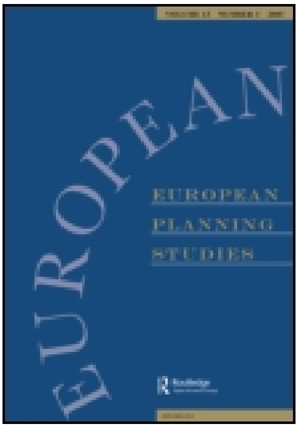

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Dynamics of Industrial Districts and Business Groups: The Case of the Marche Region

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Abstract *Italian industrial districts are undergoing fundamental changes due to globalization. Taking a firm perspective, we argue that the analysis of firm strategies, in particular the rise of business groups, is key to understand the organizational adjustments industrial districts have recently gone through. Due to the typical family structure of industrial district firms in the Marche region, as in other fragmented Italian districts, the organizational form adopted by firms to manage growth is that of the business group. We evaluate the empirical relevance of business groups in the Marche region, and we describe different transition strategies that turned firms into business groups.*

1. Introduction

From the 1970s onwards, scholars have pointed to the spectacular growth of agglomerated systems of small and medium size enterprises (SME's) that Becattini (1979) referred to as Marshallian industrial districts. Even though part of their success could be related to the weakness of the Italian currency (Brusco & Paba, 1997), these industrial districts were particularly fit to cope with the tendency of flexible specialization in global markets (Piore & Sabel, 1984). New market conditions, together with the development of microelectronic technologies, brought about a shift from purely standardized methods of production to more flexible production processes, in which the importance of internal scale economies diminished, thereby lowering the "minimum efficient scale" of production. This gave way to the importance of small firms operating in local production systems that were locally embedded in trust based relationships with other firms and institutional structures (Granovetter, 1985). These small district firms

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could prosper because they benefitted from external scale economies and internal flexibility.

In the meantime, however, globalization moved on, and this has affected the evolution of Italian industrial districts (Dei Ottati, 1996; Paniccia, 1998; Balloni *et al*., 2000; Boschma & Lambooy, 2002; Cainelli & Zoboli, 2004). Global networks have become more important, and district firms have developed strategies of internationalization. Especially, the rise of business groups has attracted a lot of attention from scholars (Cainelli *et al*., 2006). A business group is a particular corporate structure with a core firm and one or more subsidiaries. This article assesses the dynamics of industrial districts by drawing on current experiences in the Marche region. On the basis of secondary data, we show the increasing importance of business groups in the Marche region, also in respect to other Italian regions. Then, based on our own interviews, we investigate more in detail how firms have evolved into business groups, and what types of transition strategies have been followed by firms in this respect. We argue that business groups are particularly common in Italy due to the fragmentation and family structure of Italian firms and to the asymmetric distribution of power and knowledge between firms in the Italian industrial districts.

The article is structured as follows. Section 2 briefly discusses our theoretical view on industrial districts which departs from the evolutionary theory of the firm (Varaldo & Ferrucci, 1996). The third section gives a brief sketch of the dynamics within the industrial districts in the Marche region from the 1950s till today. Doing so, we devote special attention to business groups. In Section 4, we assess, both quantitatively and qualitatively, the relevance of business groups in the Marche region, and describe more in detail how firms have evolved in such organizational structures. Section 5 draws the main conclusions.

2. Industrial Districts in Transition

The industrial district literature has been very important to explain the success of agglomerated clusters that were strongly specialized and extremely fragmented in a large number of SME's (Becattini, 1987; Bellandi & Russo, 1994; Cooke & Piccaluga, 2006; Becattini *et al*., 2009). Much emphasis has been laid on the external economies of scale from which these firms could benefit. Because district firms shared a common socio-institutional tissue, transaction costs were kept low (Williamson, 1985; Scott, 1998; Cooke, 2001). This resulted in low levels of vertical integration and a strong division of labor between district firms, which enabled them to specialize and learn, and increase their productivity (Cainelli & Iacobucci, 2009).

This literature has provided rich insights into the nature and economic success of industrial districts. However, this view of industrial districts has been challenged and adapted, partly due to globalization. In that view, not much attention was given to the fact that district firms differ from each other in terms of economic power, absorptive capacity, network connectivity and organizational strategies (Boschma & Lambooy, 2002). Empirical evidence shows, however, that access to local resources in the district (such as knowledge and finance) differs from firm to firm. To an increasing extent, district output is in the hands of a few leading firms (Varaldo & Ferrucci, 1996; Corò & Grandinetti, 1999; Rosa & Scott, 1999; Belussi & Sammarra, 2005; Iammarino, 2005; Iammarino & McCann 2006), and business groups have emerged as a new organizational form to cope with new conditions of markets and technology (Rosa, 1998; Iacobucci, 2002;

Iacobucci & Rosa, 2005). Districts are characterized by high levels of turbulence, in which some firms do well, some firms are capable of reorganizing themselves, but many firms just come and go. This is in line with recent survival studies that show that clusters in general are a hard place to survive for firms, instead of a place that offers positive externalities almost by definition (Klepper, 2007). Some firms within the districts developed and grew over time through acquisitions of other districts firms and, eventually, these firms became predominant and were able to influence the evolution of the local system.

While knowledge may be "in the air" in districts, as Marshall once put, there is a need to reconcile that with the fact that knowledge basically accumulates within the boundaries of firms, or within organizational arrangements like networks and business groups. Access to external knowledge in an industrial district is one thing, but crucial is whether district firms have the capacity to understand and process external knowledge, and transform it into something useful economically. Recent studies that have analyzed the configuration of knowledge networks in districts tend to show that some firms are well connected to other firms in the district, while the majority of district firms is poorly or not connected (Staber, 2001; Giuliani & Bell, 2005; Boschma & Ter Wal, 2007; Morrison, 2008). This depends on the absorptive capacity of firms, among others. In other words, it is not so much the location of the firm in an industrial district that matters *per se*, but whether a firm is capable of exploiting the local externalities that may be around.

This has also implications for studies that focus on the evolution of local systems (Garofoli, 1992; Dematteis, 1994). In those studies, the local system is conceived as a territorial unit that is capable of self organization, that is, it continuously rearranges its structure as a consequence of endogenous and exogenous inputs. Such a view can be complemented with an evolutionary micro-perspective, in which the evolution of (different) strategies of firms and asymmetric power at the district level are incorporated to describe the evolution of local systems. In that respect, the dynamics of industrial districts are not so much ruled by an internal logic of local systems but are described in terms of changing organizational strategies and the unequal capacity of local agents to take advantage of externalities.

Recent contributions have addressed the relationship between the presence of business groups and the characteristics and evolution of industrial districts (Cainelli *et al*., 2006). A business group is a set of legally distinct units (firms) which is controlled by an entrepreneur or an entrepreneurial team (Cainelli & Iacobucci, 2009). Studies suggest that business groups act as substitutes for imperfect capital, labour and product markets in many countries and, consequently, they permit competitive advantages that are not available to independent firms (Hicheon *et al*., 2004; Filatotchev *et al*., 2005). In industrial districts, credit markets may not support SME's, knowledge may not be accessible because leader-firms set up their own R&D facilities, and local trust may erode when leading firms buyout subcontractors because they do not want knowledge to leak out. In a way, the business group replaces the market, in the sense that market coordination makes way to corporate control and the subcontractor becomes a subsidiary firm. And networks of firms with informal and unstable relations are replaced by business groups with their formal and stable liaisons. This can be considered a "defensive strategy", as the business group tends to enclose and control externalities within the same corporate structure. In this sense, the cooperation among independent firms typical of the early stage of industrial districts evolution is replaced by the formal coordination within a business group. But leader firms may also conduct more "aggressive strategies" that dominate the ongoing in the district, due to their superior access to markets, information, knowledge and finance (Boschma & Lambooy, 2002). In both strategies, the leading firms exploit their ability to transfer and share financial, human and management know-how across subsidiaries. In this way, district firms become more and more concentrated in business groups, which leads to asymmetric distribution of market and financial power in the district, which leads to more and bigger business groups, *et cetera*. For example, a leading firm has better access to credit as compared to other SME's in the district, and might use this power to acquire those firms that are financially in crisis.

This is not to say that the business group organization itself achieves superior performance. In fact, the empirical evidence is quite mixed in this respect (Hicheon *et al*., 2004). This may depend, among other things, on the strategic choices these business groups make. Thus, rather than treating business groups as uniform sets of firms with given characteristics, we view business groups as collections of resources. It is the ability of the management of business groups to configure different types of resources to fit the competitive environment. In the last years, the performance of principal business groups in the Marche region has differed widely in terms of sales and revenues. Some have attributed this to the geography of their internationalization strategies (Balloni & Iacobucci, 2008). This article aims to dig deeper into this topic, by describing some features of business group strategies in this respect.

3. The Evolution of Industrial Districts in the Marche Region

The Italian industrial districts are considered worldwide a successful case in the field of regional development. Industrial districts have been juridically recognized in 1991 (national law n. 317/91 and later on n. 140/99), for the purpose of formulating Italian industrial development policies. The following (quite controversial) criteria were developed to identify industrial districts within Italian regions.:

- the territorial unit of analysis is the "local system", based on daily commuting travels within a geographical area identified by ISTAT;
- percentage of manufacturing employees above the national average;
- percentage of SME's employees above the national average;
- specialization in a certain manufacturing industry (average of employees above the national average)
- majority of employees working for SME's (over 50%) in the specialized industry.

According to those criteria, the total number of industrial districts in Italy were 133, and 26 of those were identified in the Marche region. More information on those 26 industrial districts is presented in Table 1. As shown in the table, 77.8% of all manufacturing employees in the Marche region worked in those 26 industrial districts (ISTAT, 1996).

If we consider the added value per capita in the manufacturing sector in 2002, and we put the whole of Italy to 1, in the Marche region, that indicator is 1.24. For the sector Leather and related products, this score is 7.33, for Wood, plastic and rubber, it is 1.92. According to the last Census of Industry and Services (2001), the number of employees in the manufacturing sector in the Marche region increased 7.4% in the period 1991–2001, while in the same period, Italy had lost 6.1%. The performance of the Marche

Table 1. The industrial districts in the Marche region

					Manufacturing industry (1996)	
District's name	Specialization	Number of municipalities	Population (2000)	Kmq	Number of firms	Employees
PIANDIMELETO	Wood and furniture	5	5804	105.6	135	779
FOSSOMBRONE	Wood and furniture	8	30,067	257.3	646	4058
PESARO	Wood and furniture	7	113,635	281.8	2214	17,132
SASSOCORVARO	Textile and clothing	6	9555	193.9	189	1076
URBANIA	Textile and clothing	3	14,851	141.3	263	2825
SANT'ANGELO IN VADO	Textile and clothing	3	5992	192	97	656
PERGOLA	Textile and clothing	5	13,782	226.5	214	1768
MONDOLFO	Textile and clothing	8	27,292	183.4	440	3091
SERRA DE' CONTI	Leather and shoes	6	14,996	215.2	274	2591
OSTRA	Textile and clothing	8	25,104	226.7	470	3972
FABRIANO	Mechanics	16	117,634	876.4	1534	22,275
RECANATI	Other industries and toys	7	58,104	255.7	1033	9512
OSIMO	Other industries and toys	7	70,429	266.1	1293	12,816
CINGOLI	Textile and clothing	3	12,966	214.5	163	1393
TREIA	Wood and furniture	2	13,337	115.8	261	2347
URBISAGLIA	Textile and clothing	4	7188	76.6	137	959
TOLENTINO	Leather and shoes	7	37,454	407.8	646	5090
CIVITANOVA MARCHE	Leather and shoes	3	58,568	115.5	1173	9810
MONTE SAN GIUSTO	Leather and shoes	3	30,170	124.6	935	7205
PORTO SANT'ELPIDIO	Leather and shoes	2	37,998	68.5	1406	9793
MONTE SAN PIETRANGELI	Leather and shoes	2	3522	28.5	125	1067
MONTEGRANARO	Leather and shoes	2	14,965	43.2	657	4733
MONTEGIORGIO	Leather and shoes	25	98,157	485.8	1687	12,709
FERMO	Leather and shoes	7	66,662	193	1326	8849
MONTEFIORE DELL'ASO	Leather and shoes	8	10,809	138.3	176	1132
OFFIDA	Leather and shoes	7	15,227	199.4	186	1810
Districts total		164	914,268	5.633.40	17,680	149,448
Rest of the region		82	554,927	4.061.10	5957	42,647
Marche total		246	1,469,195	9.694.50	23,637	192,095

Source: Ministero delle Attività Produttive-IPI (2002).

has been the best of all regions in Central and Northern Italy. However, within the Marche region, there are notable differences, as shown in Table 2.

The take-off of industrial clusters in the Marche region took place in the 1950s, with high levels of firm entry and exit. The industrial system was widespread—even if strongly specialized—and the internal competition was tough, with relationships between firms that were purely market oriented. Some have characterized this period as "the chaos after the Big Bang" (Balloni *et al.*, 2000, p. 5)

In the 1970s, the Marche clusters evolved into the typical structure of an industrial district, with strong and robust growth. Due to a strong labor division, and the sharing of technologies and production processes, the typical Marshallian externalities were "in the air". In this initial phase, the systemic dimension is dominant, and none of the firms could influence the dynamics of the entire system. In this atomistic economic landscape, relationships among firms were still market oriented and agglomeration economies were mainly propelled by sharing mechanisms that allowed firms to reduce costs. However, in this period, the first types of more stable collaborations emerged, and these became quite typical in the following decades. Those collaborations consisted of quite stable networks of independent firms, but these were not (yet) organised into a formal business group.

In the 1980s, the districts underwent a reorganization process. This transition led in the 1990s to a more complex organization. Authors do not agree on the driving forces: some of them put more emphasis on exogenous conditions such as market turbulence (Balloni & Iacobucci, 1997) and the increasing importance of global networks (Dei Ottati, 1996), others have focused more on endogenous conditions such as the erosion of factors that were decisive for their previous success (Bianchi, 1992), such as the decrease of mutual trust (Corò & Grandinetti, 1999). For sure, learning mechanisms became more crucial (Corò & Grandinetti, 2001; Cainelli *et al.*, 2006). This required several adjustments in the internal cluster organization, such as a better control of the supply chain in order to secure the quality of final products, and an increase of investments in R&D and marketing (brand image, distribution channels).

In both cases, the result was an increasing relevance of leading firms and business groups, and an asymmetric distribution of output, capital, knowledge and market power. Those leading-firms had particular characteristics such as a global orientation, upgraded routines (including marketing, logistic, R&D, finance), high management quality (especially with respect to managing networks), and strong connections with the banking sector. Those leading firms linked local value resources to global networks, which led to the transformation of a relatively closed system of exchange at the local

Table 2. Number of employees in the manufacturing sector in four provinces of the Marche region

Province	Employees 1991	Employees 2001	%
Pesaro e Urbino	41,885	49,573	18.4
Ancona	54,719	61,307	12.0
Macerata	40,419	44,352	9.7
Ascoli Piceno	55,250	51,325	−7.1
Total	192,273	206,557	7.4

Source: ISTAT (Istituto Nazionale di Statistica).

level and started the internationalization of the manufacturing process. It is in this period that some leading firms started to develop into a business group in which previous collaborations with other districts firms became included in the boundary of the group through acquisitions. First, the focus was on finding cheaper suppliers abroad, but then these firms also developed supplier evaluation processes and adopted criteria for supplier selection on the basis of quality, trust and services. This is one of the reasons that prompted the leading firm to acquire a subcontractor and control it formally, in particular when the subcontractor was confronted with financial problems or problems which concerned the succession of the founder within the family firm. We investigate those critical moments in the next section. This approach led to a process of supply chain qualification, even at the local level, with positive (or negative, in case of exclusion) impacts on district suppliers (Corò & Grandinetti, 1999). Leading firms also operated internationally through a growing demand for services not available at the local level, such as marketing, design and technological innovation (Chiarvesio *et al.*, 2004). Those activities had often not received attention from district firms. As a consequence, the district was often not able to develop and offer high-quality services in those domains, although there were exceptions (Chiarvesio *et al.*, 2010). Consequently, leading firms faced two possibilities: (1) organize those services inside the firm or a business group; (2) buy those services outside the district.

Some authors argue that those global strategies of leading firms may have reduced the internal cohesion of the district and have increased a break-up process within the local system, due to the vertical integration of relationships and their formalization (processes of mergers and acquisitions among district firms, medium firms leading groups of district firms) (Corò & Grandinetti, 2001; Sabel, 2004). We argue that the rise of leading firms does not necessarily have a negative impact on industrial districts, but they can also offer opportunities for other firms to transform their business organization and reorganize their district business relationships.

The relevance of leading companies and business groups has been assessed by some studies. However, this literature has not fully taken into account the importance of entrepreneurship in shaping the formation of business groups, and little work has been done on the empirical study of the transition of entrepreneurial firms into business groups, specifically on the reasons that speed up the process of transition towards vertical and horizontal integration. In the next section, we turn to this topic.

4. Business Groups in the Marche Region

The aim of this section is twofold. First, we estimate the quantitative relevance of business groups in the Marche region. Then, we describe different strategies that are followed by entrepreneurs that evolved into a business group organization.

The quantitative assessment of business groups in the Marche region has been made possible by a new dataset at the business group level, recently developed by ISTAT (2009). This is the so-called "Archivio statistico sui gruppi d'impresa" (Italian Statistical Business Register on Business Groups). The dataset, available on line since June 2009, covers 3 years (2005, 2006, 2007), and draws upon three different statistical sources:

- Archive of declarations to the CONSOB (Commissione Nazionale per le Società e la Borsa) of all shareholders of listed companies.

- Archive of Camere di Commercio (Chambers of Commerce) of all shareholders of non-listed companies.
- Archive of firms' consolidated balance sheet.

The dataset has been constructed by means of matching the Italian Statistical Business Register on Business Groups (Archivio sui Gruppi d'Impresa) with the Italian Business Register (ASIA—Archivio Statistico delle Imprese Attive). From the second data source, information is drawn from all Italian firms operating in the manufacturing industry with respect to their geographical location, economic activity and number of employees. A business group is characterized as belonging to a specific sector according to the sector of its largest company. A manufacturing group is assigned to a region where the largest company is located in. Table 3 shows the geography of business groups in Italy for the period 2005–2007.

Table 3 shows that the presence of business groups is conditioned by geography in Italy. In fact, high numbers of firms belonging to a business group are concentrated in North-Western regions, immediately followed by regions in the North-East of the country. In the South of Italy, the presence of business groups is not a significant phenomenon. This might suggest that the presence of business groups correlates with the development stage attained by local production systems. In the Marche region, the business groups cover 49.3% of total employees in the manufacturing industry in 2007. In the period

Table 3. Numbers of employees and firms within business groups across Italian regions

Regions	Employees industry in BG 2007	% on total	Trend 2005–2007	Firms industry in BG 2007	% on total	Trend 2005–2007
Piemonte	305,990	69.0	0.7	3902	24.4	12.0
Valle d'Aosta	4165	57.9	1.3	117	22.7	28.6
Lombardia	672,257	60.8	1.5	14,500	25.2	12.0
Liguria	58,636	68.0	10.0	1042	22.9	26.6
Trentino-Alto Adige	42,642	61.3	4.8	1156	29.4	30.5
Veneto	287,141	55.6	9.6	6384	23.7	20.0
Friuli	75,658	62.7	4.0	1351	25.2	16.1
Emilia	306,516	63.3	4.8	6353	25.3	12.2
Toscana	125,257	47.9	8.6	3946	20.0	14.4
Umbria	32,782	53.0	10.9	778	21.2	2.8
Marche	76,359	49.3	11.6	1879	20.9	20.0
Lazio	185,272	57.3	11.1	4453	16.8	13.6
Abruzzo	44,266	45.4	7.0	1122	18.4	22.0
Molise	5630	43.6	9.4	192	17.9	2.7
Campania	78,937	35.2	28.8	2545	12.2	31.9
Puglia	47,254	32.4	37.5	1663	12.7	41.7
Basilicata	13,467	49.3	9.6	245	13.3	28.9
Calabria	7987	21.9	47.3	464	10.7	33.0
Sicilia	40,077	32.4	25.6	1723	14.1	18.3
Sardegna	17,810	35.1	2.6	841	16.9	17.8
ITALIA	2428,105	55.8	6.5	54,656	20.8	16.3

Source: ISTAT (2009).

2005–2007, there has been a sharp increase of 11.6%, which indicates that the transition toward business groups in the Marche region is still going on. Business groups are quite diffused even in those regions (Piemonte and Liguria) that are not typically associated with industrial districts.

The relevance of those statistics is that, even in a region with fragmented specialized districts as in the Marche region, half of the employees in manufacturing are within a business group, and this share is increasing more than in the rest of the Northern regions. Even if it is not possible, due to the nature of the data set, to assess precisely the relevance of business groups in industrial districts, it is of increasing importance for sure, as industrial districts in the Marche occupy 77.8% of the total employees in manufacturing. Other studies (Cainelli *et al*., 2006) confirm that business groups are more widespread in industrial districts than in non-district areas.

There is also a large variation in the number of companies that belong to a business group. In the dataset, there are 52 business groups that exceed the number of 50 companies, and 111 business groups have more than 5000 employees. If we consider the number of firms in business groups, the share is much lower that the share concerning the number of employees. This is strictly due to the fact that almost all medium-sized and large companies are part of a business group (i.e. 89.9% of Italian firms with more than 500 employees in a business group, and only 19% of Italian firms with less than 20 employees).

To assess how entrepreneurs have evolved into business groups organizations, we have conducted 21 in-depth semi-structured interviews with entrepreneurs or CEO's of (leading) firms in a business group in the Marche region. The sample has been taken from the list of the principal district leading firms in the Marche region (Balloni & Iacobucci, 2008), and from the consolidated balance sheets of those leading companies. By doing so, we include leading firms who evolved and grew into a business group through several acquisitions (13 interviews), and firms which have been acquired by an existing business group (8 interviews). We did not select particular industries, in order to avoid a (sector-specific) bias in our findings. The interviews were held in 2006. The interviews were structured to cover three matters:

- when and why they started the transition into a business group;
- what the structure of the business group looked like (e.g. information on the subsidiary companies and their specialization);
- what the strengths and weaknesses of being part of a business group are.

The sample is not large enough to present quantitative results applying statistical tools. Nonetheless, the answers were often quite similar, so we are quite confident that we have identified some regularities, which we report below.

The interviews showed that there are basically two critical moments in the life of a typical family firm in an industrial district, which make them evolve in a business group: (1) after a period of growth, a critical size of the business is reached, with a high degree of complexity; (2) the intergenerational change at the death or retirement of the founding father of the firm. In both cases, an organizational adjustment within the firm is required. In the interviews, two different solutions to these critical moments predominate: an external and an internal one (Figure 1).

Due to the achievement of a critical size in the business, an organizational adjustment is required to manage the high degree of complexity. If the firm has access to human and

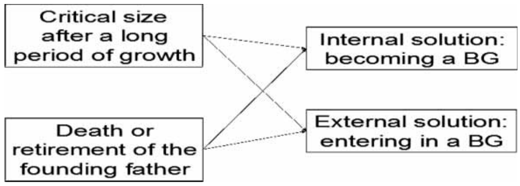

Figure 1. Critical moments and solutions in the life of an industrial district firm.

financial capital to continue to invest in its core business, then it follows an "internal solution" and turns itself into a business group. To achieve this, the firm usually buys out existing firms in the same sector. At the same time, it buys out firms more backward in the production chain, in order to cover the entire production chain and achieve a stronger specialization in every unit of the group. As much as possible, they prefer to acquire firms from the same area but this is not a general rule, as in the interviews we also found out about acquisitions outside the Marche region. In the new board of directors, there will not only be the founder entrepreneur or/and members of his family, but also other managers (no family) and members of a bank, usually the same bank that is financing the growth process of the firm.

The reasons why entrepreneurs prefer to buyout new companies rather than new business units within the existing one can be associated with some advantages of the group form, both in the development and in the management of the new ventures. The legal autonomy of the firm allows an effective accountability in terms of economic performance of the new venture, so as to ensure a direct link, as in the typical entrepreneurial firm, between a business and a manager (or a group of them) and, eventually to preview incentives at the achievement of planned goals, for example, in terms of budgets, profits and revenues of every single firm in the business group. Another reason for such business group growth is that it prevents the leading firm from exceeding a legal threshold that is linked in Italy to the number of employees. Having more employees in the same unit would imply more strict rules for security within the factory, higher labor costs and more rights for workers, and this is what the firm wants to avoid.

All the leading firms interviewed (e.g. Merloni, Tod's, Pieralisi, Elica, Turboair, Clementoni, Fornari, FinSei) had to go through an organizational adjustment after a long period of growth, and all of them went for an´internal solutioń, so that in the board of directors, brothers, sons or grandsons of the founding father were still represented, next to the managers, bank members and associates. We report here an example of Elica S.p.a., who is world leader in the production of extractor fans, and who can be considered a typical example of the evolution of a family company into a business group. In 2000, after a long period of growth, and having solved the inter-generational transition (the son replacing his father after his death), Elica started the transition through a range of buyouts, like a firm in Padova (Veneto) from the same sector, and other firms more backward in the production chain (i.e. FIME current transformer; OLA, steel laminate; ACEM, electric engines; ROAL electronic component). Those buyouts allowed Elica to continue to grow and to maintain their leading market position. The firms entering the Elica Group continued to supply other customers such as IBM and Electrolux. As Elica is a world leader, in the same period they started three important joint-ventures with competitors in China, India and Japan. The business group form allowed Elica to gain better control of the supply chain, and the joint-ventures can be considered an outcome of the achievement of upgraded routines. In other words, the leading market process of Elica is a consequence of a "learning by doing" capability in controlling routines such as production and marketing.

Based on the 8 interviews with acquired firms by an existing business group, we observed that firms become a subsidiary of a business group when the firm does not have access to human and financial capital to continue the growth process. This happens when the firm has a strong potential to grow in the market, but the family structure forms a obstacle to manage the growth process. The business group will help the firm to achieve its internationalization ambitions because it can draw on strong routines in management, marketing, finance and R&D. In 5 of our 8 interviews, the original entrepreneur had a place in the board of directors, in order to preserve his tacit knowledge and existing relations with employees and customers. At the same time, in the case of vertical integration, the business group achieved control over a sub-contractor, or in the case of horizontal integration, the group diversified its assets by adding a firm active in another sector to its portfolio.

A typical example is Fratelli Messersi S.p.a., a company which produces machinery for construction. After a long period of growth, and after having solved the inter-generational transition (two brothers replaced the founding father), the company decided in 2004 to sell 70% of their stocks to Fin.Sei (Merloni Group), because the management of the firm became too complex, and upgraded routines were required to internationalize. One of the two brothers was appointed to the board of directors. Entering in a multinational business group, Fratelli Messersi S.p.a. will take advantage of Fin.Sei routines in knowledge, marketing, finance, and internationalization, as they have offices worldwide, particularly in China (Hong Kong), which is considered a huge market for machinery for construction. At the same time, Fin.Sei have diversified their assets, as Fratelli Messersi is not operating in the same sector.

In three out of the eight interviews with former subcontractors being acquired by a business group, the supplier was too important in terms of knowledge, in that case the leading firm, instead of continuing a normal market relationship,decided to control the supplier formally, so as not to risk the loss of his support and its access to crucial knowledge. This strategy can be the consequence of a shared creative process, and it occurs more frequently in knowledge-intensive sectors.

A typical example is that of Tontarelli S.p.a., a company producing plastic products in France, Spain, Great Britain, Germany and the Czech Republic. In 2003, Tontarelli S.p.a. started to control Interstampi, a supplier of molds. Even in this case, as usual, Tontarelli S.p.a. did not change the management as they clearly wanted to continue to share their creative process with them. The buyout of Interstampi allowed Tontarelli to have an exclusive relation with a crucial supplier, and to achieve more effective communication.

5. Conclusions

In the last decades, Italian industrial districts have been undergoing fundamental changes. To assess those dynamics, one needs to analyse firm dynamics at the district level, and conceive district firms not as being homogeneous, even when they are part of the same local system. Some firms will not be able to confront market turbulence, while others will grow and make the necessary organizational adjustments to cope with globalization, like the establishment of business groups.

In this article, we have put emphasis on the rise of business groups, because this is a notable feature of the more recent evolution of industrial districts in Italy. Some leading district firms have organized themselves in business groups, which has resulted in a more uneven distribution of capital, knowledge, and market power across the firms in the districts. Doing so, these leading firms have been able to link local resources to global networks, setting in motion a process of internationalization. Our findings showed that the number of business groups has grown rapidly in the Marche region quite recently, and these employ about half of the people active in manufacturing in the Marche region in 2007. This level is still a bit lower than regions in the Northern part of Italy, but it is clear that districts in the Marche region have witnessed a huge transformation in this respect.

Based on interviews with leading district firms and acquired firms by business groups in the Marche region, we could identify a number of strategies of companies becoming part of such a business group. The formation of a business group was often triggered by two events: (1) the company reached a critical size after a rapid expansion, moving into a more complex organization; (2) the company was confronted with the death or retirement of the founding father. We found that companies opted for a number of strategies in this respect. An internal strategy meant that the firm bought out firms in the same sector or firms in their production chain. When this was not possible (because of insufficient access to capital, for instance), companies went for an external solution, that is, they were incorporated themselves in an existing business group and one member of the family was appointed to the new board of directors. In this latter case, the business group could assist the firm to move into international activities, and part of the family skills in management and innovation were maintained.

Our interviews have only touched upon these types of strategies, and how companies became part of business groups. As a matter of fact, we must be aware of the limits of the empirical data we have used in our analyses. Those limits basically concern the size and characteristics of the sample. Even if we feel that the answers to our questions were quite consistent, the sample is composed of entrepreneurs who have been successful in expanding their activities in a business group. For this reason, they cannot be considered entirely representative of the way firms have re-organized themselves in business groups. Therefore, it would be quite informative to know more about business groups that failed to develop, and what were the reasons behind that.

In addition, future research should concentrate more on the consequences of the formation of business groups for the functioning of industrial districts. To put that more in a perspective of identifying possible pathways of industrial districts would be an intriguing question (Belussi *et al*., 2003). In this respect, studies on business group should become part of the emerging literature on the economic resilience of regions, which now often lacks a firm perspective. When investigating the "adaptive capacity" of a local economy, we should consider the (adaptive) strategies of the economic agents living in the region. In this article, we examined business group strategies that faced critical events such as the achievement of a critical firm size after a rapid expansion, or the death or retirement of the founding father. Future research could investigate the capacity of business groups to respond to major shocks, such as deep recessions and globalization. In that case, the future of industrial districts may depend, among others, on the adaptive strategies of their leading business groups.

And are district firms in a business group more resilient to shocks? Related to that is the question whether the performance of subsidiaries before and after entering a business groups increases or not. This latter topic is under investigation in developing countries, where the business groups could compensate for imperfect or under developed markets in finance, labour and products (Yiu *et al*., 2005; Guest & Sutherland, 2010).These and other research topics would certainly contribute to a better understanding of the importance of business groups for the evolution of industrial districts.

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