

Marshallian Industrial District: The end of an era or adaptation to the global economy?

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1. Introduction

The rediscovery, in the 1970s, of the industrial district as a vibrant form of organisation marked one of the significant achievements of Giacomo Becattini, together with other scholars who shared his awareness of the importance of this organisation. It was, however, a discovery that aroused surprise because small enterprises were widely regarded - in particular among economists - as inefficient and a mere residue of the past. Yet in places where small enterprises were multiplying (for instance, Modena, Prato, Empoli, Pesaro,...), more jobs were becoming available, exports were increasing and incomes were growing, together with rising social mobility. For several decades the Italian districts showed themselves to be more competitive and innovative than the large businesses (Becattini and Coltorti 2006), partly as a result of the change in demand that made itself felt after the end of Fordism (Piore and Sabel 1984). This “success story” attracted the attention of scholars from various disciplines: general and business economists, geographers, sociologists, and so forth, thereby giving rise to a vast literature that cannot be adequately addressed or even summarized here. However, in the new context of globalization that has taken shape over the last two decades, even the districts have encountered more than a few difficulties. This has resulted in transformations of the economic structure of the district as well as changes in its internal and external relations, leading many analysts to conclude that the era of the Marshallian Industrial Districts had come to an end (De Marshi and Grandinetti 2014).

The present text is structured as follows. After a brief mention of the Marshallian industrial district as was rediscovered and further developed by Italian economists (section 2), I give an overview of the main changes in the market and institutional context in the wake of globalization (section 3). I will then focus on some of the main transformations that have taken place in the Italian districts since the 1990s, basing my analysis on empirical research I have performed and on additional investigations I have examined (section 4). Finally, after highlighting the important role still played by the districts in the Italian economy, I endeavor to redefine the evolutionary processes of the Marshallian Industrial District within a framework that would allow reproduction of the district in a manner suited to the era of globalisation.

2. The Marshallian Industrial District as rediscovered in Italy in the 1970s

2.1. The rediscovery of Marshallian Industrial District

The phenomenon of the agglomeration of small and medium-sized businesses in a given industry was widespread in Britain in the second half of the XIX century. Well known was the case of metal working in Sheffield and textile production in Lancashire. However, it was Alfred Marshall, with his in-depth knowledge of these agglomerations, who recognized that “the advantages of production on a large scale can in general be as well attained by the aggregation of a large number of small masters into one district as by the erection of a few large works” (Whitaker 1975, II, p.196). Marshall himself explains this assertion by introducing the concepts of “external economies” (Marshall 1923, p.167, 600) and “industrial atmosphere” (Marshall 1923, p.284, 287).

Roughly a century after Marshall’s first theoretical account of the industrial district, a further description was given by Giacomo Becattini, who carried out research on the industrialisation of Tuscany during the early post World War 2 decades. Becattini made use of the concept of external economies to explain the proliferation of small businesses within a sector in localities such as Prato (textiles), Empoli (apparel) or Cascina (furniture), implicitly also recalling the concept of industrial atmosphere (Becattini 1969, p.20 and 13). He then returned to this question and gave an in-depth

account of the phenomenon in the subsequent volume on the economic development of Tuscany (Becattini 1975). However, it was not until 1978 that he used for the first time the expression ‘industrial district’ in reference to the industrialisation of Tuscany (Becattini 1978, p.123). In a 1979 article Becattini explicitly mentioned Alfred Marshall, suggesting that the concept of the industrial district could be used as a unit of analysis of industrial economics, in addition to that of the sector (Becattini 1979).

Since during the years in question other Italian regions in addition to Tuscany, in particular Emilia Romagna, Marche, Veneto and Lombardy were experiencing industrial development through the agglomeration of small firms that were specialized in the range of activities of a main industry. Accordingly other scholars also contributed to the rediscovery of the industrial district as a model of socio-economic organization. Among the economists who espoused this approach, mention should be made of Sebastiano Brusco (1982, 1986, 1990, 1999), Giorgio Fuà (1983) and Gioacchino Garofoli (1991).¹ In many cases the Italian districts had already taken shape in the 1950s ((Brusco and Paba 1997), during the years of the so-called Italian “economic miracle”, due to the high growth rates of GDP. But it was above all in the 1960s and ‘70s that they achieved a remarkable development that could no longer be disregarded. The economic and institutional context that saw the multiplication of the small businesses of the districts was characterized by the following main factors outlined here below.

First and foremost, at least up to the 1970s, the economy in Italy and in the other industrialised countries was undergoing marked expansion, becoming an integral part of a free trade system and, in particular, of the European Common Market (1957). At the same time, however, the international financial system was strictly regulated and the national banking system was under the control of the State. Moreover, the areas in which the districts were developing also benefited from the presence of the Savings Banks and the Cooperative Credit Banks that facilitated small entrepreneurs’ access to credit. In these same areas, the municipal administrations adopted policies of social cohesion and support for local development (Brusco and Righi 1989; Trigilia 1986). Another condition that proved favourable to the development of the districts was the presence of a non concentrated distribution system, especially in Italy. This enabled small businesses to place their products on the national market and above all on foreign markets, by virtue of an extensive network of intermediaries composed of a large number of sales representatives and foreign buyers.

Finally, after a prolonged period of economic development boosted by mass production, consumers in the industrialised countries, whose standard of living had improved, began to reduce their demand for standardized products (Piore and Sabel 1984). Increasingly, the demand for durable goods , above all products for the person (apparel, footwear, jewelry...) and for the home (furniture and furnishings, tiles) - which were the type of goods in which the Italian districts were specialised – became more and more fragmented and variable². This tendency that was manifested by consumers favoured the development of the districts, not only on account of the flexibility of their organization, but also and above all by virtue of the widespread availability of craft skills that were still frequently available in the local societies where Fordist industrialization had not penetrated.

In a 1989 article Becattini defines “the industrial district as a socio-territorial entity which is characterised by the active presence of both a community of people and a population of firms in one

¹ The contributions by scholars who have studied the Italian districts are very numerous, and cannot all be cited here. We will limit ourselves to quoting some works in English that include a number of articles on the subject: Goodman and Bamford with Saynor 1989; Pyke, Becattini and Sengenberger 1990; Pyke and Sengenberger 1992; Cossentino, Pyke , Sengenberger 1996; Becattini, Bellandi, Dei Ottati, Sforzi 2003; Becattini, Bellandi, De Propis 2009.

² The Italian goods for the person and the home had such a success in exports that were called *made in Italy* products. On *made in Italy* goods produced in Italian districts see Becattini and Menghinello 1998.

...area. In the district, unlike in other environments such as manufacturing towns, community and firms tend to merge” (Becattini 1990. p.38)³. During his extensive research on the birth and evolution of the Prato district in the 50 years following the second world war (Becattini 1997a)⁴, Becattini reached the conclusion that given the complexity and continuous change that characterised the form described as the industrial district, study of the district should be decomposed into the analysis of a number of different processes which, when they evolve coherently with one another, allow reproduction to adapt to the external changes affecting the district over time (Becattini 1998)..

The main evolutionary processes of the industrial districts are: i) the process of localized division of labour; (ii) the process of flexible integration of the division of labour; (iii) the process of integrating the contextual knowledge with the new codified knowledge present on the global market and the ensuing flow of innovations; (iv) the process of conscious governance designed to allow coherence between the evolution of the production system and that of the local society.

2.2. The process of division of labour

The main evolutionary process of the Industrial District consists in localized division of labour, that is to say, in the constant birth of enterprises that act as an addition to existing enterprises or a replacement of those that have closed down. Such a process, in a district that is “in a road-worthy condition” , to use a metaphorical expression of Becattini’s, allows gradual specialization of the enterprises and, at least in part, an increase in their variety as well as the overall growth of the local productive system and, therefore, of its efficiency. It should be noted that in the ideal-type of the industrial district the division of labour concerns not only the production process but also the entrepreneurial function, which can be decomposed into the function of control over a specific phase of production (by the ‘phase firms’ or subsuppliers) and the function of design and marketing (by the ‘final firms’ or clients). Clearly, the process of division of labour is crucially dependent on external factors such as the evolution of technology in general, as well as that concerning the localized industry, and also on the activities specifically related to the latter, which can be decomposed, approximately, into phases and functions.⁵ However, the most important external factor on which the process of division of labour depends is the extent of demand for the local products. It is therefore fundamental for the district to have fairly stable relations with the external markets, in particular those in which its products are sold. Accordingly, such products must be capable of being distinguished from other similar products by virtue of a recognizable identity of the district products (Becattini and Rullani 1993⁶; Becattini 2006, p.669). But at the same time, the process of division of labour also depends on factors internal to the district, such as the local society’s capacity to generate a constant flow of new entrepreneurs, and the capacity of the District businesses to integrate their local knowledge with new external sources of knowledge, so that there can be continuous innovation of products, production processes, markets and to some extent also the organization.

2.3. The process of flexible integration

³ Becattini 1989 was published in an English version in 1990.

⁴ This study was commissioned by the Municipality of Prato in 1979 and was carried out over 18 years. The coordinator was Giacomo Becattini, in addition to myself, as well as another 13 researchers from various different disciplines: historians, economists, sociologists, statisticians, geographers. Part of this research has been translated into English (Becattini 2001).

⁵ On the decomposability of the production process and industrial districts, see Tani 2009.

⁶ Becattini and Rullani wrote: “as we can say that a company is not complete without a sales network and a clientele, in the same way in a productive place we can say that it is not...a local productive system, if it does not have a stable placement network for its products” (Becattini and Rullani 1993; English publication 2004, p.60)

The process that was complementary to the division of labour among businesses is that of its integration. In order to distinguish this from the vertical integration that was typical of the large Fordist firm, it has been called flexible integration (Becattini 2001, p.44-58). Coordination of the division of labour in the district is achieved essentially through the local markets of the different types of specialised activities that express the subdivisions of the economic-productive process of the main industry and of the subsidiary activities. A considerable number of businesses form part of these markets, including marketing enterprises, and therefore they enter into competition with one another. At the same time, however, operators in a district share a set of implicit reciprocal cooperation rules, which Brusco has termed the districts' behavioural codes (Brusco 1999). It follows that integration of the division of labour among the district firms is achieved by the dense web of cooperation and competition relations on the local markets. Since this integration mechanism combines market elements (price system) with community elements (system of community rules), the term 'community market' has been used (Dei Ottati 1986).

The repeated interaction among enterprises having different types of specialization within the local markets of the district has given rise to nodes of dense and stable relations that constitute micro-organisations, for which the expression 'teams of firms' has been devised (Becattini 1997b). Basically, these consist of a group of enterprises that centre around a final firm, and a number of phase enterprises among which more stable relations have been built up, so that coordination of the division of labour has become more conscious and is to some extent planned, as compared to 'community market' relations. Tacit knowledge circulates more easily among team businesses within a district, thereby also facilitating the process of innovation. Furthermore, it is worth noting that since a district's team businesses are immersed in the local markets, they are open teams in which more stable and structured – albeit generally not exclusive – relations are further enhanced by other business relations, on the part both of client firms and subsupplier firms.

The integration of the division of labour that is accomplished by means of the teams of firms and, even more, through the 'community market' are forms of flexible integration. When faced with changes in external demand, particularly in the case of qualitative changes, integration makes it fairly easy for the final firms (the clients) to regroup the various specialisations that are required for manufacturing their products; similarly, the phase enterprises (the suppliers) can more easily shift to a different client. Thus it is a form of flexibility that is built into this type of organization rather than into the technology, in contrast to the case of flexible specialization (Piore and Sabel 1984, p.259).

2.4. The process of integration of local knowledge with external knowledge

Another process that plays important role in the reproduction of the Industrial District as a vibrant production system is the integration of contextual knowledge with the new codified knowledge circulating in the global networks (Becattini and Rullani 1993). Contextual knowledge is that which is learned by experience and becomes deposited in the senses and mind of those for whom that experience is a pervasive aspect of their everyday life. This is tacit and informal knowledge such as that possessed by workers who, being extremely familiar with their machine, are capable of averting its malfunctioning before any mishap occurs, or who have an intuition of possible applications different from the daily routine. Or, to take another example, contextual knowledge may take the form of an entrepreneur's in-depth knowledge of a market, that leads to insight into a latent consumer need. Codified knowledge, on the other hand, is that which is generally produced in research laboratories and leads to the patenting of new machines, new materials, new formulas. Economic literature on innovation does not, in general, devote attention to contextual knowledge, but such knowledge does play a genuine role that affects the process of innovation in a number of phases: in particular, in the phase that concerns interpretation of potential needs to be satisfied (Lester and Piore 2004), and in the drawing up of a project for a product, in which it is vital to

ensure that the product complies with the appropriate functional and aesthetic requisites and at that same time is economically competitive.

In terms of how the industrial district is organized, it can be described as an environment rich in contextual knowledge that constantly circulates by virtue of the frequent interaction among subjects who are endowed with different specialisations, but who also share a common production culture and social environment. This is the kind of setting Alfred Marshall seems to have had in mind when he used the metaphor of the 'industrial atmosphere'. In effect, contextual knowledge constitutes a crucial factor of the competitive advantage of the district as an organizational model. However such knowledge needs to be continuously integrated with new codified knowledge, which is mainly produced externally. If the latter circumstance fails to come about, the industrial atmosphere is unable to inject fresh vigor into the local production system: on the contrary, it becomes asphyxiating and the district, shorn of its capacity to renew itself, falls into decline.

2.5. The process of deliberate institutional governance

The processes of division of labour, flexible integration and integration of new codified knowledge are to a large extent semi-automatic processes ((Marshall 1923, p,599), since they mainly derive from interaction among numerous agents whose economic behavior depends on the market even though it is integrated by implicit rules and customs of the community. However, the semi-automatic processes cannot, in themselves, ensure that the evolution of the productive system comes about in a manner that is coherent with evolution of the social system. That is to say, it cannot guarantee that it will reproduce the cooperation among agents in local markets that is necessary for effective coordination of the division of labour and, more generally, for the competitiveness of this organisational model (Dei Ottati 2009). In this regard, the formal institutions of the district can play a crucial role. Case studies have shown that conscious institutional governance is necessary not only for the birth of the district⁷ and for its capacity to adapt when faced with radical changes in the external context, but also for the normal reproduction of the district over time. For instance, in order to ensure proper functioning of the process of flexible integration, the sense of belonging, though of paramount importance, is not in itself sufficient to avert the rise of conflicts among the various categories involved in the production process: rather, what is required is an institutional mechanism that can explicitly solve, or even avert, the outbreak of conflicts. The trade associations of the different categories can, by means of periodic agreements among the parties, assure formal regulation of the employment relation and subsupplier contracts and can act as a watchdog to ensure that agreements entered into by the subjects involved are respected⁸. This explicit regulatory activity, which comes into play alongside with the implicit rules of the district code, not only favours social cohesion and the participants' commitment to the economic process, but it also has the effect of inducing the enterprises to engage in strategies involving competition oriented towards innovation rather than wage reductions or action on subsupplier tariffs (Dei Ottati 1994b, p.470-4).

Case studies have shown that deliberate governance by the formal institutions is mainly carried out by the local government with the participation of the various trade associations of the different categories, but it may also include other institutions, depending on the nature of the collective problem to be solved. Therefore, conscious governance does not concern only the regulation of the major economic relations within the district: rather, it must also address the question of solving the collective problems that arise at various times within the productive system and in the local society.

⁷ On the role of the local government and the artisan association in the process of formation of Prato industrial district, see Dei Ottati 2003, p.503-7.

⁸ For an example of collective bargaining on subsupplier tariffs, see Becattini 2001, p.51. On social concertation and industrial districts, see Dei Ottati 2002.

Examples of collective goods and services produced by deliberate institutional activity enacted through agreements among the various parties concerned are, for instance, the creation of infrastructures for the enterprises, the supply of services for training, research and technology transfer, access to credit, quality control and promotion of local products. Deliberate governance may also concern services that are of aid to families, such as child-care centres or public transport. In short, the mission of institutional governance is to produce the public goods required for the competitiveness and cohesion of the local system (Bellandi 2009). Thus in order for the district to reproduce itself over time, it is essential for the formal institutions to be capable of organizing a “public deliberative forum... open to the..relevant local actors within which effective solutions to common problems can be jointly discovered” (Zeitlin 2008, p.227)⁹. Such a task is by no means simple, but it is essential for reproduction of the district as a viable socio-economic system. However, emphasis on the role of local institutions does not imply that decisions made by national and supra-national institutions are irrelevant for reproduction of the district over time, especially in today’s global economy.

3. An overview of the changes in the external market and institutional context

Since the 1990s, globalisation has increasingly brought about a fundamental change affecting the characters of the international, national and local context in which enterprises of the industrialised countries find themselves competing. This is particularly true of enterprises forming part of the Italian districts. The process of globalisation of the markets and production has been intensified by the massive development of information technology and by progress in the transport sector. However, globalisation could not have been so rapid and pervasive without the actions undertaken by the main international institutions that aimed to bring about progressive liberalization not only of trade, but also of capital movements. Additionally, political events such as the fall of the Berlin wall, followed by the entry of Eastern European countries into the market economy, as well as the economic reform policies enacted in China, have played a significant role.

These changes had a considerable effect on the political background but also on the regulatory framework of the economic context. Together with the development of information technology, this has led to reorganization of production processes on an international scale, giving rise to the so-called global value chain (Gereffi et al., 2005). The delocalization of ever increasing volumes of production towards less developed but low labour cost countries, which originally started as a process involving the large multinationals of the more industrialised countries, increasingly came to be a situation that included smaller and medium sized businesses, which were struggling to face the price competition of emergent countries such as China. More generally, in all the developed countries these conditions led to a decrease in the number of people employed in manufacturing, as well as a marked increase in the imports of semi-finished and finished goods from countries with low factor cost. A further result was the phenomenon of massive flows of funds that were only partly directed towards real investments (Konzelmann, Fovarque-Davies, Wilkinson 2012).

Besides the internationalization of production, a change also came about in the organization of commercial distribution. This was manifested first in the Anglo-American context, and then in the other countries, by the rise of large-scale retail which, as a result of the liberalization, was able to import low cost products from newly industrialised countries and thus to internationalise. Large-scale retail thereby succeeded in increasing the volume of sales as well as intensifying its market power over the producers (Hamilton, Senauer, Petrovic, 2011).

⁹ On the governance of industrial districts, see Bagnasco 2009.

The Italian districts have been affected by the changes in the regulatory context of capital flows and in transfer of goods and services, as well as the technological revolution, all of which have resulted in a global reorganization of finance, industry and commerce. But another development has brought about a further and non-secondary institutional transformation: the European monetary union. Introduced in 1992 with the Maastricht treaty, it was brought into action in 1999 with the launch of the euro and the formation of the so-called Eurozone. However, on account of the incomplete manner in which this integration has been performed (as became clear after the large-scale financial crisis of 2008-9), it has deprived the national states, and in particular those like Italy with a large public debt, of the possibility of intervening so as to encourage a less unequal economic development. At the same time, it has failed to create European institutions capable of fulfilling this function (Blankenburg, King, Konzelmann, Wilkinson, 2013). Moreover, even before the great financial crisis, respect for the financial parameters laid down in the treaties of the European Union resulted in austerity policies that caused low growth rates in Europe, i.e. in the fundamental market which, until the 1990s, had acted as an outlet for the products of the Italian districts. Subsequently, even the markets that had been the traditional outlet for the products of the districts were shifted, at least in part, towards newly industrialising countries, where, however, the economic, cultural and institutional barriers are considerably higher.

4. Main transformations of the Italian industrial districts

4.1. Changes in the productive system

4.1. 1. The downscaling of manufacturing and of the specialization sector

As early as the last decade of the twentieth century, the competitive pressure driven by market globalisation had led to a reduction of Italian manufacturing. Thus although, in Italy, nationwide figures concerning the working population increased during the 1990s. On the national level an increase of over a million additional workers (+ 7.8%) was recorded between the 1991 industry and services Census and that of 2001, half of whom were in the industrial districts (+ 10%), whereas those working in manufacturing diminished by 6.1 % on the national level, with decreases mainly affecting in the areas of large enterprises (- 13.1%). In the industrial districts, figures remained fairly stable (-0,8%). (Dei Ottati and Grassini 2008, p, 1022).

It needs to be emphasised that even as early as the 1990s , the evolutionary trends of the Italian industrial districts were beginning to become differentiated, according to the sectors of specialization and the strategies adopted on the local level in reaction to the growing competitive pressure (Solinas 2006). As far as job trends in the various specialization sectors are concerned, the greatest number of job losses between 1991 and 2001 occurred in sectors that were specialized in production of goods for the person and the home (apparel, textiles, leather goods and footwear, jewelry, paper, ceramics, furniture and furnishings), with job losses amounting to 308.014 (-14.5%), most of which occurred in the sectors of apparel and textiles. But at the same time, job increases were observed in light engineering mechanics, particularly in machinery equipment, with an increase of 7.7 % in terms of figures on the national level, and above all in the districts (+ 17.7%). This implies that the 1990s saw the beginning of a process of redefinition of the Italian manufacturing specialization, and of that of the districts in particular: this reprofiling was particularly evident with regard to the increasing impact of light engineering mechanics, which saw its share of manufacturing workers rise from 30.5%, as recorded in the districts in the 1991 Census, to 36.2% in 2001. This contrasted with the decline in goods for the person and the home, for which the percentage of jobs dropped from 50.9% to 44.1 % (Dei Ottati and Grassini 2008)¹⁰. It was above

¹⁰ On the performance of Italian industrial districts and large enterprise areas in the 1990s, see also Becattini and Dei Ottati 2006.

all after the turn of the century, firstly after China entered the WTO and then on account of the great international crisis, that the severity of job losses and the disappearance of small firms in Italian manufacturing, especially in the districts, began to be significant. This effect was driven in particular by the marked increase in imports from China, which not only supplanted a considerable share of Italian production but also led Italian firms to engage in price reduction, particularly in the sectors concerning goods for the person and the home (Bugamelli, Fabiani, Sette 2010; Giovannetti, Sanfilippo, Velucchi 2013).

Thus in the 21st century, as emerges from the Census data, job losses in the manufacturing firms continued at a rather fast pace. Between 2001 and 2011 the number of workers decreased by roughly 1 million on the national level (-19%) and by roughly 400.000 units (-21%) on average in the districts, whereas total job figures show a slight increase (+1.8%) (ISTAT 2015a, p.4). During the same period the overall decrease in manufacturing establishments in the districts was roughly 45,000 units (-21.6%) (ISTAT 2015b, p.9). Furthermore, the 21st century has experienced increased heterogeneousness in the evolutionary paths of Italian districts: the census data show that the greatest number of job losses occurred, on average, in districts that were specialized in the production of jewellery, footwear, textiles and apparel (Lombardi and Magliocchi 2016). Since the data revealed marked performance differences in the among districts even when the districts in question were specialized in the same sector, ISTAT made use of certain criteria regarding variations in number of workers (overall job numbers, manufacturing jobs and specialization sector) between 2001 and 2011, in order to identify groups of districts that were more homogeneous with one another in their performance as far as the job trend was concerned. The analysis showed that in 51 districts overall job figures decreased on average by 1.5%, above all on account of job losses in the sector of specialization (-24.9%). In contrast, another group of 51 districts the number of jobs showed an increase, with a lower than average loss of jobs in the sector of specialisation. Among these districts, 22 had changed specialization during the ten years that elapsed between the two Censuses, mainly by shifting towards light engineering mechanics. The survey also recorded 19 districts with particularly heavy job losses overall, which were due above all to loss of jobs in the district's sector of specialization (between -44.5% and 30.5%) (ISTAT 2015c, pp.64-67)¹¹.

4.1.2. Product innovation and quality upgrading

In response to the changes in the market and the institutional context outlined above, (section 3), the enterprises – and above all the final enterprises – of the Italian districts tried to react to the international pressure of competition: indeed, some began to build their counter-response as early as the 1990s (Dei Ottati, 1996). A very wide variety of strategies was adopted by the affected firms, and numerous different evolutionary trends can be discerned as regards the individual districts; however, it would appear that overall the enterprises which have succeeded in reacting to globalisation (and, accordingly, the districts in which such firms were more numerous) adopted a combination of the following strategies, which were often complementary to one another.

- i. Innovation and enhancement of the products in order to reduce price competition;
- ii. Technological innovation and delocalisation of the phases and/or of low value-added products towards low labour cost countries so that costs could be contained;

¹¹ The variety of evolutionary paths of the districts further emerges from another statistical investigation which also considers not only the change in number of jobs in the specialization sector between 2001 and 2011, but also the variations in medium sized enterprises and the variations affecting exports in a district's given sector of specialization. The analysis reveals that during the period under consideration, over half of the districts analysed showed a reinforcement of the medium-sized enterprises. Bellandi and Coltorti 2014.

- iii. Reorganisation of the activities carried out by the firm, with important investments in the areas of: research and development, trademark, marketing and also distribution, i.e. in activities with greater value added.

As far as the strategy of product enhancement and innovation is concerned, several examples can be drawn from available research. From the 1990s onwards, in the leather tanning and footwear district of Santa Croce sull'Arno (Pisa) the final firms embarked on a strategy of making creative use of local workmanship in order to achieve high quality products; at the same time they also extended and constantly renewed their pattern book and samples, offering their services as suppliers to the great Italian and international fashion brands such as Gucci (Faraoni 2008). Furthermore, again by virtue of the network of local sub-suppliers, the district enterprises were able to offer a flexible production approach, with the possibility of customising the products according to a client's requirements and of meeting tight delivery deadlines. In some cases the upgrading of the Santa Croce production has even reached the point where some of the tanneries have an industrial designer of their own capable of interacting with the client in creation of the product (Fabbri 2014). In such cases the tannery does not merely sell the tanned leather, but even a research and development service as well .

A similar strategy was adopted, again as early as the 1990s, in the district of Riviera del Brenta (Padua-Venice) that is specialized in the production of ladies' shoes (Rabellotti 2004). At present, most of the district's production concerns the supply of shoes for large high fashion and couture firms such as Dior, Yves Saint Laurent, Prada and the luxury multinational LVMH (De Marchi, Gereffi, Grandinetti, 2016).

Businesses in the footwear districts of Marche also sought to build up a strong counter-reaction to globalisation, by differentiating their products and, above all, by shifting towards higher quality and value-added market segments. The evidence that Italian footwear production in quantity declined by roughly one-half between 2000 and 2010, while its value decreased by only 20%, indicates that the strategy of product enhancement was widely enacted by the footwear enterprises (Cutrini, Micucci, Montanaro 2013, p.216). Furthermore, the average value of footwear in the Marche districts between 2000 and 2014 rose by 80% (Cutrini 2015, p.211). The strategy of product differentiation and innovation was also embraced by businesses in the Montebelluna (Treviso) district. Specialised, at first, in ski boot production, today the district is specialised in production of footwear for a wide variety of sports such as climbing, skiing, trekking or motorcycling, as well as the associated specialist clothing. The businesses in Montebelluno manufacture products that are at the forefront of innovation in materials, technology and design, with attention also devoted to the specialist performance such products are required to achieve in the light of the type of utilization for which they are intended. (De Marchi, Grandinetti 2016).

A similar pattern emerges from an analysis of the goldsmithing sector, an industry in which Italy used to enjoy a position of primacy. The districts that showed the strongest resistance to international competition in the early days of the new century, but also to the drop in demand resulting from the more recent financial crisis, were those in which the enterprises adopted product enhancement and innovation strategies, shifting towards more elevated market segments. For instance, in Arezzo the firms no longer focus on manufacturing standardised products, such as chains, but have shifted instead to new products with fashion content, and also invested in trademarks of their own (Sanfilippo 2008). The strategy of producing high quality jewellery and accessories and of taking up a position in luxury market segments was followed above all by enterprises in the district of Valenza Po (Alessandria), among which one finds several famous brands such as Bulgari and Damiani. (De Marchi, Lee, Gereffi 2014).

Another example of enterprises focusing on continuous innovation and on product personalization to satisfy individual customer requests, as well as on innovative design, can be found in the furniture-making district of Alto Livenza (Pordenone). This district has succeeded in remaining the most important furniture-making centre of the whole of Europe. (Buciuni, Corò, Micelli 2014; Breznitz and Buciuni 2015).

Similarly, firms forming part of the mechanical engineering districts have taken steps to respond to the competition of standardized products from low labour cost countries by innovating and enhancing the quality of the products they supply. In the mechanical engineering district of Reggio Emilia, firms have moved away from the mere production of simple components, shifting instead to production of complex systems that incorporate new technologies and new materials, and can be personalized according to customers' requests. Such developments enable the enterprises to raise the price of their products (API 2008, p.230). Furthermore, enterprises are increasingly offering co-design and prototyping services, as well as technical assistance abroad. This more extended range of services as well as the more sophisticated production systems is also further supported by a strategy adopted in some of the district firms that have transformed themselves from subsuppliers into final firms, partly by means of associations of firms specialized in complementary products (API 2008). During the period 2000-2008, strategies of this kind led to a rise even in the value of exports as well as an increase in the number of firms and in production capacity. As a result, the drop in international demand that made itself felt after the great financial crisis of 2008-9 had particularly negative effects on firms which had engaged in expansionary investments during the previous growth years (Bigarelli and Russo 2012).

4.1.3. Process innovation, delocalization and foreign immigration

With regard to the issue of cost reduction as a means of counteracting price competition, the strategies adopted by enterprises, including those within the districts, involved internationalization of production and, to some extent, the introduction of more efficient technologies, but also recourse to immigrant workers and entrepreneurs. The internationalisation of production began as early as the 1990s, at first by outsourcing some production phases to the Eastern European countries which had only recently become part of the market economies and had low labour costs; these countries were also geographically and culturally close to Italy and enjoyed a tariff regime favourable for Outward Processing Trade (Tattara 2009).

In contrast to the strategy of product enhancement and innovation, delocalisation is generally advantageous for firms that engage in this strategy, but the overall effects on the production system and local society may be either positive or markedly negative. Less competitive firms definitely undergo a negative effect, but this can be more than compensated if the delocalization of low value-added activities makes it possible to obtain resources that are then reinvested in the local system in order to improve the manufacturing and service activities carried out in the district. In such a case, the district maintains its vitality and viability even in the new context of globalization. But if, on the other hand, firms that have delocalized are unable to maintain within the district an adequate quantity and quality of production and of high value-added functions, then delocalization accelerates the district's economic decline and social breakdown, together with dispersion of the skills that had been built up within the district.

We will now give an overview of figures concerning the delocalization of Italian manufacturing firms. The sectors with the greatest number of firms that have delocalized are those concerning light mechanical engineering, leatherwear and footwear, apparel and textiles. In these sectors the percentage of firms that delocalized was greater than the average number of Italian manufacturing enterprises that engaged in delocalisation, which was roughly 4% in the years 2007-9. With regard to the location of districts presenting the greatest number of enterprises that delocalized, the districts

in question were in the North-East (Veneto), and the greatest intensity of delocalisations occurred among the larger firms (Costa 2010).

Taking a closer look at the internationalisation of production, enterprises forming part of districts mainly had recourse to subcontracting rather than to direct foreign investments. However, it should be noted that in some districts there were foreign investments made specifically by multinationals with the precise aim of obtaining access to the highly qualified skills present within the district. As examples of such a phenomenon one may quote the case of the acquisition, by LVMH, of an enterprise in the ladies' footwear district of Riviera del Brenta, or the acquisition of local firms by the multinationals Nike and Rossignol in the sport system of Montebelluna (Tattara 2009; Samarra and Belussi 2006). Furthermore, the German multinational Braun and the Swedish Gambio, both of which are leaders in the field of medical devices, have acquired enterprises from the biomedical district of Mirandola (Modena), where they have set up their own production plants and also research and development units (Bigarelli 2013, p. 35 and 48).

Furthermore, again in the district of Mirandola, the multinational and large-sized enterprises have also delocalized the simpler and lower value productions to Asian countries, partly to reduce costs and partly also to penetrate more effectively into the new markets. More recently, these same firms have automated the production process in the district establishments in order to render production more efficient. But at the same time there are also enterprises in Mirandola that produce high quality components for the large firms, which then send them to their foreign production plants. Production of the components in question calls for a high level of skill. In addition, there are firms that produce electromedical apparatuses and employ staff with advanced skills in areas such as mechanics, electrical components, electronics and information technology. Such staff are capable of designing "intelligent" and highly complex machines. The firms in question act as a support for the large firms in the creation of new products. Precisely on account of this rich array of skills within the district, after the disruption caused by the 2012 earthquake the foreign multinationals decided to reconstruct their offices and their plants in Mirandola rather than move to another location. (Bigarelli 2013).

The districts with a strong presence of light engineering mechanics show a trend similar to that outlined at the beginning of this section, with an initial move towards imports from Eastern European countries, starting from the 1990s, followed after the turn of the century by imports from Asia, in particular China.¹² The imported products involved not only the simpler standard semi-finished goods but also subsupplies of simpler productions as well as longer series produced according to the designs created by the Italian district firms. However, the choice of either direct delocalization (with subcontracting or investment abroad) or indirect delocalization (through imports of standard semi-finished products present on the international market) depended on the type of specialization of the given district and its enterprises. The more standardized productions and those with longer series were the first to be delocalized, and the extent of delocalization was greater. Thus in the mechanical engineering district of Modena, which is specialised in high quality personalized productions and short series, a 2005 survey found that only 16.4 % of the standard components was purchased abroad, and only 8.9 % of custom-designed components was commissioned abroad (Bigarelli and Russo 2012, p.62). At the same time, during the growth years that preceded the great financial crisis the Reggio Emilia district enterprises made investments in new technology that enabled them to automate part of the production; the new technology also made production more flexible and therefore capable of satisfying an increasingly varied demand.

¹² A gradual generalized change came about in the destination of delocalization: thus the choice to delocalize towards Eastern European countries began to give way to delocalisation towards Asia. Thus whereas in 2007 Italian manufacturing enterprises still most frequently (36.2% of enterprises) delocalized to Romania, in 2010 the most frequent destination (32.8% of enterprises) was China (Costa 2010, p.310).

However, the larger enterprises invested in setting up industrial plants of their own abroad, above all in Asia. This not only favoured sales on the growing Asian markets themselves, but also offered a solution to the difficulty of finding blue-collar workers in the Italian districts (API 2008, pp 221-223). Thus, at least up to the great financial crisis, delocalization and automation had by no means impaired the viability of the mechanical engineering districts of Emilia, which had seen a growth both in exports and in their workforce.

In the leather-tanning and footwear district of Santa Croce sull'Arno, during the years following the international financial crisis (2010-2013), when manufacturing was experiencing severe setbacks not only in Italy, the value of exports and the turnover of the local production system actually increased and figures concerning the number of jobs remained stable. This good performance can be explained not only by the enhanced quality of the products, but also as a result of the firms' strategy of making considerable investments in new process technology. Furthermore, the enterprises in question had already long engaged in delocalization of low value-added phases, both towards Eastern European countries and also towards China, where in 2012 as much as 25% of the district's turnover was produced (Fabbri 2014).

In the footwear districts, delocalisation of the most labour-intensive phases had already taken place in the 1990s. The process had concerned all the sectors and all the districts, but to different extents and in different ways depending on the market segment in which the district and the firms had positioned themselves. Thus in districts that were specialised in high quality products and those where the majority of enterprises had adopted a strategy of innovation and product differentiation, delocalization took place to a lesser extent, at least in the 1990s, than was the case for districts specialized in low quality and low price footwear. For instance, Outward Processing Trade data for 2001 in the district of Barletta (Southern Italy), a district where firms have positioned themselves in the low market segment, show that in this district the delocalization process took place to a far greater extent than in footwear enterprises in Marche or the Riviera del Brenta. Significantly, the latter districts are known for producing high quality footwear, mainly destined for foreign markets (Amighini and Rabellotti 2006). The delocalization was often undertaken by final enterprises, which partly shifted their production to low labour cost countries. However, in a number of cases even the subcontractors of the district, upon the request of the client enterprise, transferred their production abroad or became the production managers of plants which the final enterprises opened abroad (Samarra and Belussi 2006; Cutrini 2011).

The evidence from the Marche footwear districts suggests that the process of production internationalization intensified during the first decade of the new century, both in terms of number of enterprises resorting to this strategy, and also of number of phases delocalized. In extreme cases, delocalization of the entire production process was undertaken (Cutrini 2011). In more recent years, some firms have brought part of the production back into the district, either because they have enhanced their product quality, or on account of problems of international subsupplier coordination and quality control (Cutrini 2015). As regards the delocalisation undertaken in the 1990s, Romania was the country towards which the greater part of delocalization of Italian footwear enterprises was carried out, with particular emphasis on the region of Timisoara (Cutrini 2011; Crestanello and Tattara 2011)¹³. In the new millennium, attention turned to China and Vietnam, which became the main countries of destination for international production decentralization, with the aim of achieving a further reduction in production costs; an additional aim, in this case, was to gain access to South-East Asian markets, whose medium-high class consumers appreciated Italian fashion products. According to the 2001 Industry and Services Census, firms that formed part of the

¹³ In 2005 the jobs in Romania connected with Veneto firms Outward Processing Trade in footwear were 26,514 (Crestanello and Tattara 2011, p.193).

leatherware and footwear sector and which opted to delocalize amounted to 6.1% as an average of Italy as a whole, while those in the Marche district accounted for 6.7% and those in the Veneto districts were 12.2% (Cutrini 2015, p.216). Delocalisation thereby bore some of the responsibility for reducing the number of firms and workers in the districts. In Marche, for example, jobs in the leatherware and footwear industry decreased by 44.2% between 2001 and 2011, with a drop from 43.277 to 24.156 (Cutrini 2015, p.214).

Additionally, attempts to counter price competition by increasing product quality and differentiating among products were made in districts specialized in the textiles and apparel sectors. But to reduce costs even further, the larger firms, in particular, delocalized their medium-long production series as well as those that had longer delivery times. In the textiles districts, available research suggests that delocalization took place mainly in order to follow client firms in the apparel sector which had already delocalized their productions. However, this in turn required direct investments and the transfer of Italian technical staff to maintain control over production and train the local workers. As a result, the cost gain was notably reduced (McCaffrey 2013). In the apparel sector delocalization was more frequent than in the textile sector¹⁴. As far as the Carpi apparel district is concerned, for instance, in the last two decades several medium-large enterprises have achieved a prominent position and have invested in the trademark and their own distribution channels. This has increased the district turnover, as over half of the entire district turnover is concentrated in these firms. In addition, these are also the firms that show the greatest propensity to delocalize, with over 60% of their turnover coming from the delocalized activities (Bigarelli 2014, p.117). What remains within the local production system are the productions of short series and those with tight delivery deadlines, as well as design, the sample book, marketing and commercial distribution. However, excessive reduction of the local manufacturing plants leads to the risk of not reproducing the necessary production skills required for continuous product innovation (McCaffrey 2013; Bigarelli 2014)¹⁵.

Another aspect that cannot be ignored is the use of immigrant labour and of enterprises set up by non EU immigrants as sub-suppliers in the Italian districts. This phenomenon is particularly noticeable in the districts of the so-called fashion system: apparel, textiles, leatherware and footwear. In effect, globalisation has led to an exponential increase not only in the movements of capital and goods, but also in the movement of populations. Thus foreign immigration has also made itself felt in Italy, albeit with a slight delay in comparison to other developed countries, as it did not have a marked impact until the 1990s.¹⁶ In the leather tanning district of Arzignano, for instance, at the beginning of the new millennium roughly half of the workers in the tanning industries were foreign immigrants (Murat and Paba 2005).

In this regard, one important aspect concerning foreign immigration in the Italian districts is the spread of so-called ethnic entrepreneurship. Available research indicates that in 2009, non EU entrepreneurs in Italy in the apparel sector numbered 12.986 (21.8% of the total number of enterprises), of whom 10.660 (18.7% of the total) were citizens of Chinese origin. Enterprises set up by Chinese immigrants are mainly located in the districts, above all of Prato, Empoli, Carpi and Brescia ((Foresti 2010, p111-113). Similarly, numerous non EU entrepreneurs can be found in the sectors of leatherware and footwear: thus in 2009, counting the whole of Italy, there were 4.182 foreign entrepreneurs (15.1% of the total number of firms), of whom 3.314 (11.9% of the total)

¹⁴ In 2005, the jobs in Romania connected with Veneto firms Outward Processing Trade in clothing were 31,357 (Crestanello and Tattara 2011, p.193).

¹⁵ In the district of Carpi, between 2001 and 2011, jobs in the textile and apparel sectors decreased by 35.7%, namely from 10,994 to 7,066 (Bigarelli 2014, p.11).

¹⁶ Foreign residents in Italy were roughly 2 million in the years 2002-4; by the years 2008-10 the total had increased to over 4 million (Lombardi and Sforzi 2016)

were Chinese, mainly concentrated in the area of Florence and in the footwear districts of Veneto and Marche (Foresti 2010, p.115)¹⁷.

Let us take a look at a few examples. In the footwear district of Marche the presence of Chinese subsuppliers working in the most labour-intensive phases such as upper stitching has now become essential for the final firms (Cutrini 2011, p.1007). Similarly, in the Carpi apparel district, Chinese enterprises have replaced the Italian subsuppliers in the sewing phase and to some extent also in other labour intensive phases such as ironing and embroidery. More recently, these latter activities have also seen the entry of Pakistani entrepreneurs (Barberis, Bigarelli, Dei Ottati 2012)¹⁸.

Foreign immigration began to become widespread in the districts as from roughly the 1990s. This was partly a result of the fact that after thirty years of continuous development the new generations, who had benefited from better schooling, were no longer willing to accept factory work, and even the small subsuppliers were encountering difficulty in replacing the older generations (Murat and Paba 2005; Barberis 2008; Foresti 2010). Additionally, when the pressure of international competition became fiercer, the tendency to turn to enterprises that were established by foreign immigrants and were localised within the district increased considerably, as this allowed small final firms to reduce production costs despite lacking sufficient resources to delocalise abroad.

4.1.4. Functional upgrading and emergence of business groups and medium-sized enterprises

If product enhancement and differentiation is not accompanied by a strategy that highlights these distinctive characteristics in such a manner as to make them clearly visible to the final user, then neither product enhancement nor differentiation will achieve the desired result. Thus district enterprises that reacted to the new context of globalization also took the additional step making substantial investments both upstream and downstream from the so-called value chain, namely R&D, design, marketing, advertising, brand management and distribution.

For instance, it emerges from an analysis of the literature that the footwear enterprises of the Santa Croce sull'Arno district have further enhanced their products by investment in brands, advertising and to some extent also the distribution network. Moreover, some of the tanning businesses sell directly to the large fashion enterprises and also offer them co-design services. This functional upgrading, both by the tanning enterprises and those in the footwear sector, has led to an increase in the number of workers who have a marked degree of highly codified knowledge, not only of a technical-scientific type but also in terms of stylistics and commercial activities within the enterprises and within the local system. Indeed, in 2013 there were almost 500 enterprises offering information technology services, management consultancy services, advertising, technical analysis services, designers, and other knowledge intensive services (Fabbri 2014, p.12).

Another interesting case is that of Montebelluna, where enterprises have supported product innovation, on the one hand by delocalizing the most labour-intensive production phases, and on the other, by focusing on R&D, marketing and distribution (Samarra and Belussi 2006, p.554-558). Sectorial diversification can also be noted here, with a shift from production of ski boots to that of clothing for the different sporting disciplines, and also of skates and snowboards. Many of the district's workers are now specialized technical operators with advanced educational qualifications.

¹⁷Another study has shown that in 2007, in the districts specialised in production of goods for the person (apparel, textiles, leatherwear and footwear), 31.3% of the total of microenterprises (1-10 workers) was composed of Chinese immigrants (Lombardi et al. 2015, p.295).

¹⁸The case of the Chinese entrepreneurs in Prato is different from that of other districts. At the beginning, in Prato too the Chinese entrepreneurs started as subsuppliers of local knitwear firms, but after the turn of the century a substantial number of them became final entrepreneurs. As a result, they effectively established a Chinese fast fashion productive system in Prato, which is still poorly integrated with the textiles firms of the area. (Dei Ottati 2014).

In partial analogy with the footwear districts of Marche, the firms that have enhanced the quality of their products and differentiated their productions have also invested in the brand, as well as in marketing and the direct commercial network. This has led to the hiring of professional figures with service competences, whose task is to provide support for development of the new functions. In the past, such figures were relatively rare in the districts (Cutrini et al. 2013, p.225 and 232).

In the apparel district of Carpi, the new emerging enterprises have invested not only in research for development of new models but also, especially since the beginning of the new millennium, in promoting brand awareness and in distribution control by means of single-brand shops (Bigarelli 2014, p.109). This strategy has led to an increase in turnover for these enterprises and, consequently, of the district itself. As a result, figures with new managerial and marketing skills have been introduced. The functional upgrading has also made itself felt on the level of subsupplier businesses. At present some subcontractors supply the finished product: they make the samples, the prototypes and are in charge of industrialization, as well as coordinating the production process that is generally carried out by other enterprises. Upon request, such subsupplier businesses may also provide additional services such as logistics. The district also features multi-phase subsupplier businesses that perform quality control and are in charge of shipping to clients the items of apparel produced abroad by the larger enterprises (Bigarelli 2014, p.108-9 and 118-9).

Expansion of R&D activities can also be observed in the Emilia light mechanical engineering districts, where the larger firms have set up cooperation agreements with research centres. The smaller enterprises have likewise integrated their R&D activities with the knowledge of professional business services (API 2008, p.210). At the same time, the enterprises no longer make use of distributors for the purposes of exporting, and have instead created their own network of agents. A similar move has been undertaken by the subsupplier enterprises, which, in order to reach the necessary size, have also built up associations of enterprises specialized in complementary products. These associations of enterprises act jointly in organizing the commercial function, in order to be able to sell directly on foreign markets. In some cases, other subsupplier enterprises attempt to become first level suppliers in order to be able to undertake the role of coordinator of the whole production process (Bigarelli and Russo 2012, p.75).

In the Mirandola district, as already noted, the foreign multinationals carry out the R&D function within the district, and partly also that of marketing. Furthermore, the small local businesses cooperate with the larger firms in the product innovation process, which in the case of bio-medical productions requires advanced skills and knowledge from numerous different fields of research. Furthermore, this is a sector in which quality standards are of the utmost importance and have to be certified. In the Mirandola district, some subsupplier firms that had failed to obtain contracts with the large enterprises because of delocalization and, partly also because of process automation, proceeded to adopt upgrading strategies. Thus some firms made the transition from production of only one stage to the supply of a complete product, which they achieved partly also by establishing groups of firms. This development enabled them to obtain access to clients external to the district, and in some cases also to foreign clients. Other enterprises, above all those engaged in pressing, have sought to extend their range of clients by turning to various different sectors that are considered to be promising, again outside of the district (Bigarelli 2013, p.108-9).

In the industrial district, the scale economies and, above all, the scope economies that are necessary for production efficiency are achieved by division of labour among the enterprises and by its flexible integration: the latter being accomplished through the local markets and the teams of firms (sub-section 2.2.3). But another important change should be noted. In the past the distribution system was made up of many small shops and the final enterprises could therefore market the district products through wholesalers and other intermediaries present at the national and international trade fairs. This required no massive investments, thus allowing the existence of a

considerable number of small final enterprises. Such a situation is no longer the case: a radical change has come about as a result of the new competitive context of globalization and concentration of the national and international distribution system. At present, much of the production of the manufacturing systems of the developed countries and therefore also of the Italian districts has been severely affected by price competition from products made in low factor cost countries. Therefore, as we have seen, some of the district enterprises have resorted to differentiating and enhancing their products in order to distinguish them from the low cost products. Consequently, the firms, above all the final firms, have faced the need to invest in innovation, both as regards the performance of their products and also their aesthetic qualities; additionally, they have built up appropriate strategies for promotion of their trademarks and they have often created an international distribution network of their own. Such a change implies the need for large-scale financial resources and the development of functions in which economies of scale are important. This, in turn, has also led to the need for new skills that are not identical with the knowledge concerning the production that was typical of the district. As early as the 1990s these changes had begun to prompt the spread of groups of firms within the districts and the formation of larger-sized enterprises, which often were medium-sized enterprises, but on occasion even large multinational enterprises, such as Luxottica in the Belluno eyewear district¹⁹.

We noted earlier (section 2.3) that teams of firms began to take shape in the districts. These consisted of groupings of enterprises specialized in complementary activities, which gradually entered into more stable and organized relations as a result of repeated relations over time. Furthermore, product enhancement and greater innovation to improve their products allowed many such teams to become transformed into groups of enterprises, that is to say, into sets of enterprises that were legally distinct but were all under the same ownership. This evolution is to some extent the result of the need for greater control over product quality by the final firm, but also of the need to achieve the size necessary to adapt to the new context.²⁰ In general, these sets of enterprises were composed of small groups made of medium-sized and small businesses, mainly specialised in the district's main industrial sector, but differentiated from one another according to the product involved (for example, ladies' footwear or men's shoes), or according to the phase, or the function (manufacturing or services), or by localization (within the district and outside of the district, especially abroad)²¹.

This type of organization into groups of enterprises is based, like the district itself, on division of labour among the enterprises and on a more organized form of flexible integration, in which the businesses forming part of the group are autonomous in their management and generally have preferential, although not exclusive, relations with the parent company (Iacobucci 2004). This is a fundamental characteristic needed for successful competition on markets where demand is highly differentiated and variable, and thus calls for continuous product innovation and, often, personalization on the basis of client demand. A study conducted on the 2001 census data confirmed the greater sectorial specialization of the groups of enterprises within the districts and their more widespread presence precisely in the districts: 5.87% of the total of firms in the Italian districts belonged to a group, versus 4.63% of those in non-district areas (Cainelli, Iacobucci, Morganti 2006, p.514).

¹⁹ On medium-sized and large enterprises in the Italian districts, see Coltorti 2009.

²⁰ On this evolution in the case of the Tuscan districts, readers are referred to Dei Ottati 1996; additionally, on the growth model of the district enterprise, see Dei Ottati 2002, p.453).

²¹ A recent study has shown that out of roughly 3200 medium-sized enterprises, about 1000 are heads of a group and, overall, they control more than 5000 businesses, of which almost 2000 are manufacturing enterprises in Italy and 500 abroad. Furthermore, they control about 2700 service enterprises (above all commercial companies), more than half of which are abroad. In addition to the controlled enterprises, one also finds other enterprises that have links to the parent company. (Mediobanca-Unioncamere 2015, p.XIV)

In addition to the spread of groups of enterprises, a further aspect worth noting is the rise of medium-sized enterprises. Since 1996, the Research Office of Mediobanca, in cooperation with Unioncamere, has been conducting a yearly census of Italian medium-sized manufacturing enterprises²². The latest available survey (2013) shows that medium-sized manufacturing enterprises number roughly 3200, two-thirds of which are located in the industrial districts (Coltorti and Varaldo 2013, p.138). They are mainly specialized in goods for the person and the home, the food industry and mechanical engineering. In 89% they consist of family controlled enterprises, and often (70%) they are also family-run (Mauriello 2015)²³. The enterprises in question have a strong propensity to engage in exporting, which in the majority of cases (65.6%) they carry out directly, and in 17.5% of enterprises specialized in goods for the person and the home their exporting activity is carried out by means of their own commercial network (Mauriello 2015). Predictably, most of the activities conducted within these enterprises concern research and development, marketing and coordination of the network of manufacturing and service suppliers. The implicit tertiarisation of these manufacturing enterprises is confirmed by the evidence that during the 2004-13 decade the workforce in medium-sized enterprises specialized in the *made in Italy* sectors increased on average by 9.5%, with a 21% increase in white-collar workers and managers and a 4% increase in blue-collar workers (Mediobanca-Unioncamere 2015, p.XVIII). Furthermore, 35% of medium-sized businesses drew up formal agreements with applied research centres and 28% with enterprises supplying research and development services. (Mauriello 2015). This evolution can be attributed to the greater focus by these firms on functions upstream and downstream from manufacturing. The growth of tertiary functions within the larger enterprises, as noted in the case of the Santa Croce sull'Arno district, was accompanied by the creation of knowledge-intensive service enterprises²⁴. The actual manufacturing is mainly entrusted to external suppliers, either local or national and, as we have seen, often also located abroad. A recent survey shows that 21.3% of medium-sized enterprises have production plants or commercial offices located abroad, and 12% have entered into formal production or commercial agreements with foreign enterprises (Mauriello 2015). Choice of suppliers is made in most cases on the basis of quality of performance rather than cost. Moreover, although the extent of local supplying has decreased considerably, especially since the beginning of the new century, it concentrates the higher value-added activities, and those which are fundamental for the competitiveness of the client firms and of the district when the lead firms spread knowledge and opportunities within the local system.

Medium-sized enterprises are those which, once they have achieved a sufficient size to enable them to engage in the level of innovation and promotion required to maintain their grip over the market niche in which they operate, generally do not grow to any further size category. This is due to the fact that one of the advantages of these firms is precisely the fact that their organisational flexibility allows them to adapt more successfully to changes in demand and technology (Coltorti and Varaldo 2013). Despite the problems arising from the prolonged recession that followed the great financial crisis, the overall results achieved by medium-sized enterprises operating in the *made in Italy* sector between 2004 and 2013 showed a 36% increase in turnover and a 62% increase in exports (Mediobanca-Unioncamere 2015, p. XVIII). Moreover, results from another survey indicate that districts with extensive presence of medium-sized enterprises achieved better performances, both in terms of number of jobs and also of exports, during the 2001-2011 period (Bellandi and Coltorti 2014).

²² The Mediobanca –Unioncamere studies currently classify as medium-sized enterprises those that have between 50 and 499 employees and a turnover between 16 and 355 million euros.

²³ A recent study has shown that Italian family-run manufacturing enterprises have an advantage in terms of profitability as compared to non family-run businesses. In the case of medium-sized enterprises, this advantage is cumulated with that of being localized in a district. Cucculelli and Storai 2015.

²⁴ In this regard see also Camuffo and Grandinetti 2011.

4.2. Changes in the local society and institutions

Precisely on account of the long-standing development of the Italian districts, the new generations have had the opportunity to benefit from an improved standard of living and a significantly better level of education. Consequently, their expectations with regard to their life-style and working conditions are different from the background in which their parents grew up. We saw in the previous section that delocalization and the utilization of immigrant labour arose above all from the need to address the price competition of goods imported from low labour cost countries, but partly also from the challenge posed the generational change in blue-collar and craft labour within the district (McCaffrey 2013; API 2008; Murat and Paba 2005)²⁵. To some extent, difficulties of this kind had already surfaced before the turn of the century: subsequently, the situation worsened and negative expectations became more evident, with many small businesses closing down as a result, firstly, of globalization and then of the international financial crisis.

Additionally, the effect of the changing aspirations of the younger generation who had grown up in the district and the ageing of the native population was further aggravated by the presence of many non-E.U. immigrants, whose integration within the local community presented a greater challenge than had been the case with immigrants from southern Italy in earlier decades. The new challenge was due to severe problems in relation to language and culture. These circumstances led to a substantial change in the social structure of the Italian districts. Furthermore, the presence of foreign immigrants intensified the already stiff competition on the local labour and subsupplier markets because of international pressure. These phenomena exacerbated the tension and conflict within the districts, both between immigrants and natives but also between those who drew advantage from the presence of immigrants versus those who were adversely affected. Therefore, if there is no integration of immigrants, their presence accelerates the breakdown of the relation of mutual reinforcement between competition and cooperation that characterizes relations within an industrial district that is “genuinely roadworthy”.

Thus unless changes in the economic and social structure are governed through deliberate action by the formal institutions, which draw their legitimacy from popular consensus, they may easily result in a crisis of the collective identity of those who live in the district. In this context it should be borne in mind that this collective identity lies at the root of the concept of “trust as collective capital” that sustains reciprocal cooperation among the district agents (Dei Ottati 1994a). The break-down of trust is mainly due to the increase in internal differences, in terms both of social and economic disparities. From the economic point of view, the diversification of products as a strategy for response to international competition has led to sometimes markedly divergent changes in technology, size, market power and profitability between firms.

Furthermore globalization, with its concomitant increase in competition and delocalization, has weakened respect for the implicit rules that govern the functioning of the industrial district (Brusco, 1999). In the previous era, the unwritten code of behaviour was based on reciprocal cooperation in a medium-term perspective, rather than on the search for immediate advantage in a perspective driven purely by market forces. Clearly, however, as far as local operators are concerned, it is now difficult, if the enterprise’s supplier relations are predominantly with external firms, to impose penalties on an entrepreneur who has not abided by the proper rules of conduct. A similar case is that of an entrepreneur who has been adversely affected by the unfair behaviour of a business partner but has difficulty in finding a reliable substitute – a situation frequently encountered among subcontractors when there is a situation of systemic excess production capacity. At the same time, if businesses close down, as frequently occurs in the current context, because the competition from

²⁵ Similar considerations on the different attitudes to work among the offspring of entrepreneurs in the English districts can be found in Marshall 1923, vol.II, p.579.

emergent countries crowds out their own production, the possibility of rewarding fair behaviour and professional competence through assistance in launching an entrepreneurial career in the district's sector specialization is likewise reduced. All this also has adverse implications for the mechanisms of the development of "trust as personal capital", that is based on reputation (Dei Ottati 1994a).

Starting from the 1990s an additional factor further undermined the traditional district-internal cohesion outlined in the preceding sections. On account of the crisis of the political parties which had governed the local institutions since the early postwar period, and above all the municipalities of the districts - PCI (Communist Party) in central Italy and DC (Christian Democratic Party) in the north-east -, the ability of the local institutions to promote social cohesion was severely weakened. This was particularly true in the case of the municipalities within the districts, which began to face considerable difficulty in encouraging a new vision of shared development. Similarly, the trade associations of the various categories (industrialists, craftsmen, workers...) now found themselves operating in the framework of shrinking districts that were undergoing considerable internal differentiation. Consequently, the collective action traditionally promoted by these organs of representation began to decline. This deterioration adversely affected many districts precisely at a time when the adjustment to globalization should have involved the whole district and not just a few lead firms.

Moreover it cannot be overlooked that the international and national financial system has profoundly changed since the 1990s. With the privatization of banks and the liberalization of the credit market according to the Anglo-American model, the main aim of the banks has now become that of maximising value for their share-holders, rather than favouring general economic development. This new situation has led to the take-over of smaller banks by the larger banking groups. The concentration of banks has led to a marked reduction in the number of local banks in the districts, i.e. precisely the banks which, in the past, sustained development by granting credit to small businesses²⁶. The adverse effects of concentration in the banking sector, which have made themselves felt above all with regard to small businesses and in the less developed areas (Alessandrini, Presbitero and Zazzaro, 2009), have been further compounded by the consequences of international regulations concerning the credit market. The various Basel agreements among the central banks of the most industrialised countries have imposed strict capital constraints and credit rating as criteria in the granting of credit.

These changes have exerted a marked effect on the manner and distribution of the financial resources that flow into the districts. First and foremost, the above mentioned changes in the international and national financial system have significantly increased the barriers restricting access to credit for small businesses and new enterprises. Consequently, difficulties arise in the process of adaptation to the new competitive context, since within the districts such adaptation has traditionally occurred through the creation of new enterprises as well as through innovative investments undertaken by existing enterprises, including small enterprises. But while up to the 1990s credit could, in part at least, be obtained by relying on one's personal reputation as a guarantee (as mentioned earlier), today this is no longer possible, either with the banks or among enterprises.

As far as credit granted by banks is concerned, the presence of the large banking groups in the districts has broadened the range of financial services offered. On the other hand, a counteracting effect can be observed in the disadvantage of having distanced the banks' decision-making centre from the local enterprises, thereby making it more difficult for credit institutions to engage in relational lending, i.e. in granting credit partly on the basis of qualitative information. Empirical

²⁶ It should be noted, however, that if the local bank grants credit too easily, this may lead to the risk of triggering a systemic crisis, with a chain reaction involving numerous firms within the district.

research has demonstrated that the greater distance of credit-seeking enterprises from the banks' decision-making centres reduces the provision of credit and thus increases the likelihood of rationing (Alessandrini and Zazzaro, 2009).²⁷. Therefore the relation between banks and enterprises has become depersonalized in the districts as well.

An additional aspect to be taken into consideration is that in the past the Loan Guarantee Consortia played an important role in facilitating access to credit for small businesses operating within the district (Brusco and Righi, 1989, pp.411-14). Today, however, the role of these Consortia has been considerably reduced, above all because they have been declared equivalent to banks and are therefore subject to the same regulatory framework. Thus recourse to a Loan Guarantee Consortium can in the end result in a further slow-down of the process of obtaining credit. It should also be noted that in the new financial system, the more structured enterprises, which are in possession of considerable capital as well as having a budget surplus and greater market visibility, are favoured as regards access to credit, concerning both quantity and conditions. This is particularly true now (2016) that the European Central Bank has adopted an expansionary monetary policy in order to encourage economic recovery in Europe. Furthermore, despite the presence of alternative financial tools on the market, such as private equity, the credit granted by banks still remains the principal source of external financing for enterprises forming part of the districts, even in the case of medium-sized businesses.

5. Can the Marshallian Industrial District adapt to the global economy?

5.1. The industrial districts in the Italian economy today

Despite the marked downsizing of employment in the manufacturing sector of the Italian industrial districts and the transformations described in Sect. 4., the districts are still the mainstay of the Italian economy. A recent study has shown that there are three times as many industrial agglomerations in Italy compared to Germany, and ten times as many compared to France (Alampi, Conti, Iuzzolino Mele 2013). The continuing relevance of the industrial districts is further confirmed by the 2011 census data. A comparison with the 2001 census indicates that employment figures remained unchanged during the period in question: thus in Italy, both in 2001 and 2011 the districts accounted for roughly 40% of the workforce engaged in manufacturing (ISTAT 2015a, p.4). Districts were still concentrated in the regions of the North-East and Central Italy: Lombardy, Veneto, Emilia Romagna, Tuscany, Marches (ISTAT 2015a, p.1). The sectors of specialization were still, as in previous surveys, those constituting the so-called *made in Italy* phenomenon, i.e. products for the person and the home, and light mechanical engineering. In this regard, districts specialized in mechanical engineering have increased over the last decade, rising to 38 out of 141 districts surveyed (ISTAT 2015a, p.9). Moreover, despite the presence of several fairly large enterprises, the average size of manufacturing firms remains low: 9.1 employees per establishment (ISTAT 2015a, p.3).

In addition to the industry and services Census evidence, information is also obtained from an analysis of the balance sheets of district and non-district enterprise balance sheets, which is carried out yearly by the Research Office of Banca Intesa Sanpaolo. The December 2015 report states that "in every year between 2009 and 2014 the district enterprises achieved better results than non-district businesses. Thus the districts have completely regained what they were shown to have lost when the 2009 survey was conducted, when their turnover suffered a dramatic 15.7 % drop.... In

²⁷ However, some empirical studies have shown that before the great financial crisis, the firms within a district were, on average, less rationed in the access to credit than was the case for businesses located outside the district (Alessandrini, Presbitero, Zazzaro, 2008). In contrast, during the financial crisis, businesses forming part of a district were found to have undergone greater rationing as regards access to credit than was the case for those located outside the districts (Unioncamere, 2012, pp.60-64).

contrast, the gap recorded in non-district businesses was still significant, standing at 5.9%.²⁸ ((Intesa Sanpaolo 2015, p.37). The Intesa Sanpaolo analysis also showed that district enterprises are on average more likely engage in exporting (38.4% of district businesses compared to 29.4% of non-district firms) and to have trademarks registered abroad (32.7% as against 25.8%), to invest in innovation (50 patents every 100 businesses compared to 42) and make investments abroad (24.9 every 100 district firms versus 18). (Intesa Sanpaolo 2015, pp.8-9).

However, this good performance conceals a marked heterogeneousness among the districts and also among firms in individual districts. As regards differences among firms, analysis of their balance sheets reveals positive turnover and profitability trends, above all for medium-sized businesses whereas both indicators remained, on average, negative for microbusinesses²⁹. In addition, microbusinesses were struggling to cope with bank debts and therefore experienced difficulty in maintaining financial balance, even when their industrial results were favourable (Intesa Sanpaolo 2015, p.31). This outcome shows while many small businesses within a district are struggling, the reason is not that they are inefficient - a charge often brought against them - but rather that they face difficulties arising from the overall financial crisis and problems in access to credit.

The gap between the economic-financial results achieved by more structured enterprises and those recorded for many small enterprises forming part of a district also emerges from other studies. The most successful performance of district versus non-district enterprises, also in terms of profitability, i.e. the so-called “district effect”, which was demonstrated empirically by econometric research conducted in the 1980s and 1990s (Signorini 1994, Fabiani et al 2000), would appear to have vanished ((Foresti et al 2009). However, a very recent analysis which decomposes the “district effect” by business size class points out that during the period 2004-2013, when investigations concerned similar sectors, enterprises with more than 100 workers and located within the districts showed greater profitability than was the case with non-district enterprises. In contrast, for enterprises with fewer than 50 workers the “district effect” was negative (Storai 2016). But as this result concerns the overall data on 141 Italian districts, it is quite likely that it may conceal differentiated trends among districts.

5.2. Possible adaptation of Marshallian Industrial District?

The model of the industrial district is characterized by the division of labour among enterprises, but what distinguishes the Marshallian Industrial District from other forms of organisation is that here “social forces cooperate with economic” (Marshall 1920, p.276). This facilitates integration of the division of labour among closely complementary activities, thereby transforming the district into an “organic whole”. Furthermore, this characteristic favours the rise of a particular kind of environment that Marshall calls “industrial atmosphere”, where information and knowledge circulate more easily and thus promote innovation and entrepreneurship.

However, in the article where Becattini proposes again the concept of the Marshallian Industrial District he recognizes that cooperation among economic and social forces is advantageous but uneasy to maintain; moreover, it is subject to change over time on account of the evolution of economic and social forces within and outside of the district. Consequently, “the organisation of production and the social structure fluctuate continuously between more or less capitalistic forms (in terms of share of work in the form of waged labour, of greater or lesser vertical integration, of

²⁸ The results refer to a sample of manufacturing and agricultural firms with a turnover greater than 750 thousand euro in 2008, representative of district and non-district areas: the analysis focused their balance sheets from 2008 to 2014 (Intesa Sanpaolo 2015 pp.15-17).

²⁹ In the investigation performed by Intesa Sanpaolo the medium-sized enterprises are those with a turnover between 10 and 50 million euro and micro-enterprises are those with a turnover between 750 thousand and 2 million euro in 2011. (Intesa Sanpaolo 2015, p.16)

greater or lesser economic and financial concentration, of a more or less ‘Fordist’ or ‘neo-handicraft’ nature of the organization of the process of production, etc.)” (Becattini 1990, p.49). In the same article Becattini also hints at the consequences of a marked reduction in demand for the products in which the district is specialised, which would result in many businesses closing down and thus extensive unemployment within the district. In a situation of this kind, “beyond a certain threshold, firm bankruptcies start a chain reaction and those workers among the most sought after, who have lost employment, begin to migrate...When this happens, the wealth of experiences and production capacity accumulated in the course of time...begin to vanish and, consequently, both the system of values and the network of local institutions begin to break down” (Becattini 1990, p.50).

Faced with the radical changes in the external context summarized earlier (section 3), various different evolutionary outcomes can be envisaged. If the people, businesses and institutions of the district mobilise their forces so as to build up a reaction against the difficulties caused by the changed context, then the decline of the district could be averted: its former dynamic energy could be revitalised through regeneration of an economic and socio-institutional structure, while still maintaining the above mentioned characteristics.³⁰ In the following pages we will attempt to outline the changes in the district’s evolutionary processes that could allow adaptation to the global economy.

5.2.1. The new division of labour

Globalisation, liberalisation and the new forms of communication technology have changed the way in which production is organized. The predominant approach is now based on the model of the global value chain (Gereffi et al. 2005), that is to say, the international fragmentation of the production processes. Originally, this model was first adopted by the multinationals of the developed countries, which engaged in gradual delocalization of production towards low labour cost countries. Initially, the Italian district enterprises sought to mount resistance to this new state of affairs, but it was not long before a number of entrepreneurs realized although the local external economies still played an important role, they were no longer sufficient, on their own, for survival in the new context. Accordingly, it began to be acknowledged that recovery of competitiveness could be achieved only through changes both in the products as well as in the internal and external organization. We noted earlier that some of the businesses adopted a combination of strategies, including that of delocalizing the most labour-intensive standard phases and the longer series. As was also mentioned earlier, it is generally accepted that only under certain conditions can the international division of labour have positive effects on the district’s competitiveness: namely, only if a fairly numerous quantity of enterprises and activities remain or become incorporated into the local production system. Furthermore, they need to be well integrated with one another and have high value added, both as regards their manufacturing activity and also their special services that have been set up to support manufacturing. This is a necessary condition for generating that “industrial atmosphere” which constitutes a crucial element of the district’s advantage as a form of organization.

At first sight, multilocalised division of labour seems to be in contradiction with the concept of the industrial district. However, on closer inspection the space embodied by the Marshallian Industrial District is a space of social and economic relations rather than a geographic concept. It is a space that can be built up through repeated interaction among subjects that have various different specialisations and who engage in organized exchange of goods, services, information and

³⁰ When describing the evolution of the districts, the life cycle theory is not appropriate, because it fails to take into account that the district is a human organization and that humans can engage in deliberate individual and collective action. For a critique of the life cycle theory applied to cluster see Trippi et al, 2015.

knowledge. The space of socio-economic relations changes over time, due to the evolution of social and above all economic conditions. Thus it need not necessarily involve a space restricted to a single locality. A clear example of trans-national socio-economic spaces can be found in the networks of relations between migrants and their place of origin, and between the different locations in which they have settled. In this regard, the case of Chinese migrants is emblematic³¹.

Relations of cooperation and trust among people can also arise as a result of an inherited sense of belonging, as for instance in the case of one's family background or origin from the same home town. But such relations may also derive from repeated interaction among subjects who operate within the framework of the same profession, or the same organization, or even the same institution (Bagnasco, 2006). With the increase in economic development, trust of the first type tends to be weakened and is replaced by a form of trust of the second type, more carefully built up and founded on reputation (Schmitz 1999). The advantages of the "industrial atmosphere" and thus of the "localized thickening...of inter-industrial relationships" (Becattini 1989, p.132) do not disappear with globalization and the progress in communications: on the contrary, at times they may even be enriched, extending market niches to the global level. This is due to the fact that in the case of production activities where demand is frequently fragmented and constantly variable, and technology undergoes frequent and rapid change, it is not sufficient to be part of a flexible organization that allows easy adaptation to changing circumstances. Rather, it is vital also to be part of an environment that is rich in knowledge and relations, where information, including non codified information, circulates by virtue of the social and economic interaction among the various operators. Such an environment not only facilitates reciprocal learning and the creation of a specific production culture and identity, but it also encourages the ability to interpret ongoing changes (on the demand and also on the supply side) as soon as they are perceived. This facilitates, or even triggers, the prompt introduction of innovations likely to achieve success (Scott, et al. 2001, pp.15-16). Thus it becomes a critical resource that is of aid when the decision-making process takes place in a climate of increasing uncertainty. It is clear that the range of productions that find themselves facing this kind of situation most certainly includes the goods belonging to the *made in Italy* phenomenon.

On the basis of the literature examined earlier ((sub-section 4.1), it can be stated that the case of Montebelluna and that of Santa Croce sull'Arno seem to constitute examples of districts in which the international division of labour has not translated into a decline of the district. On the contrary, it has prompted an evolution of these districts, leading them to specialize in high value added and capital-intensive (including human capital) manufacturing and service activities.

5.2.2. *The new flexible integration*

The transnational extension of the division of labour and the greater differentiation and enhancement of the products, i.e. the strategies adopted by the Italian district enterprises to survive in the new competitive context, have consequences pertaining to the process of integration of the division of labour. In effect, on the basis of the general rule established by Alfred Marshall, "the development of an organism, whether social or physical, involves increasing subdivision of functions between its separate parts on the one hand, and on the other a more intimate connection between them" (Marshall 1920, p.241). The need to adapt to globalisation has also given rise to larger enterprises than was the case in the past. The citation of a further observation by Alfred Marshall is of relevance here: "the task of marketing efficiently over a large area makes demand for almost unlimited capitalistic resources, unless it is facilitated by association with others engaged in the same industry" (Marshall 1919, p.511). This development is due above all to the increasing

³¹ On transnational networks of Chinese migrants and globalization see Lever-Tracy 2008. On the case of the Chinese migrants off Prato, see Dei Ottati 2014.

importance of the marketing function. Moreover, with globalization and concentration of the distribution sector, district product marketing cannot be carried out by “pure entrepreneurs” (Becattini 1990, pp.42-43), whose most important capital previously consisted, in relations on the one hand with the district producers and, on the other, with external market clients. Becattini himself argues that “in a world dominated by finance capital, if the district is unable to set up its own trade web for the marketing and protection of the trademark of its typical product in the main external markets, then it is doomed to fail” (Becattini 2006, p.669). In the case of the districts, the size increase has involved mainly the final firms, namely precisely the ones specialized in marketing the products manufactured by local subcontractors prior to the advent of globalisation. As we saw in the case of the mechanical engineering districts of the Emilia region, the quest for larger size partly also concerned the subcontractors which, through various forms of aggregation, engaged in joint action in order to supply a more complex product or a range of products, and to cover the cost of searching for clients outside of the district, who were often located abroad. This enabled the enterprises to exploit the opportunity of the strong development of the intermediate goods market that arose from international fragmentation of the production processes.

The transnational extension of the division of labour, together with the growth in size and organizational forms of a limited number of enterprises, has reduced the relative symmetry of relations among subsupplier and final enterprises within the districts. These transformations, in addition to the changes in the local society, mentioned earlier, in conjunction with the fierce competition on the local markets triggered first by globalisation and then also by the international financial crisis, have markedly reduced the traditional cooperation based on the sense of belonging³². Taken together, these modifications have undermined the viability of the “communitarian market” as a mechanism of integration of the division of labour, because respect for the implicit rules of the district has been weakened or has completely disappeared, while relations with the external supplies are, at least in the beginning, of a purely market-based nature, or are of a hierarchical nature in the case of direct foreign investments.

In this new context, many teams of businesses have undergone a transformation and have become groups whose links are based on ownership relations between the final firm and the subsuppliers who are endowed with the fundamental skills necessary in order to be competitive on the global market. Other teams of businesses have formalized their relations by means of long-term contracts and other explicit forms of agreements. In numerous cases, the organization of subsupplying, especially as far as the larger enterprises are concerned, is now structured on more than one level. The number of first level suppliers is generally limited, and they have close and collaborative relations with the main enterprise. They organise the production process by using second level subsuppliers, which implies that that the first level suppliers must possess managerial skills and financial resources which were previously not required in the case of a district subsupplier. This form of organization introduces hierarchical elements into relations among the enterprises, even though this is usually a type of hierarchy that can change over time and tends to depend on the particular client involved. In the Emilia mechanical engineering districts, for instance, there are subsuppliers that are first-level subsuppliers in some relations but second-level suppliers in some other cases (Bigarelli and Russo 2012, p.64). With the increasing pressure of international competition, the need to contain costs and maintain elevated quality standards and capacity to innovate, as well as tight delivery deadlines, has led to the adoption of procedures for constant quality control and control over production and delivery times and costs among the various subsuppliers. The procedures also involve frequent meetings between the subsuppliers and the

³² The reduced trust of subcontractors in the final firms emerged clearly in two empirical studies carried out in the district of Prato at the beginning of the new millennium (Dei Ottati 2005).

managers of the client enterprise. Overall these procedures, which are designed to promote exchange of information and interaction, can encourage the development of cooperative relations.

In the new form of flexible integration of the division of labour among the enterprises, the market plays an important role because price pressure has increased with globalization. However, the market is unable, on its own, to obtain the “more intimate connection” that is needed for the coordination of a multi-localised production process that also undergoes continuous technological and product changes; in such a context, close coordination is needed in order to ensure not only a rich variety of products but also high quality and prompt delivery times. Accordingly, in addition to the market a number of steps have been taken to introduce elements of conscious management (hierarchy), partly through greater specification and codification of the work to be carried out by the subsupplying enterprises, and partly also with the introduction of several levels of subsupplying as well as the formalization of relations, which at times taken on the form of ownership (groups of enterprises). This notwithstanding, since the need to have a flexible organisational structure that is capable of continuous innovation requires the cooperation and commitment of various different actors, the new form of integration also needs to generate collaboration. Now that semi-automatic cooperation (based on the sense of belonging and the district code) has been eroded, cooperation among the various subjects involved must be built up through repeated economic relations. This is achieved partly through formal coordination mechanisms among enterprises, thereby facilitating exchange of information and problem-solving, and allowing the development of relations of reciprocal trust and a shared technical language.

In the case of integration of the division of translocal labour, and often transnational, labour, it seems possible to surmise that the aspects concerning the market and hierarchy are of greater importance as compared to local relations. This can be attributed not only to the fact that activities which are habitually delocalized are the most standardized activities and therefore more easily codifiable, but also to the fact that the creation of collaborative relations requires time as well as direct and frequent interaction. But even in this case, utilization of technical staff belonging to the client enterprise who either relocate themselves directly to the foreign establishments, or at least visit them frequently in order to exercise control over production and assist in problem solving as well as assuring achievement of the required quality standards, can help to develop partly collaborative relations. In the Montebelluna district, delocalization seems to have given rise to the formation of a satellite cluster at Timisoara in Roumania, partly as a result of the transfer of Montebelluna subsuppliers to Roumania (Belussi 2010)³³.

In some particular cases where a community of transnational entrepreneurs has taken shape, as for instance in Silicon Valley with the community of engineering experts who studied in California but came from Taiwan, integration of the division of labour between Silicon Valley and Taiwan makes use of the social and professional relations of this community to achieve flexible integration of the division of labour between the two production systems that are specialised in complementary activities ((Saxenian 2002). Here too, the communitarian relations are important but are not, in themselves, sufficient. They have to be combined with trust that is built up on the basis of a reputation for professional expertise and which must be continually renewed (Hsu and Saxenian 2000). With regard to the Italian districts with which I am familiar, an integration of the division of labour similar to that which is achieved between Silicon Valley and Taiwan could, perhaps, be developed in the district of Prato. At present, Prato has a large community of immigrant entrepreneurs who originally came from Wenzhou (China), and who maintain economic and social relations with their place of origin. But it should be borne in mind that such an outcome requires the

³³ For a model of multi-embedded transnational industrial district as an adjustment strategy to the challenges of globalisation, see Zucchella 2006.

complete integration of these immigrants in the economy and society of Prato (Dei Ottati 2016). Moreover, as in the case of the integration between Silicon Valley and Taiwan, this would also call for the support of a deliberate action by the institutions of both locations, in such a manner as to create a socio-institutional channel of communication that would facilitate distance integration (Hsu and Saxenian 2000, pp.1997-8)³⁴.

5.2.3. *The new integration of external knowledge*

As argued by Becattini and Rullani (1993), a local production system cannot exist if it has no systematic connection with the global knowledge network: for, as stated by Marshall (1920 p.138), “knowledge is our most powerful engine of production”. In effect, in order to reproduce itself over time, a local production system must be able to sell on the external market the goods it produces. Therefore, it must constantly take into account the scientific, cultural, organisational and institutional evolution that takes place in the world.

Before the era of globalization the Italian districts showed they were capable of being innovative. This was above all an innovation of an incremental type, which integrated external technological knowledge with a base of contextual knowledge that was in part the knowledge and craftsmanship inherited from the past. External knowledge concerning the technical skills that were important in the district’s production and, in particular, the knowledge concerning the trends affecting demand, was introduced into the district by the numerous final enterprises (which not infrequently were embodied by pure entrepreneurs). Such enterprises maintained the contacts with the external markets, which were often foreign markets, on which they depended for supply of the raw materials and for sale of the products. Constant maintenance of these contacts was assured by numerous commercial intermediaries. A non negligible role in the introduction and dissemination of external codified knowledge was played by the technical schools for localized industry, which trained new entrepreneurs, in the districts where such schools were present. Subsequently, this function was also fulfilled by specialised centres for the provision of real services to local enterprises (Brusco 1992).

Globalisation has, on the one hand, encouraged the formation of local production systems similar to the Italian districts in various regions of the emergent countries of Asia and Latin America (Christerson and Lever-Tracy 1997; Schmitz 2004; Wang and Mei 2009; Parrilli and Garcia 2009), while on the other hand it has created difficulties for the districts of the developed countries, including the Italian districts. Therefore, many small enterprises have failed to survive. Nevertheless, some of the district enterprises have bounced back, introducing innovation in products, processes and the organization of production and marketing: in such cases, they have regained their competitive edge.

In the districts that are adapting to the new context, the process of integration of contextual knowledge with external codified knowledge – a process that is of paramount importance today – is achieved predominantly through two types of actors: the more structured enterprises and the knowledge intensive business services)³⁵.

The medium-sized enterprises and the groups of enterprises that have taken shape in the Italian districts have built up a structured system of relations with the external environment. They have a network of external suppliers and also a commercial network on the foreign markets. Furthermore, in order to support the innovation and marketing functions, they make use of codified knowledge intensive services, which are not infrequently located outside of the district, often in the large cities

³⁴ An other example of local institutions supporting internationalisation of district firms is that of Santa Croce sull’Arno (Bellandi and Caloffi 2008)

³⁵ On industrial district external sources of knowledge, see Camuffo and Grandinetti 2011.

where such services are concentrated. Additionally, and specifically in order to develop innovations, the more structured district enterprises have established formal cooperation agreements with universities and research centres, as well as with other external enterprises that have complementary knowledge, (Mauriello 2015). Finally, the personnel of the medium-sized businesses are themselves generally in possession of a high level of codified knowledge. This characteristic is vital in order to ensure constructive interaction between the client enterprise and the enterprise supplying research & development and design services as well as consultancy services on management, commercial or technical matters.

The other type of enterprises that aim to achieve integration between the codified knowledge which circulates within the global networks and the districts' contextual knowledge is represented by knowledge-intensive service enterprises. Such enterprises have sprung up in the districts that are most successfully adapting to globalization, where they respond to the specific new needs of local manufacturing businesses. An emblematic example is that of the district of Santa Croce sull'Arno. The enterprises of this kind, including those localized in the districts, tend to have clients that are also located outside of the district, because there are no transport costs associated with the supply of services. Furthermore, once a suitable interaction for effecting exchange of knowledge with the client has been established, the new communication technologies can be utilized. Therefore these enterprises interact with many subjects who operate in different sectors and localities, and they are often in contact with other service enterprises; the resulting exchange and circulation of information favours the creation of new knowledge, not only in terms of technical-scientific knowledge but also of an aesthetic and symbolic nature. The latter aspect is of vital importance for goods belonging to the so-called *made in Italy* category.

In previous decades, when innovation tended to be incremental and the integration of external knowledge in the district was accomplished predominantly by a large number of final entrepreneurs, the mechanism underlying the spread of external knowledge was more decentralized than in the present-day situation. Today, the number of firms that have the channels and resources to gain access to external knowledge has noticeably decreased. This has resulted in the introduction of elements of centralisation of the mechanism through which external knowledge penetrates into a district and is disseminated, as well as elements of hierarchy concerning internal relations within the district. It is worth pointing out, however, that such a change could induce the larger firms to refrain from disseminating the new knowledge within the local system. The likelihood of this risk is to some extent limited by the need to have a flexible organization, which implies that relations with the local suppliers are often not exclusive; accordingly, this enables the new knowledge to circulate within the district, at least to a certain extent, although less intensely than in the past. Another important consideration is that the medium-sized enterprises need to be able to use the district's contextual knowledge, because that is precisely the distinguishing feature of the district's manner of engaging in competition, given that codified knowledge is, by definition, identical everywhere. Naturally, such a situation requires that the contextual knowledge is continuously integrated with codified knowledge, because it would otherwise become little more than folklore and thus no longer of any use (Brusco 1996, p.150).

But in the situation facing the districts today, many small enterprises, whether final or sub-suppliers, not only lack the financial resources needed to gain access to external codified knowledge, but quite often do not even have the cognitive resources that are essential for integrating the contextual knowledge they possess with the new codified knowledge. Therefore in some cases the smaller businesses have aggregated together with the specific intention of seeking to achieve greater commercial and cognitive openness towards the external context. In this regard, a possible rebalancing of the gap that has arisen between the larger and the smaller enterprises could be achieved by the creation of a local institution entrusted with the task of providing the smaller

enterprises with knowledge-intensive services, so as to facilitate extensive dissemination of external knowledge and thereby reproduce the “industrial atmosphere”.

5.2.4. Deliberate institutional governance and globalisation

According to Alfred Marshall, economic and social evolution depends on the dialectic between automatic action (routines) and deliberate action (innovative action) (Raffaelli 2003). Since the industrial district is based on market relations that are intermingled with modes of behavior that follow implicit interactional rules, it is an organization whose functioning depends to a large extent on “semi-automatic” mechanism. ù

We noted earlier that changes in the competitive context have, on the one hand, led to fierce competition on the local markets and, on the other, induced significant changes in the functioning of the evolutionary processes of the district that were examined in the previous sections of this paper. The automatic mechanisms have been partly replaced by elements of more conscious direction and formal organization. Such changes have affected above all the enterprises that have increased in size (medium-sized enterprises and groups of enterprises). So far, we do not have sufficient evidence from empirical research to be able to assess whether this transformation has involved a substantial portion of the local system, nor do we have data indicating whether this change affects only a few enterprises: in fact, we do not even know how many districts are adapting positively to the new context. As in the case of delocalization, the increase in size and the consciously managerial approach of some firms may lead to a recovery of competitiveness in the local system, but such an outcome could, on the contrary, result in the overall decline of the local system as a district. The outcome will depend on the behaviour of the enterprises that have succeeded in regaining competitiveness: if, by virtue of their access to external knowledge and markets, they contribute to a renewal of the body of knowledge, with vibrant entrepreneurial action and cooperation among enterprises, then the effects will be positive both for the local economy and the local society. However, it cannot be excluded that the behavior of these firms may be of a predatory type, if they fail to allow circulation of the knowledge they possess and exploit their position of power to the detriment of the smaller enterprises, thereby thwarting rather than favouring renewal of the smaller businesses and the birth of new enterprises, then the district as such is doomed to decline, despite the fact that a few enterprises may be prospering.

It was pointed out earlier (sub-section 2.5) that even in periods of gradual change, deliberate governance by the local institutions is vital in order to promote compatibility between economic and social development, and also to satisfy collective needs such as training, access to credit, or the building up of infrastructures for localized industry. In a context of radical change such as that which took place between the end of the XX century and the beginning of the new millennium, the need for conscious governance by local institutions is even more strongly felt. This is due to the fact that adaptation to the new context cannot involve a mere handful of enterprises: rather, it must be collective and must involve the economy and society as a whole. Given that the small firms generally do not have sufficient financial and human resources to gain access to the new codified knowledge, or to the external markets, it is indispensable to set up organisations that will assist them in the process of adaptation; moreover, in order to balance - at least partly - the asymmetry of relations that has emerged between smaller and larger enterprises, such assistance should not be granted to those who have sufficient resources to proceed on their own. Deliberate institutional governance should not replace the economic actors, but rather it should help the smaller enterprises to overcome the difficulties that impede their adaptation. This can to some extent be accomplished by encouraging the building of collaborative relations among the smaller enterprises.

In addition to setting up local institutions aimed at assisting the small enterprises in the adaptation process, the local governments should play a fundamental role in several other directions as well

They should be capable of organizing a public discussion forum with participation open to the various economic and social categories, in such a manner as to encourage dialogue among the different economic and social actors and to assist in the process of mediating among the different interests. Such a move should allow general and medium term interests to prevail over the immediate interests of a small number of powerful enterprises. If the various actors succeed in achieving a shared vision on the future of the local system, then investments and the behavior of the different subjects would be oriented towards a common end: their actions would become coordinated, thereby boosting a relaunching of local development (Bagnasco 2009). Participation in a forum of this kind should also be open to the representatives of the foreign immigrants who have become the new actors of the local economy and society in many Italian districts (Barberis 2008). At present, we know little about the role played by the local institutions with regard to the Italian districts' adaptation to globalization. In the case of the furniture district of Alto Livenza, the Professional School of Furniture still plays an important role in renewal of contextual knowledge and in the training of new entrepreneurs: in fact it has been stated that "...the school acts as a collaborative public space where owners and managers of all the firms in the region work together on school related activities and use the same networks and sometimes the same meetings to solve industry wide issues" (Breznitz and Buciuni 2015, p.115). Additionally, after the turn of the century the local government and the chamber of Commerce took the initiative in setting up a public-private institution that organizes the Salone Internazionale del Mobile (International Furniture Fair) and also the Trade Fair for components and accessories for the furniture industry. This fair has created "a bridge between domestic and global buyers and regional specialised manufacturers" (Breznitz and Buciuni 2015, p.116). Taken together, these developments have encouraged reproduction of the dynamism of the district even in the new context. However, the evidence concerning the textiles and apparel districts shows that after the closure of many small enterprises and the delocalization of some of the larger firms, even the local institutions have lost their ability to exercise constructive governance and galvanise the strengths of the districts (McCaffrey 2013). Therefore, the considerations of this section are based above all on a reflection concerning the experiences of the past.

Finally, I believe it is important to underline a theme that has been neglected in studies on the district, but which is of fundamental importance for the reproduction of the industrial district over time, albeit in forms that are continuously changing. I am referring here to the role of the policies and decisions enacted by national and supranational institutions. Studies on districts of the past have shown that national policies favouring concentration of the banking and financial system, as well as of industry and distribution, have adverse effects on the reproduction of the industrial districts (Zeitlin 2008). As explained earlier, the concentration of the distribution system, in combination with globalization, has shifted the balance of economic power towards the large buyers who have proceeded to obtain their supplies in low labour cost countries, thereby drastically and more or less permanently undermining the demand for district products in the industrialised counties. Moreover, the liberalisation and privatization of the banking system, introduced in Italy in conformity with European regulations (sub-section 4.2), has led to the disappearance of the local banks and, at this point, also of the cooperative credit banks³⁶. In sum, these changes have exacerbated the problems of access to credit facing the small enterprises in the Italian districts, and such an outcome by no means favours their adaptation to globalization.

The 2008 financial crisis demonstrated that a problem of conscious governance is far from being an issue that concerns merely the districts or the national states. Rather, it more generally involves the current setup of global financial capitalism. With the rise of neo-liberalism, which now enjoys a

³⁶ On the abolition of the cooperative credit banks in Italy and the negative effects of this Act, see Cappellin et al. 2016.

predominant position in the main international institutions, such as the International Monetary Fund, World Bank, World Trade Organization, European Commission, the evolution of the global economy has been left to the automatism of the market. But this is far from being a perfect competition market. Rather, it is a global market dominated by a handful of large concentrations of economic-financial powers, with respect to which the states – above all those of southern Europe such as Italy – have become impotent on account of the manner in which the so-called Eurozone has been established (Cowling and Tomlinson 2011; Blankenburg et al. 2013). It is by now clear that these changes have led to an increasingly unbalanced economic development, with marked inequalities within and among the different places. This has intensified uncertainty about the future and has also aggravated social conflicts. In such a situation of governance of the global economy, there is little scope for a form of “capitalism with a human face” (Becattini et al. 2009, p.XXXIII) such as that of the industrial district, which can reproduce itself only by combining economic growth with social progress.

As stated by Keynes almost a century ago, “the world is not so governed from above that private and social interest always coincide... It is not a correct deduction from the principles of economics that enlightened self-interest always operates in the public interests”. And he continued by saying: “the ideal size for the unit of control and organization lies somewhere between the individual and the modern State. I suggest, therefore, that progress lies in the growth and the recognition of semi-autonomous bodies within the State-bodies whose criterion of action within their own field is solely the public good as they understand it” (Keynes 1926, p.10).

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