XXXIV CONFERENZA ITALIANA DI SCIENZE REGIONALI

INDUSTRIAL DISTRICTS AFTER THE MARSHALLIAN AGE: EVIDENCE FROM THE VENETO REGION

Valentina DE MARCHI*, Roberto GRANDINETTI**

* Dipartimento di Scienze Economiche e Aziendali "Marco Fanno", via del Santo 33, 35123 Padova, email: valentina.demarchi@unipd.it
** Dipartimento di Scienze Economiche e Aziendali "Marco Fanno", via del Santo 33, 35123 Padova, email: roberto.grandinetti@unipd.it. Corresponding author

ABSTRACT In the last 15 years, Italy's industrial districts have been undergoing profound changes due to the growing globalization of economic activities and also to socio-cultural factors. Based on a number of empirical studies, this paper identifies and analyses several phenomena now amply evident in Italian industrial districts, including: the impact of immigration on how the social and the production structures mutually interpenetrate; the shrinking reproducibility of the entrepreneurial factor; the diversification of the local production structure; an increased concentration of the turnover and workforce at few firms; a weakening of the fabric of relations between enterprises. The combined effect of these phenomena has been to dismantle the Marshallian model that once characterized the majority of Italian industrial districts. In this paper we test empirically this result considering the industrial districts (IDs) of the Veneto region, with the aim to verify if it is still possible to refer to districts external economies. More precisely, we compare the ID areas of this region with non-district ones specialized in the same industries based on dynamics in a ten-years period in: i) the population of firms; ii) the IDs' specialization degree; iii) firms' economic performance.

1 Introduction

This paper explores the changes underway in Italian industrial districts, conducting a broad review of the empirical literature on the topic published in the last 15 years (1998-2012) and verify if it is still possible to speak about district external economies. The filter used to select the articles and books for our review was the documented presence of major social and economic changes within the district(s) considered, paying particular attention to changes with an impact on their Marshallian features. Some of the studies considered the Italian industrial districts as a whole, based on certain quantitative variables, e.g. the district enterprises' growth and profitability performance indicators. Others analyzed a particular phenomenon, such as the immigration of foreign workers in Italy and in its regions, but they contain some interesting comments on the situation of the industrial districts too. The majority of the research that we reviewed focused on single districts, however, or compared different districts that share the same sectorial specialization. Finally, there were also some studies on

single enterprises or institutions with a size or a role that makes them particularly important to the district in which they operate.

Our review enabled us to identify several recurrent phenomena that, taken together, go to show how the Marshallian features of the Italian industrial districts are disappearing. To be precise, these phenomena include: the emergence of a multi-ethnic society within the districts; the socio-cultural discontinuity induced by the generational turnover; a greater industry heterogeneity of the production structure of the district territories; an increased concentration of employees and other variables indicative of the production of value in the populations of district enterprises; the gradual fading of the network factor, meaning the fabric of inter-organizational relationships that distinguishes an industrial district (of Marshallian or other type) from a mere geographical concentration of enterprises operating in the same industry.

All in all, such phenomena suggest that the differential competitive advantage that characterized industrial districts in the past has faded away. Notwithstanding the importance of such thesis for policy making, it has not been empirically verified in a rigorous way yet. This paper is a first attempt to fill in this gap, focusing on industrial districts located within a region (Veneto) rich in their presence. In order to verify if a differential competitive advantage still exists, we compare the IDs areas with non IDs ones, controlling for industry specialization with respect to: changes in firms' demography in a ten-years span; the degree of industry specialization of industrial district areas; firms' financial performance.

2 The competitive advantage of Marshallian industrial districts

Industrial districts are a form of spatial organization of production, which is not homogeneous. Its variety is particularly evident in Italy, where there is a higher concentration of industrial districts than in other countries (Paniccia 1998). The numerous empirical studies on single districts nonetheless enable us to identify several common characteristics. They occupy a circumscribed territorial area, which contains a population of manufacturing and service enterprises operating in the same business field but having different specializations and being interconnected by relationships (Becattini 1990). IDs are formed by firms of different dimensions, but the division of labor among them gives rise to a numerically marked prevalence of smaller businesses. Institutional players (both public and private) generally operate in industrial districts too, generating positive externalities for the local enterprises, particularly through social regulatory measures, the provision of public infrastructures, the production of services and the implementation of projects for the district's development (Storper 1993).

Each district population is characterized by a category of end products. In addition to this horizontal dimension, to describe the population of firms in a district adequately we must also consider a vertical dimension along which the firms are distributed, occupying the various stages in the supply chain (Maskell 2001). Firms operating in the industrial districts generate a considerable variety of inputs, from the semi-processed parts and components needed in the various specialized stages of the production processes characteristic of the district to the materials, machine tools and other technologies used in these processes, and various types of services. The district's horizontal dimension unfolds instead at each step in the supply chain,

where we find enterprises that tend to produce the same type of output and are consequently in competition with one another.

The industrial districts as outlined above do not appear to differ in any way from the (geographical) clusters discussed by Michael Porter (1998) in an article that met with great popularity, and not only in the academic world. The author defined clusters as geographical concentrations of interconnected companies and institutions in a particular field. In actual fact, there *is* a difference, and it is by no means negligible. Porter disregards the spatial dimension of his clusters: among the many examples he provides, several cover the territory of a whole state, such as California or Sweden, whereas the industrial districts studied in Italy and other European countries always occupy far more limited areas.

When the father of the concept of industrial district, Alfred Marshall (1890) was looking at the industrial areas of Sheffield and Lancashire in the latter half of the 19th century, he recognized exactly the same elements as we find in the modern definition of industrial district, i.e. a specific territory, a given business area, a population of firms, and a web of relationships between the firms belonging to this population. To these distinctive elements, he added a strong interpenetration between the production domain and the social domain, or between a population of firms and a community of people to put it in the words of Giacomo Becattini, the economist who rediscovered the traits of the Marshallian industrial districts in the Prato textile district in Tuscany in the 1970s. To be more precise, Becattini defined the Marshallian industrial district as a socio-economic entity characterized by the interpenetration of a community of people and a population of firms, and specified that the Marshallian form of industrial district occupies a geographically circumscribed, naturally and historically bounded area that enables production activities and daily life to overlap (1990).

The strong link between the manufacturing structure characteristic of a district and the social structure of the district territory (that, for the sake of brevity, we can call the communitarian factor) is very important in the theory of industrial districts developed first by Marshall and later fine-adjusted by Becattini and his school, since it is attributed the capacity to reduce frictions (transaction costs) in the relationships between the actors located within the district (Dei Ottati 2003). The same factor facilitates the circulation of knowledge in the local setting (Camuffo and Grandinetti 2011) and the consequent formation, returning to the effective metaphor coined by Marshall (1890), of an 'industrial atmosphere'. Ultimately, the communitarian factor – that some authors have also termed 'collective identity' (e.g. Sammarra and Biggiero 2001) – is the distinctive trait of the Marshallian variant of industrial district (Markusen 1996).

The power of the communitarian factor derives from its positive effects on the competitive advantage of the single enterprises located within a given district. Marshall effectively summarized this complex causal relationship in his concept of external economies – outside the firm, but inside the district system in which the firm operates (Asheim 1996). In other words, physical proximity to a number of potential suppliers of inputs for the firm and/or potential buyers of its outputs is not enough to generate external economies; there have to be exchanges between these players within a 'community market' characterized by a shared language, common values and meanings, and implicit rules of behavior (Dei Ottati 2003). This set of elements – or communitarian factor – facilitates mutual understanding between people activating and managing any inter-organizational relationship within the district, and

this in turn reduces the transaction costs and improves the transfer and co-production of knowledge.

The interpenetration that explains the communitarian factor is not easy to create, nor to reproduce, as we shall see later. For a start, it demands a territorial area that is substantially homogeneous from the socio-cultural standpoint (a community of people), which is the outcome of a process that takes time. In addition, this social structure must innervate a production structure that is fairly homogeneous from the sectorial standpoint. The district-specific production activities must consequently represent a significant portion of the area's whole production structure. In order to complete the explanation of how the competitive advantage of the Marshallian industrial districs – or, better, of the firms located within these spatial contexts – takes place it is important to remember that the communitarian factor impacts on local inter-organizational relationships, which may be both direct and indirect. In turn, the network structure of the district imply that the production structure is fragmented with regard to the size of the businesses, that is the district's production resources must not be concentrated in one or just a handful of large enterprises.

3 Understanding the changing industrial districts: the Italian case

After the pioneering studies by Becattini (1979) and Brusco (1982), a vast amount of literature was published on the industrial districts. Numerous empirical studies convincingly applied the theoretical approach of Marshall and Becattini to a broad array of district systems in Italy and elsewhere. Such interest in the topic stemmed from the district model's spreading and success, particularly in Italy. For a long time, from the 1970s through the first half of the 1990s, industrial districts and their sizable populations of small and medium firms were an important, dynamic component of the Italian economy. Given their considerable weight in the country's manufacturing industry (Garofoli 2002), it is undeniable that 'districtuality' was a decisive factor in explaining the success of Italian goods on the international markets up until the mid-1990s.

But the Italian industrial districts have changed profoundly in the last 15 years under the increasing pressure of globalization as well as other factors. The structural changes that have taken place have been compounded by the world recession that began at the end of 2008. The combined effect has led to a formidable increase in the pressure of competition, accelerating the transition underway and inducing a tougher selection at enterprise level. Plenty of empirical studies have documented these changes both in single districts and for the industrial districts as a whole. A review of these works brings to light several recurrent phenomena:

1. the impact of immigration on the interpenetration between the social sphere and the production sphere;
2. the cultural discontinuity induced by the generational turnover;
3. the diversification of the local production structure;
4. a greater concentration of both the turnover and the workforce at few firms; and
5. the weakening of the fabric of relationships between firms.

These separate phenomena are interwoven and jointly shake the very foundations of the Marshallian-style district and even, as regards the last of the above phenomena, the structure of the industrial district in a more general sense.

3.1 Immigrant workers and entrepreneurs

As discussed, the interpenetration between social structure (the population or, better, the community of people) and production structure (the population of firms) lies at the very heart of the Marshallian variant of the industrial district. This is a mix of various ingredients – a common language, shared values, meanings, and customs, to return to the description of a community market used by Dei Ottati (2003) – that have a mutually reinforcing influence in awarding a differential advantage to relations developed within the district environment. Reasoning in terms of identity, the people working in the local enterprises and institutions feel that they belong to the same community, which implies that these individuals have a strong social and cultural homogeneity (Sammarra and Biggiero 2001). Without this socio-cultural homogeneity, there can be no community (identity) factor – and without the latter, there can be no Marshallian district.

The reproducibility of the district in the Marshallian sense has had to come to terms with the phenomenon of immigrant workers, whose numbers in Italy have increased enormously since the turn of the century. When the country's industrial districts had already substantially exhausted their capacity for expansion in occupational terms, the need for less-skilled workers in jobs affording low salaries was met thanks to the arrival of immigrants from abroad (Murat and Paba 2006). This phenomenon more or less intensively affected all the industrial districts, reaching very high peaks in cases such as the Arzignano tanning district in the Veneto region (Belussi and Sedita 2010). As a result, the workforce in the industrial districts became increasingly multi-ethnic, and increasingly heterogeneous from one district to another in terms of both the proportion of foreigners out of the total number of workers and the nationality prevailing amongst the immigrants. This last aspect was due to an embryo of ethnic community forming in a given industrial district, which would gradually take root and actively facilitate the arrival of other members of the same ethnic group (Ambrosini 2006). In the multi-ethnic (and multi-identity) districts, interaction between the various communities is very limited, as shown in a recent study by Carillo and Dessy (2012). What prevails is the model of oppositional identities: the sense of belonging to the country in which the immigrants have come to live and the sense of belonging to their country of origin are in contrast and mutually exclusive.

There are also signs of immigrant entrepreneurs becoming established in various industrial districts. A particular case concerns the textile district in Prato (Dei Ottati 2009; Santini *et al.* 2011), which was the first area to be studied in Italy as a 'perfect' example of Marshallian district, but this phenomenon has become fairly obvious in other districts too. Chinese businesses represent the numerically largest foreign component in today's Italian industrial districts and ironically, as some have already noticed, the set of Chinese enterprises in a given district relies on a strong communitarian factor that favors much more intensive cooperative relationships between themselves than can be seen nowadays amongst the other firms in the district (Calvosa 2006).

3.2 *Industrial districts and the test of the generational turnover*

The 'golden age' of Italy's industrial districts occupied the space of two generations that were essentially homogeneous in cultural terms and values. This homogeneity succeeded in smoothing out the differences between social classes, as Bagnasco (1988) explained when studying the industrial districts in Tuscany in the mid-1980s: as the author recalled, between the blue-collar workers (who lacked the features of a proletariat because of their personal autonomy and family resources), the craftsmen, the small entrepreneurs and finally the medium entrepreneurs, there was a socio-cultural continuum that allowed for interactions between people occupying different socio-economic steps and facilitated their mobility from one step to another.

This homogeneity has gradually dissolved over time, eroding the very foundations of the Marshallian edifice. In fact, combined with the effects of the above-mentioned migratory phenomena, there is the influence of the generational turnover. Let us consider, in particular, the problem of succession at the head of very small family businesses, and that of the generation of new ventures.

The young people who have latterly been faced with the problem of succession in their family business are not like their parents. They have the expectations of a generation that has grown up in a state of economic prosperity; they are generally better educated; they have a different capital of experiences and relationships, a system of values that does not disregard, but neither does it entirely accept their parents' work ethic. Given this cultural change, investing their future in the family business has become an increasingly less obvious choice and the once unprecedented problem of succession has gradually become crucial (Provasi 1999; Nazzaro and Ugolini 2003; Cerea 2010).

Industrial districts have always been characterized by a high company birth rate, which has been able to balance their equally high mortality rate and, in times of growing demand for the district's products, the former exceeded the latter. The fertility typical of these systems was fed particularly by spin-offs, i.e. ex-employees setting up their own companies, sometimes, at least initially, in conditions of economic marginality, but always sustained by values amply shared by the local community (Camuffo and Grandinetti 2011). This tendency to 'go a step further' has also changed, however, in the last 15 years. For various reasons, there has been a marked drop in the numbers of new companies established. As we shall discuss later on, globalization has drastically reduced the opportunities for new ventures in the manufacturing districts of the 'old' world. It is worth mentioning at this point that, from the social and cultural standpoint, the generational turnover has also meant that setting up your own business is no longer seen with the same widespread approval of the local community as it was in the past (Cucca 2010; De Marchi and Grandinetti 2012).

3.3 *From industrial districts to diversified local systems*

One of the reasons why the Marshallian districts developed over time was because the range of end products produced by the district's firms could be enlarged thanks to the pioneering action of a few enterprises, which began to develop the district's typical products using different materials, or they introduced new types of product (new to the district or even to the

market). This concentric diversification gradually prompted a more or less extensive change in all the Italian industrial districts, without altering their Marshallian nature (Brusco and Paba 1997). Available studies suggest, however, that the concentric diversification vein has recently run dry, making way for two very different trends. On the one hand, the set of activities involved in the business area identifying the specialization of a given district has shrunk. On the other, a reduction in the number of firms and in the number of employees involved in the district's characteristic activities has been accompanied and probably also stimulated by the development of other sectors, relating to tourism for instance (Grandinetti and De Marchi 2012).

Such a non-concentric diversification in activities that have no affinities or links with the system of firms and institutions occupied in the district specialization has had a healthy effect on the territories involved, but not on the reproducibility of the Marshallian model within their industrial districts. In fact, the interpenetration between the production and social spheres that is the life breath of the Marshallian model demands not only a homogeneous social structure (as mentioned previously), but also a dominance of the district specialization in the local production structure, as Becattini emphasized (1990).

3.4 Fewer firms, greater concentration

All the industrial districts in the 'old' world, including Italy, have had to come to terms with a formidable intensification of the competition on a global scale since the arrival on the world markets of a number of new countries capable of offering a vast range of intermediate and end products at competitive production costs. It is noteworthy that the more recently industrialized countries have often arrived on the scene thanks to the development of industrial districts or clusters, as in numerous cases studied in countries of Eastern Europe, North Africa, Asia and South America (Cammett 2006).

The globalization of production has had two different effects, both clearly apparent in the current picture of the Italian industrial districts. On the one hand, there has been a depletion in the number of firms operating in the districts due to the combined influence of higher company mortality and lower company birth rates. These dynamics are consistent with those observed in the Italian manufacturing as a whole, but they are accentuated in the industrial districts, as a study by Migliardi and Revelli (2011) on the 156 geographical areas identified as industrial districts by the Italian Statistics Institute (ISTAT) recently pointed out. On the other hand, in today's increasingly difficult competitive setting, the more forward-thinking and capable district firms have known how to react and have even succeeded in growing. Their growth has often been of external type, particularly through the acquisition of other local firms (Cainelli *et al.* 2006). We should also bear in mind the acquisitions of district firms by non-district firms, mainly foreign ones – a phenomenon that has intensified in recent years (De Marchi and Grandinetti 2012).

The joint effect of the two above-described changes – in terms of the consistency and structure of the demographic stocks – has been a significant increase in the concentration within the industrial districts of both the turnover and the workforce (Iuzzolino and Menon 2011). This greater concentration is in conflict with the reproducibility of the Marshallian type of district that – even if some larger trees are admitted within the forest, to quote a

famous metaphor of Marshall's (1890) – is mostly constituted by a large number of small and very small firms, the forest indeed.

3.5 The more dynamic district firms went global

Another important element of change concerns the fabric of relationships between district firms, which we know is a fundamental trait of the Marshallian industrial district (and, to some extent, of industrial districts and clusters too).

In the process that has led to a new international division of labor and the creation of global value chains, to use the term introduced by Gereffi *et al.* (2005), the part played by the Italian districts has been active in some ways and passive in others. The opportunity to exploit a favorable differential in the production costs has ultimately driven many district firms – starting with the leading firms – to transfer their own production activities or their supply chain relations abroad in various forms, particularly through supply agreements and the creation of joint ventures in production, or proprietary investment in production plants or subsidiaries. A vast empirical research based on quantitative analyses or case studies has documented the internationalization of the Italian district firms' production (Sammarra and Belussi 2006; Tattara *et al.* 2006; De Propris *et al.* 2008; Chiarvesio and Di Maria 2009; Grandinetti *et al.* 2009; Chiarvesio *et al.* 2010; Crestanello and Tattara 2011; Cutrini 2011). Not all the district firms' decisions to internationalize production have the effect of substituting local (district) production capacity, as in the case of a firm that makes a greenfield foreign investment for the production of its end products in order to serve an important new geographical market more effectively. The vast majority of foreign production investments and outsourcing relationships have nonetheless been driven by the opportunity to access geographical areas with lower production costs. On the whole, such decisions have led to a marked reduction in the number and value of the supply relationships within the Italian industrial districts (Rabellotti *et al.* 2009).

Broadening our horizon from production operations to the whole set of activities comprising the value network of a firm, for the more dynamic district firms globalization it has meant an expansion of the spatial horizon in which to define their strategies and consequently locate their proprietary investments or relationships with other parties. The latter become fundamentally important because the more an entrepreneurial project is ambitious and innovative, the more it has to leverage on resources and expertise from outside the company (Stevenson and Jarrillo 1990).

Internationalization has primarily involved the districts' leader firms, as explained in numerous publications (Albino *et al.* 1999, Corò and Grandinetti 1999; Lorenzoni and Lipparini 1999; Camuffo 2003; Nassimbeni 2003; Piscitello and Sgobbi 2003; Chiarvesio *et al.* 2004; Alberti *et al.* 2008; Belussi and Sedita 2009; Gottardi 2009; Furlan and Grandinetti 2011). These enterprises have not only identified places abroad where they can make or buy more conveniently, as mentioned earlier; they have also spent a great effort on the side of the markets for their products. In particular, they have extended the number of country markets where they operate and invested in the more important markets by creating joint commercial ventures, branches and subsidiaries. Some firms have also created or acquired retail chains, either owned directly or, more often than not, in the form of franchising networks. Again on

an international scale, or outside the confines of the industrial district at least, leader firms have also established relations with suppliers of strategic services and close alliances with partners in their own or related sectors. From the cognitive standpoint, they have expanded and extended the channels for accessing knowledge they need to defend their competitive advantage.

Other than lead firms (distinguishable from the other district enterprises by their larger dimensions), district players that went global include small firms that have succeeded in occupying a sustainable niche in the global market (Camuffo and Grandinetti 2005), subcontracting firms that have responded to the threat of globalization by operating internationally themselves (Bocconcelli and Tunisini 2001; Furlan *et al.* 2009), private or public suppliers of knowledge-intensive business services (KIBS) that have not remained 'prisoners' of the local demand (Di Maria *et al.* 2012), and the manufacturers of machine tools, who were among the first district firms not positioned at the end of the district's supply chain to embark with conviction on the road to internationalization (Rolfo and Calabrese 2006).

In short, the processes of growth that have characterized the leading companies and other dynamic actors in the industrial districts have reached beyond their district boundaries, in terms of both these organizations' proprietary activities and the relationships that they exploit. In the spatial configuration of both these types of growth, the intra-district portion has been severely sized down, while the extra-district portion has expanded.

4 The fall of the Marshallian advantage: a test on the Veneto industrial districts

The interpretation of the various changes underway suggests that the industrial atmosphere that characterized the Italian industrial districts of the past has dissolved, and the whole Marshallian model has consequently collapsed. Shall we conclude that the enterprises located in these districts no longer benefit from external economies and consequently no longer enjoy a competitive advantage over enterprises located outside the district and operating in the same industry? Of course, it is possible to extend this issue also to enterprise creation processes wondering if industrial districts are still elective incubators for new firms.

Despite the importance of this question, so far no study have attempted to find a quantitatively-grounded answer. There exist contributions that have suggested the absence of a differential competitive advantage with respect to non-district territories, focusing on firm's demography (Migliardi and Ravelli 2011), on firm's profitability (Iuzzolino and Menon 2011) and on growth performance of medium-sized firms (De Marchi and Grandinetti 2012). Such studies, however, have focused just on one part of the problem at a time. Moreover, another limitation of such contributions is that the way they identify empirically industrial districts is loose, including both districts belonging (at least from an historical perspective) to the Marhallian variant so as other forms.

Our analysis – which focuses on a region that is traditionally particularly rich in IDs, Veneto, Italy – aims at overcoming such limitations both from a empirical and an analytical point of view. First, we restrict the analysis just to those districts that can be classified as representative of the Marshallian variant. Moreover, the way through which we identify the

geographical and sectoral borders of the districts is at a degree of detail as has never been used in the literature so far. Finally, we analyze the hypothesis of the fading away of the competitive advantage of ISs considering three different aspects at a time. More precisely, we aim at verifying the following hypotheses:

H1 - The difference between firms' natality and mortality within IDs is not more positive (or less negative) than in the same industries outside IDs

H2 - The degree of specialization in the sector characterizing industrial districts is not increasing

H3 - Firms localized within IDs have no better financial performance than non-IDs firms of the same industries

4.1 Research methodology

In order to test the hypothesis that IDs economies are faded away and to address the three testable hypotheses in which we have articulated it, we focused the analysis on ten industrial districts, all located within the Veneto region, which is among the most rich region in industrial districts in the Italian context. The choice to focus on IDs located in one single region will improve the comparability of the emerging results, controlling for possible institutional differences that characterize different regions. Such choice appears particularly useful in a setting, like Italy, where regional differences are quite stark. The districts considered in this analysis are the following:

1. the tanning and leather district of Arzignano;
2. the Inox Valley (household appliances) of Conegliano;
3. the mechanical district of Vicenza;
4. the eyewear district of Belluno;
5. the gold-jewellery district of Vicenza;
6. the Prosecco wine district of Valdobbiadene;
7. the footwear district of Riviera del Brenta;
8. the sportsystem (sport footwear) district of Montebelluna;
9. the furniture district of Livenza;
10. the furniture district of Verona.

This list is not inclusive of all the IDs located in the region. Rather, they have been selected based on their 'proven' Marshallian origins, therefore including just districts that have a long tradition in the IDs production specialization and for which the presence of the Marshallian character have been proven by a number of qualitative contributions, academic or not[1], and by discussions with experts. As suggested by Garofoli (2001), in fact, the traditional methodologies employed to identify IDs, such as that adopted by the Italian national institute of statistics (ISTAT) that assigns the ID label to local labor systems with a manufacturing specialization in a mechanic way[2], lead to several mistakes. Our selection strategy, which may be considered conservative in that it excluded several local production systems, is motivated

[1] For a list of contributions focusing on each district see e.g., Camuffo and Grandinetti (2011).
[2] For a detailed description of such methodology see Sforzi and Lorenzini (2002).

by the need to verify the existence of district external economies in the context of the Marshallian variant, which is the focus of the present analysis.

The way through which we identify ID firms for the purpose of the analysis is among the most important contribution of our work. As discussed above, two axes characterize each district: a peculiar industry specialization and precise geographical boundaries. Where extant contributions have defined IDs in a qualitative manner or, when quantitatively, using a loose definition of one or the other axis, we adopted a very detailed methodology to identify both dimensions. Based on the existing literature (including research papers and documentation by the Italian "Osservatorio dei distretti industriali"), we defined sectoral boundaries using ATECO codes at the 5 digits level and geographical boundaries at the municipality level[3]. Given a change in the classification of industrial activities, we used ATECO 2002 codes for years between 2003 and 2008 and the correspondent ATECO 2007 codes for the years 2009-2012. Thanks to this careful definition of IDs boundaries, the results presented in this paper will represent the first account of the consistency of Veneto IDs and their dynamic evolution.

In order to verify the first two hypotheses we used Movimprese data, which contains information on firms population demography by year, industry specialization and location. Since we are interested in the change in firm's demography and districts specialization over time, we employed a ten-years span, using 2003 and 2012 data. The time span considered is very interesting, in that it includes both what we may call the 'globalization crisis', spurred by the entrance of exporters from large emerging economies in global markets in the early 2000s, and the 'recession crisis' that began in 2008 (De Marchi *et al.* 2013). For each district, and for the ten districts as a whole we calculated the stock of firms, the natality index and the specialization degree at both years.

Finally, in order to verify the hypothesis on the absence of differences in financial performance between IDs and non-IDs firms, we used turnover data coming from the data source AIDA, focusing on the years 2008-2011[4]. In order to verify if IDs firms enjoy any competitive advantage with respect to firms located in other territories we performed, district by district, the same analysis also for firms specialized in the same industries (defined at the detailed level described above) but located in any other municipality in Veneto except those included to identify the district under scrutiny[5]. We use this second group of firms as a control group to verify the performance of IDs: given that each industry share the same business opportunities and challenges, if IDs will show higher performance we could interpret this result as the existence of a district advantage. On the contrary, if there will be no differences or ID firms will show even worst performance our hypothesis on the fading out of such advantage will be confirmed.

[3] The detailed lists of municipalities and ATECO codes composing each district can be given at request.

[4] AIDA is a Bureau Van Dijk database that contains the balance sheets of the first 200.000 Italian corporations for turnover. Such dataset includes therefore just a subpopulation of Veneto firms – excluding for example individual entrepreneurs or other types of firms – which however represent the largest share in terms of employees, turnover, value added. The fact that we are comparing territories sharing this same selection problem mitigates the possible bias emerging from the use of such data. In order to verify a thorough temporal analysis, we used a balanced panel, excluding from the analysis firms whose balance sheet of at least one year was missing.

[5] Given that there are two districts sharing the exactly the same specialization (the Livenza and Verona furniture IDs), when calculating the analysis for other Veneto territories we excluded both districts, so to compare each district with non-district territories.

4.2 Findings

Table 1 reports the stock of firms active in 2003 and 2012 and population growth in each district and in the same industries in which districts are specialized but in other territories. When looking at the static data, this analysis informs about the consistency of IDs production texture; when looking at dynamic data, it gives a indirect information about the wealth of the territory, its ability to attract new firms or the sustainability of existing ones.

Overall, and differently from what the Marshallian theory would postulate, it seems that IDs territories are no more able to guarantee a higher survival rate than other territories (H1). All territories considered suffered a steep shrinkage in the number of firms between 2003 and 2012, which supports previous evidence of the reduced importance of manufacturing activities for the Italian economy and more specifically for the areas for which manufacturing have been he most important base for the development in the past, namely Northern regions (see De Marchi and Grandinetti 2012). This result reflects also the difficulties that the Italian economy and IDs are suffering, in the face of the recent recession and more generally of the globalization challenge (e.g., Ramazzotti 2010; De Marchi *et al.* 2013). However, such reduction had a faster pace within districts, as emerges when comparing the universe of firms located in the ten districts considered and that of firms specialized in the same industries but located outside that territories. Between 2003 and 2012, in fact the population of district firms reduced by 19.9%, versus the -12,2% that characterized territories external to the districts.

It is interesting to notice, however, that both the magnitude of the reduction and the differences with the control group vary across districts. In the Belluno eyewear district, the largest center for sunglasses production worldwide, firms present in the district more than halved, passing from 737 to 353. Other districts facing strong reductions are the Conegliano household appliances ID (-37.6%), the gold jewellery district based in Vicenza and surroundings (-36.3%) and the furniture district of the Verona province (-31.4%). On the contrary, there are districts which rather enlarged: it is the case of the mechanical ID of Vicenza that increased by more than 10% in the ten years considered, and of the Prosecco wine of Valdobbiadene (+5.2%), which in 2012 was by far the largest among those considered as for number of firms. Favorable industry conditions seem to have supported this development: the number of firms producing the same products increased also in other territories.

Comparing IDs territories with other territories sharing the same industry specialization in terms of the variation in the stock of firms, it is possible to identify three groups. The first one is that of districts that over-performed non-IDs territories, which includes the wine district, which grew, plus the leather district, which still shrank by 17.3%, versus the -26.0% of areas external to ID. The second group is formed by districts that performed in a way that is very much in line with what happened outside the ID and includes the mechanics, sportsystem and Livenza furniture districts. The third group is the most numerous and includes districts whose dynamic demography was worst that outside the ID, comprising the Inox Valley household appliances ID, the Belluno eyewear, the Vicenza gold-jewellery, the Riviera del Brenta footwear and finally the Verona furniture districts. The jewellery district is emblematic of this group: the difference with the control group is the largest and amount to 62.4 percentage

points. Where in the decade considered the industry in the region was growing by 26,1%, the ID reduced by 36.3% in terms of number of firms. Overall, the analysis of districts differences supports that emerging when considering all the districts together: apart for group one IDs, in fact, the difference between firms' natality and mortality within IDs is not more positive (or less negative) than in the same industries outside IDs, confirming H1.

Table 1: Stock of firms active in 2003 and 2012 inside and outside the Veneto IDs

	District territories			Other Veneto territories		
	2003	2012	Δ03-12	2003	2012	Δ03-12
Leather	791	654	**-17.3%**	2,176	1,611	-26.0%
Household appliances	346	216	-37.6%	4,232	3,609	**-14.7%**
Mechanical	489	547	**11.9%**	2,015	2,198	9.1%
Eyewear	737	353	-52.1%	1,796	1,039	**-42.1%**
Jewellery	1,024	652	-36.3%	725	914	**26.1%**
Wine	2,095	2,204	**5.2%**	10,742	9,944	-7.4%
Footwear	618	576	-6.8%	2,021	2,162	**7.0%**
Sportsystem	844	631	-25.2%	5,896	4,470	-24.2%
Furniture (Livenza)	644	539	-16.3%	8,899	7,457	-16.2%
Furniture (Verona)	2,467	1,693	-31.4%	8,899	7,457	**-16.2%**
Total	*10,013*	*8,020*	*-19.9%*	*34,473*	*30,303*	*-12.1%*

Source: our elaboration on Movimprese data

Note: as in the following table, "Total" reports the total number of firms part of any of the ten districts (first three columns) and of firms specialized in any of the IDs specializations but located outside their geographical boundaries. Considering that industry codes of some districts overlap (e.g., Mechanical and Eyewear, Sportsystems and Footwear) the total is a bit smaller than the sum of the data reported for each year and area.

The analysis of the firm birth rate reported in Table 2 confirms the evidence just discussed. In both the periods considered, the birth rate – measured as the ratio between the number of new firms that registered at the Chamber of Commerce in a particular year and the stock of firms active in the same year – was higher outside than inside Veneto IDs: in 2003 it was 3.85% vs. 3.51% and in 2012 4.34% vs. 4.16%. If we would exclude from the analysis the Prosecco district, by far the more numerous, such differences would been even more pronounced to the advantage of non-IDs territories. The fact that the rate increased in both groups, despite the disappearance, in the same period, of more than 1 firm out of 10 (Table 1), suggests that in this decade the population of firms reduced because of an increased mortality rather than for a reduction in the creation of new enterprises. Natality is particularly high in the leather industry outside the Arzignano IDs where in 2012 11,92 new firms were established every 100 firms present. Similarly, the footwear, wine and sportsystem IDs showed a quite high rate in the same year. The comparison of this data with the analysis of the dynamics in stock of firms that, apart for the wine and, to a minor extent, for the sportsystem districts, were characterized by a steep decline, suggest that such territories and specializations are characterized by a certain demographic dynamism, i.e. by an high number of new ventures and closing.

Again, the group of IDs outperforming non-IDs territories specialized in the same industry is the smallest and includes two districts – wine and footwear – that did not belonge to the same group in the analysis referring to dynamics in the stock of firms. The second group, including the household appliances and the furniture (Livenza) and the third group including

the six remaining districts include territories for which being located in IDs do not provide any competitive advantage with respect to other areas in terms of natality rates, supporting H1.

Table 2: Firms birth rate in 2003 and 2012 inside and outside the Veneto IDs

	District territories			Other Veneto territories		
	2003	2012	Δ03-12 (pp)	2003	2012	Δ03-12 (pp)
Leather	2.53%	2.45%	-0.08	6.11%	**11.92%**	5.81
Household appliances	7.23%	2.78%	-4.45	4.23%	2.44%	-1.79
Mechanical	3.48%	1.28%	-2.20	4.81%	**2.09%**	-2.72
Eyewear	2.58%	2.55%	-0.03	2.84%	**4.04%**	1.20
Jewellery	3.52%	3.22%	-0.29	2.76%	**5.91%**	3.15
Wine	4.39%	**6.67%**	2.28	3.67%	4.42%	0.76
Footwear	3.24%	**7.29%**	4.06	3.12%	3.42%	0.31
Sportsystem	3.79%	5.86%	2.07	4.55%	**8.34%**	3.80
Furniture (Livenza)	3.42%	3.15%	-0.26	3.47%	2.92%	-0.55
Furniture (Verona)	2.88%	1.89%	-0.99	3.47%	**2.92%**	-0.55
Total	*3.51%*	*4.16%*	*0.66*	*3.85%*	***4.34%***	*0.50*

Source: our elaboration on Movimprese data

The second hypothesis of our analysis regards the dynamics in the degree of specialization in the sectors characterizing the industrial districts. If Marshallian IDs were still territories able to provide special competitive advantage to firms part of the *filière*, the relevance of firms specialized in such industry shall be still quite high. In turn, the presence of a pervasive texture of firm specialized in the IDs production would ensure the reproducibility of the communitarian factor that, as discussed above, is a key ingredient in the success of the ID recipe. In order to verify such hypothesis, we make use of the ratio between the stock of firms specialized in the district's industries within the district territories and the overall stock of firms present in the same territories, including therefore both manufacturing and service activities. Table 3 reports this variable for each district. On average, in 2012 district firms represented the 4.7% of the firms active in their territories: this incidence is the highest in the Prosecco district, were 14,8 firms out of 100 were part of the district *filière,* and the smallest in the Conegliano household appliances (1.2%) and in the Vicenza districts specialized in the mechanical and the jewellery (1.5% and 1.4% respectively)[6]. The comparison of the 2003 and 2012 data suggests that the relevance of such firms for the territories is fading away, supporting what postulated in H2. Apart for the Valdobbiadene wine and the mechanical district of Vicenza – districts that in the same period increased in terms of firm stock – whose relevance increased by 0.17 and 0.13 percentage points, in all areas considered the district specializations lost their traditional relevance. This phenomenon is particularly evident in the Belluno eyewear district and in the Verona furniture one (-2.59 and -2.42). Considered the high relevance that it had for the economy (in 2003 almost one firm out of 10 was part of the district), the reduction in the Verona furniture appear particularly painful and seem the most evident example of the fading out of the so-called communitarian factor. Also the Livenza

and Conegliano districts deserve a comment: actually in these areas the incidence of district firms on the overall local population of firms reduced moderately (-0.58 and -0.72) despite the stock of district firms in the same period reduced consistently (-16.3% and -37.6%). The combined analysis of these two phenomena suggests that in districts areas the substitution of the district specialization that are fading away might be difficult and might even result in a stark net reduction of the overall productive capacity of territories.

Table 3: Incidence of firms specialized in the district manufacturing activities on overall firms

	2003	2012	Δ03-12 (pp)
Arzignano Leather	4.8%	3.9%	-0.86
Conegliano Household appliances	1.9%	1.2%	-0.72
Vicenza Mechanical	1.4%	1.5%	0.13
Belluno Eyewear	5.1%	2.5%	-2.59
Vicenza Jewellery	2.3%	1.4%	-0.86
Valdobbiadene Wine	14.7%	14.8%	0.17
Riviera del Brenta Footwear	3.6%	3.3%	-0.33
Montebelluna Sportsystem	3.1%	2.3%	-0.79
Livenza Furniture	5.4%	4.8%	-0.58
Verona Furniture	9.1%	6.7%	-2.42
Total	*5.8%*	*4.7%*	*-1.12*

Source: our elaboration on Movimprese data

To complement the evidence emerging from the analysis of the specialization degree, we investigate firm demography of other sectors. Considering that manufacturing activities in general are loosing their importance in Italy and in Veneto, we focused rather on service sectors. Particularly, in Table 4 we concentrate on that part of services that have the highest value added and a prominent role in the innovation systems of local territories, that is knowledge-intensive business services (KIBS) such as software production, R&D activities, market research and management consulting (Muller and Doloreux 2009). The presence of such firms in territories is important because, by producing and diffusing knowledge, they support the innovation processes of their (manufacturing) clients. As suggested by an analysis conducted on KIBS of the Veneto region, the market extension of such KIBS is often larger than local and regional (Bettiol *et al.* 2013) and even KIBS located within districts serve non-district customers, even if lock-in effects exist (Di Maria *et al.* 2012).

The comparison of the variation in the stock of firms located within the district geographical boundaries specialized in the KIBS and in the district industries between 2009 and 2012[7] underscores the reduced importance of the second type of firms (Table 4). The total number of KIBS firms in 2012 exceeded that of district firms, which holds true for all the district territories apart the Valdobbiadene and Verona furniture, where district characteristic

[6] It is interesting to report, at this regard, on the one hand, that the territory of the household appliances district overlaps in a significant way with that of the Prosecco wine; on other hand, that the Vicenza districts are the only one including the province capital, where service activities have an higher incidence.
[7] Unfortunately, given important changes in the ATECO 2002 and 2007 codes as far as KIBS specializations are concerned, it was not possible to use data on earlier years. ATECO codes used to identify KIBS firms can be given at request.

activities are still by far the largest. What is most striking about this comparison, however, is the variation with respect to 2009: when district industries' firms reduced by 6.2%, KIBS firms increased by 7.8%. Such growth was particularly high in the area of furniture districts (+16.9% vs. -8.0% in terms of district firms in the Livenza one, +9.0% vs. -14.7% in the Verona one) and in the Riviera del Brenta area (+10.5%). Areas where KIBS firms grew the highest, however, are not necessarily those where firms specialized in district traditional production reduced the most, suggesting that it is not possible to speak about a substitution effect but rather of a concurrent transformation in the productive texture of district areas, which however concurs in suggesting the disappearance of the Marshallian configuration.

Table 4: Stock of firms specialized in KIBS and district sectors and in the district sectors within the IDs territories

			KIBS			District industries
	2009	2012	Δ09-12	2009	2012	Δ09-12
Arzignano Leather	805	875	8.7%	671	654	-2.5%
Conegliano Household appliances	808	876	8.4%	242	216	-10.7%
Vicenza Mechanical	2,262	2,412	6.6%	603	547	-9.3%
Belluno Eyewear	539	573	6.3%	388	353	-9.0%
Vicenza Jewellery	2,736	2,915	6.5%	763	652	-14.5%
Valdobbiadene Wine	753	807	7.2%	2,085	2,204	5.7%
Riviera del Brenta Footwear	866	957	10.5%	631	576	-8.7%
Montebelluna Sportsystem	1,214	1,279	5.4%	652	631	-3.2%
Livenza Furniture	284	332	16.9%	586	539	-8.0%
Verona Furniture	644	702	9.0%	1,984	1,693	-14.7%
Total	*7,571*	*8,163*	*7.8%*	*8,553*	*8,020*	*-6.2%*

Source: our elaboration on Movimprese data

In order to evaluate if the financial performance of district firms is better than that characterizing non-IDs firms specialized in the same industry (H3), we use data on turnover (the average variation between 2008 and 2011) and on profitability, measured as the firms' average return on asset (ROA)[8] in the four years considered (average).

As reported in Table 5, H3 is just partly confirmed. In fact, IDs firms display a higher turnover increase, even if differences are limited (11.7% vs. 9.1%), whereas they are underperforming in terms of profitability (on average 2.85 vs. 3.31 characterizing non-ID firms). More precisely, the average increase in the turnover between 2008-2011 was larger than for other firms specialized in the same industries in 5 districts out of 10 (leather, household appliances, eyewear, wine and sportsystem). The leather (+36.7%) and the wine districts (+61.2%), in particular, are those that grew the more and for which differences are more marked. On the contrary, on average ID firms profitability between 2008 and 2011 have been lower than outside the districts. Vicenza jewellery district is a case in point: the average profitability of its firms was 0.34, vs. the 4.56 experienced outside that area, where large and highly competitive firms such as Morellato developed (Cappellari and Grandinetti, 2009). On

[8] ROA indicates how profitable are company's assets in generating revenues and is computed as the ratio between earnings before interest and taxes (EBIT) and total assets.

the contrary, the footwear district of the Riviera del Brenta is a positive example: its average turnover was 5.21 vs. 3.36 characterizing firms located outside the district.

Table 5: Economic-financial performance of IDs and non IDs firms

	District territories				Other Veneto territories			
	Δ 08-11 (turnover)	Av. 08-11 profitability	n	n/N	Δ 08-11 (turnover)	Av. 08-11 profitability	n	n/N
Leather	**36.7%**	**3.66**	288	0.42	16.2%	3.50	185	0.12
Household appliances	**15.5%**	**5.22**	87	0.38	7.7%	4.71	1,165	0.31
Mechanical	5.0%	3.36	254	0.45	**12.3%**	**4.29**	783	0.34
Eyewear	**13.0%**	2.87	104	0.28	6.3%	**3.54**	433	0.41
Jewellery	1.0%	0.34	207	0.30	**9.3%**	**4.56**	71	0.08
Wine	**61.2%**	**3.84**	50	0.02	21.7%	3.18	357	0.04
Footwear	10.0%	**5.21**	98	0.16	**25.4%**	3.36	590	0.26
Sportsystem	**25.6%**	**3.99**	121	0.19	21.4%	2.71	665	0.14
Furniture Livenza	-5.2%	1.50	184	0.33	**-2.5%**	**1.65**	1,001	0.13
urniture Verona	-20.1%	1.57	140	0.08	**-2.5%**	**1.65**	1,001	0.13
Total	*11.7%*	*2.85*	*1,509*	*0.18*	*9.1%*	*3.31*	*4,327*	*0.14*

Source: our elaboration on AIDA data
Note: We excluded from the analysis of turnover variations firms whose turnover increase more than 5 times with respect to 2008 data. We excluded from the ROA analysis firms with an average ROA bigger than 100 or smaller than -100. Column n report the number of firms used for the turnover and ROA analyses; column n/N indicates the incidence of such firms on the universe.

Table 6: A comparison of IDs and non-IDs firms' Herfindahl-Hirschman index, based on 2011 turnover data

	District territories	Other Veneto territories
Leather	256.9	**477.2**
Household appliances	**2,146.5**	142.1
Mechanical	**611.9**	103.5
Eyewear	**6,202.9**	125.2
Jewellery	412.3	**2,041.2**
Wine	**544.9**	225.3
Footwear	**523.2**	101.0
Sportsystem	**1,517.0**	96.2
Furniture Livenza	**487.3**	162.0
Furniture Verona	**179.7**	162.0
Total	*1,009.0*	*263.0*

Source: our elaboration on AIDA data

At this point it would be interesting to investigate if the positive variation of ID firms emerging in Table 5 indicates a diffuse increase in the district or it is concentrated at few firms. In order to do so, in Table 6 we report the 2011 Herfindhal-Hirschman concentration index (HHI) that is a measure of the size of firms in relation to the industry and is defined as the sum of the squares of the market shares of the firms belonging to that industry. The market is highly concentrated when such index exceeds 1,800, whereas it is moderately concentrated when the index is between 1,000 and 1,800. The analysis supports that in three districts out of ten turnover is highly concentrated at few firms: the eyewear district – where Luxottica alone is responsible for more than 70% of the district overall turnover– and the

Conegliano Inox Valley of Zoppas, which makes up to 42.2% of district turnover. Also the sportsystem district, whose largest firm is Geox, that makes up 34.2% of the district turnover, show a quite moderate concentration index. One of the pre-requisite of the Marshallian variant of ID is the existence of a vast “forest”, to use Marshall’s words, namely of a large group of firms homogenous in terms of size, being SMEs. The analysis of the HHI in Table 6 suggests that, at least in these three districts, such pre-requisite is no longer in place. Finally, noteworthy that in 8 IDs of 10 concentration is higher than in the other regional firms of the same sector.

5 Concluding remarks

In this paper we suggest that the Marshallian variant of IDs is not as largely diffused as it is supposed. We identified several phenomena, emerging from the vast literature studying the transformation of industrial districts, which support the move away from the Marshallian variant of IDs including: the impact of immigration on how the social and the production structures mutually interpenetrate; the shrinking reproducibility of the entrepreneurial factor; the diversification of the local production structure; an increased concentration of the turnover and workforce at few firms; a weakening of the fabric of relations between enterprises. In this paper, we aimed at verifying the thesis of the fading out of the Marshallian model driven by such phenomena and if districts that are traditionally considered as Marshallian enjoy differential competitive advantages with respect to non-district territories. This is a research question that has not been addressed from an empirical point of view so far, despite its importance for policy making reasons. By the mean of an analysis of ten Veneto districts of a ‘proven’ Marshallian origin, we empirically verify this thesis focusing on i) dynamics in the firm demography, ii) the degree of specialization on ID industries and iii) firm’s economic performance. Our methodology improve existing analysis by using a fine-grained definition of districts in terms of industry and geographical boundaries and by comparing IDs territories with non-IDs ones specialized in the same industries, so to verify if any differential advantage exists when controlling for industry specialization and institutional characteristics.

Results support that IDs are no longer guaranteeing any competitive advantage. Actually IDs territories are those showing the highest shrinkage in terms of active firms and the lowest natality rate. Moreover, the incidence of district specialization on district territories is fast reducing, to the advantage of other types of specialization, comprising also non-manufacturing activities such as in the case of knowledge intensive business services (KIBS). Evidence on the financial and economic performance of IDs firms with respect to non-ID ones is less clear cut: if ID firms had the higher increase in turnover, non-ID ones have better return-on-assets rates, suggesting that the IDs’ firms growth took place to the advantage of profitability.

It is important, to notice, however, that differences across districts exists in each dimension considered. Interestingly the only district that over performed non-ID territories in all the dimensions considered is the only not orthodox one, the Prosecco wine district, whose specialization is spanning agriculture other than industry. Other IDs showing good performance, especially from a financial point of view are the leather district of Arzignano

and the sportsystem of Montebelluna. On the contrary, IDs that are systematically under performing with respect to external areas are the Verona furniture district and the Vicenza gold jewellery one, which well exemplify the decline of the districts. The other districts are rather in between those two groups, suggesting that, if in the past all those districts shared a common configuration – the Marshallian one – their trajectories are now rather diversifying.

This analysis is of an exploratory type: further research is needed to understand to what extent districts are underperforming with respect to non-ID firms by the mean of more sophisticated quantitative techniques and to complement the analysis with employment data. Moreover, an open question arising from our analysis is if it is possible to identify any models, trajectories along which districts are moving stepping from the Marhallian configuration toward new ones, which can still offer peculiar competitive advantage, or if the fading out of the Marshallian one means also the fading out of any district configuration and the assimilation to non-district areas.

References

Alberti, F.G., Sciascia, S., Tripodi, C. and Visconti, F. (2008) *Entrepreneurial Growth in Industrial Districts: Four Italian Cases* (Cheltenham: Edward Elgar).

Albino, V., Garavelli, A.C. and Schiuma, G. (1999) Knowledge transfer and inter-firm relationships in industrial districts: the role of the leader firm, *Technovation*, 19(1): 53–63.

Ambrosini, M. (2006) Delle reti e oltre: processi migratori, legami sociali e istituzioni, in F. Decimo and G. Sciortino (eds), *Stranieri in Italia: Reti migranti* (Bologna: Il Mulino).

Asheim, B.T. (1996) Industrial districts as 'learning regions': a condition for prosperity, *European Planning Studies*, 4(4): 379–400.

Bagnasco, A. (1988) *La costruzione sociale del mercato: Saggi sullo sviluppo di piccola impresa in Italia* (Bologna: Il Mulino).

Becattini, G. (1979) Dal 'settore' industriale al 'District territories' industriale: alcune considerazioni sull'unità di indagine dell'economia industriale, *Rivista di Economia e Politica Industriale*, 5(1): 7–21.

Becattini, G. (1990) The Marshallian industrial district as a socioeconomic notion, in F. Pyke, G. Becattini and W. Sengerberger (eds), *Industrial Districts and Inter-firm Cooperation in Italy* (Geneva: International Institute of Labour Studies).

Belussi, F. and Sedita, S. (2009) Lyfe cycle vs. multiple path dependency in industrial districts, *European Planning Studies*, 17(4): 505–28.

Belussi, F. and Sedita, S. (2010) Moving immigrants into Western industrial districts: the 'inverse' delocalization of the leather tanning district of Arzignano, in F. Belussi and A. Samarra (eds), *Business Networks in Clusters and Industrial Districts: The Governance of the Global Value Chain* (New York: Routledge).

Bettiol, M., De Marchi, V., Di Maria, E. and Grandinetti, R. (2013) Determinants of market extension in knowledge-intensive business services: evidence from a regional innovation system, *European Planning Studies*, 21(4): 498–515.

Bocconcelli, R. and Tunisini, A. (2001) La costellazione del mobile nel pesarese: un'analisi interpretativa, *Piccola Impresa/Small Business*, 14(2): 83–112.

Brusco, S. (1982) The Emilian model: productive decentralisation and social integration, *Cambridge Journal of Economics*, 6(2): 167–84.

Brusco, S. and Paba, S. (1997) Per una storia dei distretti industriali Italiani dal secondo dopoguerra agli anni novanta, in F. Barca (ed.), *Storia del capitalismo Italiano dal dopoguerra a oggi* (Rome: Donzelli).

Cainelli, G., Iacobucci, D. and Morganti, E. (2006) Spatial agglomeration and business groups: new evidence from Italian industrial districts, *Regional Studies*, 50(5): 507–18.

Calvosa, P. (2006) Le reti distrettuali in Campania, in F. Izzo and A. Ricciardi (eds), *Relazioni di cooperazione e reti di imprese: Il caso della Campania (*Milan: Franco Angeli).

Cammett, M. (2006) Development and the changing dynamics of global production: global value chains and local clusters in apparel manufacturing, *Competition & Change*, 10(1): 23–48.

Camuffo, A. (2003) Transforming industrial districts: large firms and small business networks in the Italian eyewear industry, *Industry and Innovation*, 10(4): 377–401.

Camuffo, A. and Grandinetti, R. (2005) I distretti industriali come economie della conoscenza, *Argomenti-Rivista di Economia, Cultura e Ricerca Sociale*, 5(3): 1–26.

Camuffo, A. and Grandinetti, R. (2011) Italian industrial districts as cognitive systems: are they still reproducible?, *Entrepreneurship & Regional Development*, 23(9-10): 815–52.

Cappellari, R. and Grandinetti, R. (2009) Le dimensioni della crescita aziendale: Morellato-Sector, in R. Varaldo, D. Dalli, R. Resciniti and A. Tunisini (eds), *Un tesoro emergente: Le medie imprese italiane dell'era globale* (Milan: Franco Angeli).

Carillo, M.R. e Dessy, O. (2012) L'identità etnica degli immigrati stranieri in Italia: quale modello di integrazione?, in M.R. Carillo (ed.), *Flussi migratori e capitale umano: Una prospettiva regionale* (Rome: Carocci).

Cerea, S. (2010) Distretti industriali in trasformazione: modelli produttivi e società locali dal secondo dopoguerra ad oggi, in S. Cerea, R. Cucca and M. Rago (eds), *Sviluppo economico e integrazione sociale: Il caso dei distretti industriali lombardi* (Rome: Carocci).

Chiarvesio, M. and Di Maria, E. (2009) Internationalization of supply networks inside and outside clusters, *International Journal of Operations & Production Management*, 29(1): 1186–207.

Chiarvesio, M., Di Maria, E. and Micelli, S. (2004) From local networks of SMEs to virtual districts? Evidence from recent trends in Italy, *Research Policy*, 33(10): 1509–28.

Chiarvesio, M., Di Maria, E. and Micelli, S. (2010) Global value chains and open networks: the case of Italian industrial districts, *European Planning Studies*, 18(3): 333–50.

Corò, G. and Grandinetti, R. (1999) Evolutionary patterns of Italian industrial districts, *Human Systems Management*, 18(2): 117–29.

Crestanello, P. and Tattara, G. (2011) Industrial clusters and the governance of the global value chain: the Romania-Veneto network in footwear and clothing, *Regional Studies*, 45(2): 187–203.

Cucca, R. (2010) Il District territories lecchese della Mechanical, in S. Cerea, R. Cucca and M. Rago (eds), *Sviluppo economico e integrazione sociale: Il caso dei distretti industriali lombardi* (Rome: Carocci).

Cutrini, E. (2011) Moving eastwards while remaining embedded: the case of the Marche footwear district, Italy, *European Planning Studies*, 19(6): 991–1019.

Dei Ottati, G. (2003) The governance of transactions in the industrial district: the 'community market', in G. Becattini, M. Bellandi, G. Dei Ottati and F. Sforzi, *From Industrial Districts to Local Development: An Itinerary of Research* (Cheltenham: Edward Elgar).

Dei Ottati, G. (2009) An industrial district facing the challenges of globalization: Prato today, *European Planning Studies*, 17(12): 1817–35.

De Marchi, V., Lee, J. and Gereffi, G. (2013) Globalization, recession and the internationalization of industrial districts: evidence from the Italian gold jewellery industry, *European Planning Studies*, forthcoming.

De Marchi, V. and Grandinetti, R. (2012) L'industria del Nord-Est e il suo intorno: crisi e discontinuità evolutiva, *L'industria*, 33(1): 169–204.

De Propris, L., Menghinello, S. and Sudgen, R. (2008) The internationalisation of production systems: embeddedness, openness and governance, *Entrepreneurship & Regional Development*, 20(6): 493–515.

Di Maria, E., Bettiol, M., De Marchi, V. and Grandinetti, R. (2012) Developing and managing distant markets: the case of KIBS, *Economia Politica: Journal of Analytical and Institutional Economics*, 29(3): 361–79.

Furlan, A., Grandinetti, R. and Camuffo, A. (2009) Business relationship portfolios and subcontractors' capabilities, *Industrial Marketing Management*, 38(8): 937–45.

Furlan, A. and Grandinetti, R. (2011) Size, relationships and capabilities: a new approach to the growth of the firm, *Human Systems Management*, 30(4): 195–213.

Garofoli, G. (2001) I livelli di governo delle politiche di sviluppo locale, in G. Becattini, M. Bellandi, G. Dei Ottati and F. Sforzi (eds), *Il caleidoscopio dello sviluppo locale: Trasformazioni economiche nell'Italia contemporanea* (Turin: Rosenberg & Sellier).

Garofoli, G. (2002) Local development in Europe: theoretical models and international comparisons, *European Urban and Regional Studies*, 9(3): 225–39.

Gereffi, G., Humphrey, J. and Sturgeon, T. (2005) The governance of global value chains, *Review of International Political Economy*, 12(1): 78–104.

Gottardi G. (ed.) (2009), *Nuovi modelli di gestione dell'impresa: Governare le reti internazionali di conoscenza* (Rome: Carocci).

Grandinetti, R. and De Marchi, V. (2012) Dove stanno andando i distretti industriali? Un tentativo di risposta a partire da un'indagine in Veneto, *Studi Organizzativi*, 14(2), 140–73.

Grandinetti, R., Nassimbeni, G. and Sartor, M. (2009) Foreign direct investments in manufacturing by district firms: evidences from the Italian chair district, *Production Planning & Control*, 20(5): 403–19.

Iuzzolino, G. and Menon, C. (2011) Le agglomerazioni industriali del Nord Est: segnali di discontinuità negli anni duemila, in Banca d'Italia, *L'economia del Nord Est* (Rome).

Lorenzoni, G. and Lipparini, A. (1999) The leveraging of interfirm relationships as a distinctive organizational capability: a longitudinal study, *Strategic Management Journal*, 20(4): 317–38.

Markusen, A. (1996) Sticky places in slippery space: a typology of industrial districts, *Economic Geography*, 72(3): 293–313.

Marshall, A. (1890) *Principles of Economics* (London: Macmillan).

Maskell, P. (2001) Towards a knowledge-based theory of the geographical cluster, *Industrial and Corporate Change*, 10(4): 921–43.

Migliardi, A. and Revelli, D. (2011) Demografia delle imprese nelle aree ad elevata intensità di agglomerazione produttiva, *Economia e Diritto del Terziario*, 21(3): 499–525.

Muller, E. and Doloreux, D. (2009) What we should know about knowledge-intensive business services, *Technology in Society*, 31(1): 64–72.

Murat, M. and Paba, S. (2006) I distretti industriali tra immigrazione e internazionalizzazione produttiva, in B. Quintieri (ed.), *I distretti industriali dal locale al globale* (Catanzaro: Rubbettino).

Nassimbeni, G. (2003) Local manufacturing systems and global economy: are they compatible? The case of the Italian eyewear district, *Journal of Operations Management*, 21(2): 151–71.

Nazzaro, L. and Ugolini, M. (2003) Dal passaggio generazionale alla continuità dell'impresa minore, *Sinergie: Rivista di Studi e Ricerche*, 21(61-62): 297–325.

Paniccia, I. (1998) One, a hundred, thousands of industrial districts: organizational variety in local networks of small and medium-sized enterprises, *Organization Studies*, 19(4): 667–99.

Piscitello, L. and Sgobbi, F. (2003) SMEs in the new economy: evidence from selected Italian districts, *Competition & Change*, 7(1): 61–78.
Porter, M.E. (1998) Clusters and the new economics of competition, *Harvard Business Review*, 76(6): 77–90.
Provasi, G. (1999) Motivazioni e orientamenti degli imprenditori nel ricambio generazionale, in Agenzia Lumetel (ed.), *La successione d'impresa nei distretti industriali: Il caso Lumezzane* (Milan: Il Sole 24 Ore).
Rabellotti, R., Carabelli, A. and Hirsch, G. (2009) Italian industrial districts on the move: where are they going?, *European Planning Studies*, 17(1): 19–41.
Ramazzotti, P. (2010) Industrial districts, social cohesion and economic decline in Italy, *Cambridge Journal of Economics*, 34(6): 955–74.
Rolfo, S. and Calabrese, G. (2006) Struttura industriale e profili di competitività nella Mechanical strumentale, *L'industria*, 27(4): 603–22.
Sammarra, A. and Belussi, F. (2006) Evolution and relocation in fashion-led Italian districts: evidence from two case-studies, *Entrepreneurship & Regional Development*, 18(6): 543–62.
Sammarra, A. and Biggiero, L. (2001) Identity and identification in industrial districts, *Journal of Management and Governance*, 5(1): 61–82.
Santini, C., Rabino, S. and Zanni, L. (2011) Chinese immigrants socio-economic enclave in an Italian industrial district: the case of Prato, *World Review of Entrepreneurship, Management and Sustainable Development*, 7(1): 30–51.
Sforzi, F. (2007) Il contributo dei distretti industriali al cambiamento dell'economia italiana, *Economia Italiana*, 29(1): 79–103.
Stevenson, H.H. and Jarillo, J.C. (1990) A paradigm of entrepreneurship: entrepreneurial management, *Strategic Management Journal*, 11(Special Issue): 17–27.
Storper, M. (1993) Regional 'worlds' of production: learning and innovation in the technology districts of France, Italy and the USA, *Regional Studies*, 27(5): 433–55.
Tattara, G., Corò, G. and Volpe, M. (eds) (2006) *Andarsene per continuare a crescere: La delocalizzazione internazionale come strategia competitiva* (Rome: Carocci).