A case study of Italy's Marche Region Industrial Districts: A model of transformation and change

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ABSTRACT

Urban and rural communities throughout the developed world are engaged in a slow recovery from an unprecedented economic downturn not seen since the Great Depression. Key to economic recovery for these communities is not only creating opportunities for business innovation and entrepreneurship, but also the need for businesses and communities to work together in an integrated way to increase the competitiveness of their region in an ever-competitive global market. Italy's Industrial Districts have been a fundamental part of the Italian economy and are key to Italy being a major competitor in the global market. The aim of this paper is to present an analysis of the Marche region industrial district as a model of how to respond to economic changes in the new global marketplace. The paper presents an overview of the Italian Industrial Districts model and an analysis of the varied measures that the Marche Region's District undertook to meet the challenges of an economic slowdown and competing in a global marketplace.

Keywords: Industrial Districts; Italy's IDs; economic development; transformation and change

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INTRODUCTION

The deep economic recession of 2008 and 2009 and the long, slow recovery have created many economic challenges for communities worldwide, and in spite of dramatic increases in the stock market worldwide, there remains a growing sense of despair among businesses and world leaders with continued worldwide high unemployment and a realization that this economic crisis is likely to continue (Elliott, 2011; Financial Forecast Center, 2010; Eurostat, 2012) well into the future.

In Italy, like many of the other countries in Europe, political leaders, business practitioners and academic scholars are exploring ways to stimulate their economy and develop practices that can create entrepreneurial opportunities, and promote innovation in which their economy can grow in our worldwide marketplace.

Since the 1970s, Italy has relied on designated Industrial Districts (ID) as an economic engine that has not only stimulated local economies, increased entrepreneurial activity, and small business development, but has made Italy a leading exporter internationally. Italy's Industrial Districts (throughout the 1970s and into the 1980s) demonstrated how small SME's could not only operate successfully but also compete on the world stage. A "Third Italy" emerged where small scale industry, characterized by informal horizontal integration of small firms, produced goods that were exported to markets worldwide (Coltorti, 2006). However, beginning in the 1990s the successes of the Italy's Industrial Districts started to decline. Large enterprises started to mechanize and automate. With these changes, middle to large companies increased their efficiency and became much more flexible. Where ID remained innovative in their product design, the hand crafted tradition that was present in so many IDs in the production of their products restrained their ability to compete with much larger, automated production methods. In addition, many of the SMEs in the IDs were financially not able to change over to expensive renovation of their technologies and equipment in order to compete with the larger firms. Also, new economies in the developing world created increased low-cost competition for the products produced in the IDs. In addition, changing policy environment in Europe and specifically the Maastricht Treaty of 1992 resulted in not only devaluation of currency and public spending, but increased production cost of the district firms (Chiesa, 2005). Finally, the early 1990s brought rising prices for Europe and beyond. All of these factors, coupled with Italy's overly bureaucratic national systems that were slow to respond to the changing economy, gave rise to Italy's IDs losing their competitive position. Districts were losing jobs and experiencing turnover (Prato, after the stagnation in the 1990s, lost over 2000 jobs and Como experienced a decrease of 20% in turnover) and Italy's share from the its exported "Made in Italy" sectors in the world market fell dramatically (Prometeia, 2003).

In 2014, there were approximately 278 firms in Industrial Districts (IDs) in Italy. Although the IDs in Italy are located throughout the country, the most dominate number of IDs are located in the Northern and Central parts of the country. The IDs are a major contributor to economic development in Italy and represent 27.2% of Italy's GDP and almost € 77 billion in Italy's export and imports last year (Osservatorio sui distretti, 2014).

The purpose of this paper is to analyze Italy's Marche Region IDs where over 90% of the districts are made up of small businesses with less than 10 people, and where 80% of the total employment and 70% of the export are located in the ID (Camuffo & Grandinetti, 2011). Our paper will first provide a history of Italy's Industrial Districts, there characteristics, and their development throughout the 1970s and 1980s, as well as the increasing challenges they faced with the changing world market. From here, the paper will present an analysis of the Marche Region's Industrial District: its history and the many actions taken by the Marche to respond to the economic downturn and the ever changing global market.

ITALY'S INDUSTRIAL DISTRICTS

The Industrial Districts in Italy came about as part of a post-World War II development effort in war torn Italy, and grew to prominence in the post-recession years of the 1970s. However the origins of the industrial districts are often traced to the early writings of the economist, Alfred Marshall. In Marshall's, seminal work, *Principles of Economics* (1922), he spoke about these geographical concentrations of skilled workers, working and socializing together in a local environment. He described the industrial districts as "concentration of specialized industries in particular localities," and stressed the linkage of business relationships to the socio-cultural background of the local community. In talking about these local, industrial communities within specific localities, Marshall described two types: one that represented evolution of "centers of specialized skills" from the pre-industrial age, and another that came about as a result of some manufacturing or craft activity from the industrial cities (1922).

Marshall envisioned different regions where businesses were comprised of small locally owned firms where trade, investment, and production was done locally, with little interaction with companies and firms outside of the local region. A major strength according to Marshall of these districts was the sense of community and commitment to their local region which came both from the employees and the employer. In this type of "industrial atmosphere" as Marshall called it, local workers coming from the local region with a strong commitment to the district, could freely move from firm to firm within the district, thus creating a stable community with a strong local culture and shared industrial expertise.

After World War II, Italy, like much of Germany and other parts of Europe was in economic distress. In order to not repeat the mistakes post World War I - where defeated countries were allowed to go into economic crisis which many people felt led to World War II – plans for economic development were created. As part of Italy's redevelopment efforts, Marshallian industrial districts were introduced. The early forms of these districts assumed a *traditional artisan* model (Lutz, 1958, 1962). In this model, small artisan firms produced goods for the local market. However, it was found that many of these small firms, especially in the South, were thought to be inefficient and were subsequently overshadowed by somewhat larger and more efficient firms from the North of Italy.

In the 1970s Italy, like much of Europe, was confronted with oil crises and recessionary trends. It was from these crises that the industrial district model more fully developed. Starting in the late 1960s, but much more in the 1970s, the North and Central Regions of Italy underwent a rapid process of industrialization based primarily on small businesses (SME's) concentrated in traditional industrial districts. It was found that the SME's in Italy's IDs, by building on the strong craftsmanship skills within their region were producing high quality products that were able to compete with firms worldwide. In addition, labor costs were relatively low which allowed for a low cost advantage relative to large industries. Also, IDs found that the social cultural factors that are inherent to IDs; e.g., local culture, common values, trust, etc. allowed for a wonderful balance between competition and cooperation that many large firms did not have. The notion of the power of a collection of small firms and the Marshallian industrial district is supported by Giacomo Becattini (1975) research, where he contrasted the success of local production systems of small and medium enterprises in the Italian region of Tuscany, and compared them to the large firm production model of Turin and Milan.

This industrial development in Italy's IDs was primarily the result of the mobilization of a considerable amount of entrepreneurial energy to create small businesses that were specialized in different types of production and were linked with other local enterprises through the creation of efficient networks (Fuà, 1983). A "flexible specialization model" developed as

an alternative to traditional organizational structure with a focus on less capital intensive industries. As a result of this development, select regions in the North and Central area of the country transformed themselves into areas with high-income levels and high standards of living. There was a renewed sense of social cohesion, and both crime and unemployment rates are down. Some of the common characteristics that typify Italy's IDs are shown in Figure 1.

The product focus and/or industries of the firms in the districts frequently are based on social, economic and cultural factors which are often rooted in the territory or municipalities, such as food, paper, plastics, rubber, mechanics, jewelry, leather, shoes, furniture, textiles, and clothing. However, more recently we are seeing IDs that represent industries in the technology field (See Figure 2 below):

In Italy's IDs a "Third Italy" emerged where small scale industry, characterized by informal horizontal integration of small firms, produced goods that were exported to markets worldwide (Coltorti, 2006). Most of the specialized products in the districts were part of the sectors of "*Made in Italy*" (ISTAT, 2010) or the so called "4A sectors" which accounted for almost 70% of Italy's exports.

- ***A**bbigliamento-Moda* (clothes, shoes, accessories, fashion products)
- ***A**rredo-Casa* (Furniture, home appliances, kitchenware,...)
- ***A**limentari e Bevande* (Food&Beverages)
- ***A**utomazione-Meccanica* (Industrial Automation, Mechanics and machinery)

Many of the products for the "*Made in Italy*" became known worldwide. Some examples of the "*Made in Italy*" sector are *Benetton* in the clothing sector, *Tod's* in the shoe sector, *Luxottica* in the optical industry, *Merloni* in white goods, and *Marazzi, Iris, Ricchetti* and *Ragno* in the ceramic tiles industry. *Aprilia and Piaggio*, which are specialized in scooters and motorbikes, and *Riello* specialized in heating equipment are important examples from the mechanical products sector.

Italy became a force in international trade and exported their products worldwide, with many coming out of the the IDs: packaging machines in Bologna were being exported to Japan (Brusco, 1990), and Italian machine tool industry was exporting their products all over Europe. The textile industry in Carpi and Prato, the furniture industry in Brianza and Cascina, and the footwear industry in Vigevano and Puglia were all producing products that were exported throughout Europe and creating competitive advantage for the firms (Brusco, 1990). The Lombardy Industrial District for example, is regarded as one of the most industrialized and innovative regions in Europe. In 2001 regional gross domestic product (GDP) in the Lombardy IDs accounted for some 20% of total Italian GDP and 20.6% of total value added, while the unemployment rate at 3.7% was far below the national average (9.5%). At the end of 2002 the region had over 762,000 enterprises with most of the firms (90%) having less than 50 employees (ISTAT, 2001).

Economists and industrialist in Italy and beyond sang the praises of the industrial districts and the "Central Italian" model of collection of small firms, balanced, non-destructive industrial growth. Italy's ID models were lauded as economic development successes by academics and social scientists. Politicians such as President Bill Clinton (when he was governor of Arkansas), visited towns like Reggio Emilia and Modena to see their small firms and their welfare institutions. Romano Prodi, former Premier of Italy and the president of European Commission in 1990 said: "*The district is the unique real innovative contribution from our country to economic and social evolution of this century*." (Amatori and Colli, 2001).

However, in the 1990s with increased globalization, the rising of the knowledge economy and changes of new technologies forced Italy's ID to change. Districts in Italy's

North and Central regions responded differently to the "new reality" of these market changes. The Marche Region, where over 80% of people work in IDs, implemented many changes and gives an excellent case study of how this region responded to the new challenges facing IDs in the new economy.

MARCHE REGION INDUSTRIAL DISTRICTS

The Marche region is one of the most industrialized regions in Italy and is considered a region of excellence, not only for its economic performance, but also for its cultural, natural and social richness (OECD, 2010). Marche belongs to what has come to be called the "Third Italy": a model of development based on small and medium-sized enterprises (SMEs) located in industrial districts (Coltorti, 2006). See Figure 3 below

The Marche IDs has many firms from a very broad range of industry sectors ranging from agriculture, to automobiles, to pharmaceutical products (Figure 4 and 5).

Although there are a myriad of industries represented in Marche IDs, the sectors that the Marche is most known for, both in Italy and internationally, are in the furniture, shoe, textile, and mechanic sectors. For example, the furniture ID has such firms as: scavolini (www.scavolini.us/) and Berloni (www.berloni.it/#/en), and Marche's shoes are represented by ID firms such as Tods (http://tods.com/#/us) and Cesare-Paciotti (www.cesare-paciotti.com). In the Mechanic sector, you find Indesit (www.indesitcompany.com/) and Elica (www.elica.it/it/en/). These firms employ a large number of employees mostly in small to medium size firms. Although there are some larger firms in these sectors, many of the firms are very small in size. For example, 98 percent of the employees from the shoe district are employed in firms with less than 49 employees.

Marche IDs - Background and History

In the 1960's and 70s, the Marche region underwent a rapid process of industrialization based primarily on small businesses (SME's) concentrated in traditional industrial districts. This industrial development was primarily the result of the mobilization of a considerable amount of entrepreneurial energy to create small businesses that were specialized in different types of production and were linked with other local enterprises through the creation of efficient networks (Fuà, 1983). As a result of this development, the region has reaped many benefits. Marche has transformed itself into an area with high income levels and high standards of living, and there is a renewed sense of social cohesion, and both crime and unemployment rates are down.

One of the main reasons identified to explain this particular development path in the Marche region is a blending of creativity and entrepreneurial skill, often provided by the "share-croppers" (*métayer* or *mezzadro*) who transformed themselves into craftsmen and subsequently into small businessmen. Historically, the farmer was the tenant of the land, which was rented from the landholder. As opportunities developed in the cities in the ID's, many share tenants abandoned the land and became entrepreneurs, in the industrial or trading sectors, first undergoing an intermediate phase called "*metal–share tenancy*". In this phase, especially young people started working in factories, though they still lived with their peasant family. The former share tenants who arrived in the towns worked better in the extra-farming sectors chosen by them (Anselmi, 1985), and, in these activities, they showed to be responsible and enterprising.

The mechanism underlying the creation of new enterprises was primarily based on the desire of farmer employees to create an independent company as an offshoot of the original company. The new initiatives were characterized by their very small size, limited market ori-

entation and, in many cases; they were a sub-supplier firm in the same geographical area as the original company. The lack of entrepreneurial *quality* prevented or hindered the growth capacity of these firms. The nascent entrepreneur was competent in specific production areas, but did not have sufficient knowledge and organizational skills to manage large and medium sized organizations and the network of relationships needed in order to obtain financial resources and the human and material capital required to fuel the growth process (Accornero, 1999). They were frequently entrepreneurs with low levels of formal education who lacked the skills set necessary to operate and create new ventures.

Small firms constitute the backbone of most economies. In European Union (EU) countries SMEs account for over 99% of enterprises and this is particularly true in Italy where SMEs are a majority of most companies (European Commission, 2013). However, in the case of Italy and the Marche region, a large proportion of such companies, in the manufacturing and tourism sector, are frequently "family businesses" or firms owned by family members. Family firms account for 93% of all enterprises and 98% of the workforce in manufacturing companies with fewer than 50 employees in Italy. Over two-thirds of firms are totally owned by families. Whole non-family shareholders exist, typically relatives or friends, but foreign and/or financial partners are largely absent in the Marche. The share of family equity is negatively related to company size and age and such firms typically open-up equity either to generate growth or to reduce ownership fragmentation, which takes place as generations pass (Mussati, 2008).

Irrespective of the type of owner of SMEs (family owned or non-family owned), key to the success and competitive advantage of the SME in the ID is the SME's founder's attitude, background and skills. Dubbini, Micozzi, and Micozzi (2013) list the following as influencers on the successful development of SME's in Italy IDs:

1) The founder's skills, competences, values, and cultures are significant to the firm's evolution;
2) The founder often embodies the technical know-how of the firm;
3) The founder's decisions are strongly influenced by social and cultural factors; and
4) Personal relationships and paternal attitudes play a key role in firm strategies and policies.

Marche ID Model - Winds of Change

Over the last decade, the business model of Marche's SMEs has gradually changed. A new generation of entrepreneurs appears to be emerging with a higher level of formal education than in the past. These new businessmen may have experience in management, rather than solely in production, or they may even start a new business without having any previous experience of employment in an enterprise (D. Iacobucci & Micozzi, 2012). In addition, although the number of spin-offs from existing businesses has decreased (partly as a result of the gradual slowdown in manufacturing production volumes), the process of creating spin-offs from existing companies has changed. The process is more structured and includes people, both internal and external to the company, who are involved in launching new initiatives. This is a significant change from the traditional model of entrepreneurial activity, which associated the new business either to a single person or persons in the same family environment.

According to the OECD (2010) report concerning SMEs, entrepreneurship and local development in the Marche Region, three critical trends are occurring:

- Firstly, in the face of globalization and the increasing competitiveness of emerging markets, the Marche model has shown weaknesses for the last decade or so, such as scale constraints (small businesses with an average of five employees), lack of cooperation and networking (sharecropping background, extreme sectorial and regional identification), lack of innovation (few new start-ups), undercapitalization (emphasis on credit as opposed to other forms of finance), lack of support for environment (roads, space, BDS services, finance, etc.);
- Secondly, the current financial and economic crises is taking an increasing toll on the region, albeit with a time lag due of the comprehensive set of anti-crisis measures introduced by the national, regional, district and local governments. Nevertheless, there is wide consensus that the region that will emerge from the current crises will be very different and will need to reinvent itself; and
- Thirdly, the generation of Marche entrepreneurs, which contributed directly to dramatic wave of business activity, employment creation and wealth generation is approaching retirement or has already left the labor market. Given the significant levels of family businesses in the region, this brings with it threats as well as opportunities, depending on how (or if) firm transmission is planned and executed.

Iacobucci & Micozzi (2012) conducted an analysis of the entrepreneurial dynamics in the Marche region to assess the nature and scope of business in the region and to provide a better understanding of the process for setting up new initiatives considering the resources mobilized by the entrepreneurs and any problems they encountered in implementing their business ideas. The main results of this analysis was that the Marche region experienced the same decline in new firms creation as Italy, even if some positive elements seem to appear. Also, the gender gap in the entrepreneurial rate is less relevant compared to average of Italy and the level of education influences the probability of starting new firms.

The development of manufacturing sector in the Marche region during the last decades could be summarized as *Marche Paradox*. The competitiveness of the economic system has not been linked with relevant investment in R&D (the ratio between the R&D expenditures and GDP is rather lower than national and EU average). Also, innovation is realized through not disruptive innovations but depends on learning by doing and learning by interacting among firms in the same value chain. The industrial system of Marche Region is based on industrial districts that are characterized by the capacity to adapt to market changes, endogenous shock, innovation (Marco Bellandi, De Propris, & Becattini, 2009) and globalization (Donato Iacobucci & Spigarelli, 2007). (Figure 6)

The presence of firm agglomerations in related sectors fosters the creation of knowledge spill-over that improves the incremental innovation (Audretsch & Feldman, 1996, Boschma & Frenken, 2009). For example, the process of growth of the furniture district fosters the development of machine sectors to support it. The growth performance of Marche economic system could be linked not only to the district specialization but even more so to the capacity of the system to develop networks of cross-fertilization across sectors (which is due to the fact that there are several specializations in productive and service sectors within regional context).

Related Variety, University Partnerships, and Open Innovation

It is generally felt that having high levels of related variety in a region is likely to have a catalyzing effect on variety creation, and the regions overall competitiveness (Frenken, Van Oort, & Verburg, 2010) (Boschma & Frenken, 2011). The 'related variety' approach exceeds the vision of district (going beyond their traditional industry sectors) and gives value to the relationship between regional actors with different knowledge sets. In addition, from this di-

versity (variety) emerges the main benefit in terms of learning and innovative capacity (Nooteboom, 2000).

Since the mid-1990s, universities and research organizations have been increasingly involved in commercializing research results. This trend was formalized in a range of legislation promoting the '*third mission'* of technology transfer as being of equal importance to universities' traditional missions of teaching and research (Etzkowitz, 2002). In the Marche Region where universities serve as the primary research centers for firms, there is a very broad relationship between universities and the regional firms, and this is especially true with university departments that conduct applied research; e.g., engineering (D. Iacobucci, 2011).

Historically, universities are a key resource for high-tech firms, especially in the early stages of product development. In this way, universities contribute directly to firm's innovation, by providing the company with technical solutions or devices, or by involvement in applied research activities. This role is in accordance with a view of the university as a permeable institution, which pays attention to problem-solving activities that have immediate relevance for business firms, at national and local levels. As a result, governments and public opinion have placed more emphasis on demanding that universities fulfill this mission, even by commercializing their own academic inventions. This opinion was further solidified, by a wave of legislation aimed at encouraging universities to register patents and license them under profitable conditions (D. Iacobucci, 2011). The new regional call requires, as a condition for admission, the creation of agreement between research centers and firms. This change of perspective leads to increasing attention given by industry to universities' research, as part of a general strategy to move away from a "vertical" model of R&D to a "network strategy" of innovation, based upon the exploitation of external knowledge resources.

In the Marche Region, many firms in the Marche's IDs have embraced an "open innovation" model. The Open Innovation perspective (Chesbrough, 2003) offers a framework to discuss the links between agents and the "the use of purposive inflows and outflows of knowledge" to accelerate internal innovation, and expand the markets for external use of innovation, respectively. Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology. In this approach, collaborative networks are formed through several kinds of relationships between different actors in the system of sources of innovation that is the result of collaborations between firms rather than from single organizations. The mechanisms of open innovation have more than one form and as such are more difficult to mechanized, compared to the routine of "closed innovation" (Mucelli & Marinoni, 2011). For example, a company that is hierarchical in design, that has a strong autocratic leadership, and that is bound by strict rules and procedure, would generally be less open to out-of-the-box ideas from outside sources, and the concept of open innovation. Conversely, a company that has strong entrepreneurial leadership in a more organic, dynamic, organizational structure will be much more open to the possibilities that come from any source and thus to open innovation.

Most of the open innovation literature takes the perspective of the firm in the relations with universities, and a big number of approaches to conceptualizing these interactions have been developed. The most important is the triple helix model and the idea of the entrepreneurial university (Etzkowitz & Leydesdorff, 2000). The triple helix model has been used as a way of understanding the interconnection of three major components of national innovation systems: university, industry, and government. In the triple helix model, interaction among universities, industry and government is identified as being the key to innovation and resultant economic growth.

The changes in the academic and industrial systems defined as the "*knowledge economy*", require that the traditional forms of Technology Transfer (TT) must be associated with

a range of new activities. The effectiveness of the relations between university and industry depends on several factors such as the sector of activity and its stage of evolution, firms' absorptive capacities, institutional autonomy, the reputation of the university and its response to political pressures exerted at international, national, and subnational levels (West & Bamford, 2005).

Marche IDs Shift its Production Focus

While in some cases the historical local production systems in the Marche based on small firms has shown an unexpected resilience, generally over the past decade, a number of firms in the Marche has experienced increasing difficulty in ensuring the competitiveness of their production and the proper placement and remuneration of new recruits, in particular young people with a high level of education (Onida, 2004). In the Marche Region a change in the composition of production activities was needed. This is especially true for firms in the manufacturing sector, where there is needed a move towards production that has greater knowledge content (high-tech sectors). However, this move in the Marche Region (and the rest of Italy's IDs) was difficult for several reasons.

- The first is due to the fact that it is increasingly difficult to clearly distinguish between high-tech and low-tech sectors, using traditional systems for the classification of economic activities (Baldwin & Gellatly, 1998). The application of certain technological trajectories - such as those related to ICT (Information & Communication Technology) and new materials - points to the possibility of introducing major innovations in production activities regarded as *traditional* or low technology. Conversely, it may happen that assembling and/or producing standardized products with low value added and knowledge content are activities classified as "high-tech".
- The second reason lies in the fact that the development of new activities cannot disregard the development of "human capital" (human resources and knowledge) in the region.

Regional policy in this area, prompted mainly by the availability of European funds, moves along two roads: on one hand, to promote innovation within existing firms, and on the other, to promote entrepreneurship in new areas of activity, especially in high-technology sectors. In both cases there is a reassessment of the role of universities that requires a rethinking of the role of academic spin-offs, ventures that derive from research conducted in the academic field and directly involve lecturers and university researchers (Iacobucci & Micozzi, in press).

The competitiveness in the district is maintained primarily with higher content of value processes, such as improving the design, the strengthening of controls along the entire value chain in the name of quality, the overseeing of the distribution networks abroad, and the strengthening of computing platforms.

However, it appears that the districts are no longer self-sufficient with a trend to larger and more complex supply chains and the emergence of innovative practices, including Information and Communications Technology (ICT), redefining organizational structures. Subsequently, to support a lasting and widespread development of the Marche districts, it is equally a priority to invest on a system of intensification of the formal or informal networks, to try to enrich knowledge and new values of those functions of the territory from which flow the traditional competitive advantages of the district model.

Many companies in IDs can compete because they are linked to a strong brand, the company leader or network enterprise. This means that many micro-enterprises are able to position themselves close to the leading brand and survive in the wide range of competition.

Many others are not able to use local and values of ID to build new forms of innovation and self-marketing is not yet compatible with the needs of the global consumer. The wealth of knowledge of these companies needs to be upgraded in order to exploit the potential of the knowledge workers of the area that could be rearranged around other stronger knowledge attractors: the science and technology parks, universities, IT centers or design, etc.

Consequently, in the Marche we are seeing the passage from a mass market to a mass of niches, both productive (and therefore linked to a specialization of products/services) and territorial (and therefore linked to the enhancement of the specific geographical/territorial). The two line of evolution of ID in the Marche Region are improving the quality of traditional districts and the formation of new technology clusters.

FROM TRADITIONAL DISTRICT TO CULTURAL DISTRICT

In the Marche region, one can see an increasing attention to culture and creativity. The cultural ecosystem pervades across the creative industrial district and this improves the value of products and services. Moreover, it is important to focus the attention on the acquisition of technological advantages (micro-electronics and industrial machinery and equipment) should allow a higher degree of automation of production processes (Santarelli & Sterlacchini, 1990). The creative and cultural industries appear to be well development in Marche Region (Figure 7).

The traditional ID should invest in valorization of *Made in Italy*, using the culture of territory as value added to the products and goods. *Made in Italy*, is a brand that is associated with the image of Italy in the world. The brand is synonymous with quality and can therefore be defined as the set of cultural values and of human, technical, scientific, creative and production assets that characterize the production system in Italy, which involve the manufacturing districts, but also the infinite micro-systems of production geographically distributed in various areas of the region. In this sense, the personalization of products should lead from price competition to quality competition.

The furniture sector is an example of this direction. In the furniture sector some of the big companies invest in design and *Made in Italy* and maintain a strong competitive position in world market. In the last decade, a strong concentration process has taken place with the success of few big companies (in 2008 the first 15 firms represented the 41% of total production). The case study of Scavolini Spa, reported below, is representative of this.

Scavolini has been Italy's leading kitchen brand since 1984. A large industrial concern, it is capable of organizing a complex production process enabling it to create high quality kitchens valued by households across a wide range cultures and tastes, at competitive costs. Scavolini states: “It is the company that best succeeds in satisfying the consumer's most varied, concrete demands in terms of styling, functionality, safety and durability: qualities recognized and appreciated by many households, for whom the Scavolini brand offers the best furnishing opportunities together with highly reliable contents (Scavolini Company, 2014).”

Scavolini Case Study

The Scavolini company was started in 1961 and by 1984 was a leader in the Italian market. The mission of the Scavolini states: "*We work to improve the quality of life in the kitchen by raising the standards of both stylistic and functional aspects, in full accordance with our core values.*" (Scavolini, 2014).

As of 2014, Scavolini products are placed in 1300 shops with more than 40 models and 350 variations (Scavolini, 2014). Over the years, Scavolini has not only created new lines, but has pursued a diversification strategy where it has acquired new brands. When Scavolini wanted to enter in luxury kitchen segment, it bought Ernestomeda.

Although Scavolini products sell on the international market, it operates with a distinct *district perspective*: all the production phases are realized by external suppliers localized in the same province of company that assembles the components. The relationship with suppliers is a partnership where the trusty affiliation is particularly strong, and finally they operate in a fully automated warehouse that provides for maximum efficiency.

The R&D activity of Scavolini focuses primarily on the development of new models and the redesign of existing ones, realized by the collaboration with designers and architectures (i.e. King & Miranda Design, Karim Rashid, Giugiaro Design, etc.). During the process of development of new products, several phases happen:

- evaluation phase (R&D office, marketing office, sales office);
- executive planning (R&D office and industrialization office);
- presentation of new model (all the offices);
- industrialization phase (production office, purchase office, R&D office).

Scavolini's competitive advantage is guaranteed by the supplier's network that provides: the advantage of scale and flexibility economies; the creativity in the qualitative and aesthetic development of new products; a marketing strategy congruent with mission, vision and values of the company. Thus, the scale and scope economies in this sense are technical and organizational (marketing and distribution).

University Spin-Offs and the New Technology Cluster

According to the endogenous growth theory (Braunerhjelm, Acs, Audretsch, & Carlsson, 2009), technological innovation is seen as the most important factor for achieving long-term economic growth. The Knowledge Spillover Theory of Entrepreneurship specifically emphasizes the role of new firm creation in exploiting knowledge created by university research (Audretsch & Lehmann, 2005). Throughout Italy there is a need to rapidly develop activities with greater knowledge content, and there is a need to foster the creation of a new high-tech district, improving the relationship among firms, university and institutions.

One of the primary outputs of the relationship between universities and firms is the creation of spin-offs enterprises. Academic Spin-offs can not only be important drivers of local economic development because they generate hi-tech entrepreneurship, but also they can help transform local economies by promoting the emergence of local technology clusters. It has been shown that these young technology entrepreneurs represent a connection for other firms to access the know-how and skills within universities, thus encouraging linkages between research centers and small firms, and the expansion of local networks where new technologies and knowledge can be shared (Iacobucci & Micozzi, in press).

In Italy, the phenomenon of university spin-offs started to be relevant during the last decade, partly as a result of regulatory changes that introduced the opportunity for universities and research institutions to authorize, on a temporary basis, their staff to participate in

business ventures for the exploitation of new research. Academic spin-off is a phenomenon with significant potential for Marche Region. Primarily because there is a need for the Italian economy to move from so-called "traditional" or "low-tech" sectors to "high-tech" sectors (OECD, 2005), or "science-based" sectors, according to Pavitt's classification (Pavitt, 1984).

From 2000 to 2012, 49 spin-offs were born: 35 from Polytechnic University of Marche, 9 from University of Camerino, and 5 from University of Urbino (http://spinoff.dii.univpm.it, 2012). The primary industry focus area of the spin-offs from the Polytechnic University of Marche were Information & Communication Technology (ICT), energy and green economies and innovation services (these sectors reflect the some of the specialty focus of the university). In all of Italy during this period (2000-2012), there was a total of 747 spin-offs established (Center for Innovation and Entrepreneurship, 2014).

In 2012, the regional government in the Marche Region provided financial support to university spin-offs belonging to the sector of home automation, energy and smart manufacturing to foster the development of new technology clusters in the region. An example of this would be the domotic or home automation cluster that represents a set of knowledge and competencies in several research fields and productive activities. In the Marche Region, the Polytechnic University of Marche (UNIVPM), Department of Engineering focuses on home automation, and numerous spin-offs were born from their work. There are a total of 32 active "spin-off" businesses from UNIVPM with a majority of those in innovation, information, and the energy/environmental sectors. For example, there are currently 9 spin-offs in the information & communication technology, 7 spin-offs in the energy and environmental services, and 7 in innovation services such as informatics, domotics, etc. that are active in the Marche Region. In addition, we are seeing new spin-offs from other sectors such as life sciences, electronics, etc. being created as a result of their work with the university.

The academic spin-off, as a mechanism of technology transfer, represents a way to foster the creation of new technology based firms (Iacobucci & Micozzi, in press).When analyzing the data of new firm creation in high-tech sectors using the "Movimprese" database, it was observed that while trends in Italy increased and decreased over the years, a more constant, consistent trend occurred in the Marche. However, the overall rate of growth in the Marche was significantly less when compared to the country (Figure 8).

DISCUSSION

Although the existence of territorial clustering of businesses to gain sustainable competitive advantage are found throughout developed nations, the Industrial District that are found in Italy are truly unique. Where clusters are frequently groups of firms in related industries in a geographical locations formed together for the purpose of creating competitive advantage, Industrial Districts represent a much more historical evolution based on local ethnic communal cultures of trust and cooperation. In addition, ID's ability to compete is based less on firm size but much more on how production is organized among SMEs (often with less than 10 employees) and how these SME's interact with the social and productive environment in which they operate.

With the economic recession in the early 1970s, Italy's IDs gained prominence and it was often found that these groups of local, small SME's were outperforming many large firms and made significant gains in innovation and production. However, where the 1970s and 1980s brought many successes to Italy's ID model, the 1990s presented many challenges. Large companies became much leaner and nibble, and mergers of companies have resulted in concentrating markets with fewer and larger firms. In addition, Italy's ID's were finding that they could no longer compete with reduced wages given in developing nations. Finally, the "last straw" so to speak, was the financial crisis in 2007, which had a tremendous impact on

the Italian economy and Italy's IDs. In 2009, for example, export of districts decreased by 20 percent when compared to the previous year. Although this trend is changing (exports were up in first 9 months of 2012 for 48 districts), the challenge of competing internationally remains significant (Riccardi, 2012).

Although there has been up and downs, the Marche IDs has shown great resilience to responding to the many challenges of the changing global world and global markets. Small family-owned businesses have had to adapt to the new reality of this changing market. The Marche Region in particular, with a focus on SMEs and entrepreneurship, has changed dramatically. Where in the past business owners in IDs in the Marche had skills but less in the way of advanced education, today's entrepreneurs have much more education and a greater tool kit of skills and appreciation of technology in order to adapt to the changing market. Also, the Marche Region with its focus on creation of new business ventures has created opportunities for "spin-offs" from existing companies. In addition, the presence of firm agglomerations in related sectors has fostered the creation of knowledge spill-over to enhance innovation. Key to some of the Marche's ability to survive and prosper that been strong support by the regional government and also its partnerships with the universities in the region. Many of the new spin-offs businesses have come about through university affiliations.

However, to close the gap with the Italian trend the Marche Region has to foster the creation of new high tech firms improving the networking between the research centers (as Universities) and firms. According to the OECD (2010), there is a need in Italy in general, and the Marche Region in particular, to set a new policy to promote the new firm formation: "for a variety of reasons, promoting entrepreneurship enjoys support from governments at both ends of the political spectrum. Pro-entrepreneurship policies have been embraced as a means of increasing economic growth and diversity, ensuring competitive markets, helping the unemployed to generate additional jobs for themselves and others (rather than share existing work), countering poverty and welfare dependency, encouraging labor market flexibility, and drawing individuals out of informal economic activity. In short, an enterprise imperative has been charged with addressing a broad array of economic and social aspirations."

CONCLUSION

The Marche IDs provide lessons not only to other IDs in Italy but also to other industrial groups and clusters in the developing world. Increasingly, we are finding that in order to compete in this global, multinational world, businesses and in particular SMEs must collaborate and work together. It is important for SME's, in the new competitive arena, to manage the "relational capital". We strongly believe that firm's external contacts can bring in new and different kinds of stimulus that, once properly combined, can provide an innovative result and, once screened, give rise to much more competitiveness and creativity (Roberts, 2001). Following this line of reasoning, innovation and development drivers are relations with clients, suppliers, competitors, producers of complementary products, universities and other public and private bodies involved in research (such as laboratories, scientific and technology parks, business incubators). R&D collaboration networks are important too (Ahuja & Lampert, 2001; Freeman, 1991; Hargadon & Sutton, 2000), especially in contexts and circumstances where a single organization does not have the resources and capacity to develop and bring about innovation on its own (Hagedoorn, 2002).

Italy has been dramatically impacted by the economic crisis of 2008, and the stalled rebound to the crisis has been slow and painful. The country's sovereign debt has been a significant barrier to new business creation. In 2008 and 2009, alone the IDs lost 92,000 jobs and by all accounts this trend has not stopped (Riccardi, 2012). In addition, the Italian Na-

tional Government is often regarded as inflated, over staffed, over taxed, bureaucratic, and not providing the necessary investment in education and R&D.

Key to the success of the Marche and the other IDs will be a renewed interest and focus by government on innovation and creation of new ventures. Although the *Made in Italy* brand has been successful and should not be abandoned, many IDs in the Marche and elsewhere are looking at new industries and in particular the green economy for new opportunities.

In Italy and throughout Europe, as well as in North America, new industrialization plans are being drawn for the manufacturing sector. Historically small businesses have been the key to economic development in countries in Europe and the U.S. Although the IDs are a unique to Italy with his informal compacts and tie to the culture and social values of the region, there are important lessons that can be drawn from their successes that can be transferred to other communities in Europe and beyond.

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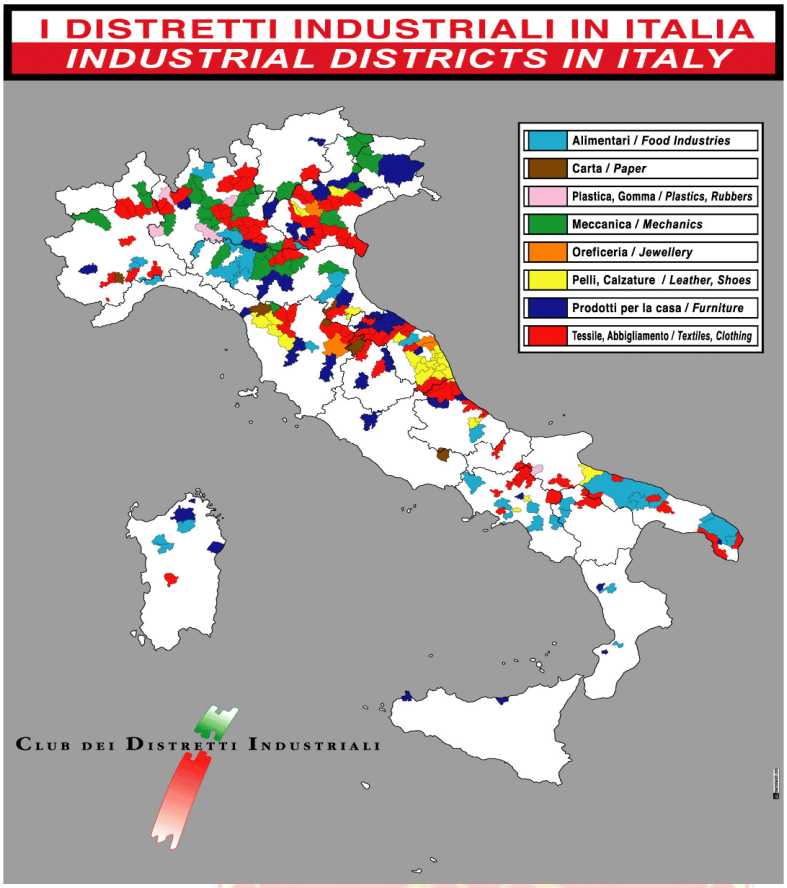
APPENDIX OF FIGURES AND TABLES

Figure 1.
Common Characteristics of Industrial Districts

- Business structure dominated by small, locally owned firms
- Firms are localized in a bounded geographical area
- Population of firms, each specializing in a single step (or few steps) of the production process of the district,
- Localized process of division of labor
- Substantial intra-district trade among buyers and sellers
- Key investment decision made locally
- Long-term contacts and commitments between local buyers and sellers
- Low degree of co-operation or linkage with firms outside of district
- the physical proximity between firms engenders positive spillovers
- Diffusion of information, knowledge ideas among firms
- Workers within districts are committed to the district
- Workers may move from firm to firm within the district,
- Generally there is limited out-migration of workers in the district
- High incidence of exchanges of personnel between customers and suppliers
- High degree of co-operation among competitor firms to share risk
- Large percent of workers engaged in design and innovation
- Specialized sources of finance, technical expertise, business services available in district outside of firms
- A local community made up of a community of people and a parallel institutional system
- Local community incorporate a system of values that it has developed over time which can provide incentives to entrepreneurial activity and introduction of innovations
- A system of values is widespread and transmitted through the institutional system; e.g., the market, the firm, the family, the government, political associations, trade unions and private associations
- Homogenous system of values and views regarding work ethics and role of the family
- Strong trade associations that provide shared infrastructure, management training, marketing, technical, and financial help
- Strong local government role in regulating and promoting core industries

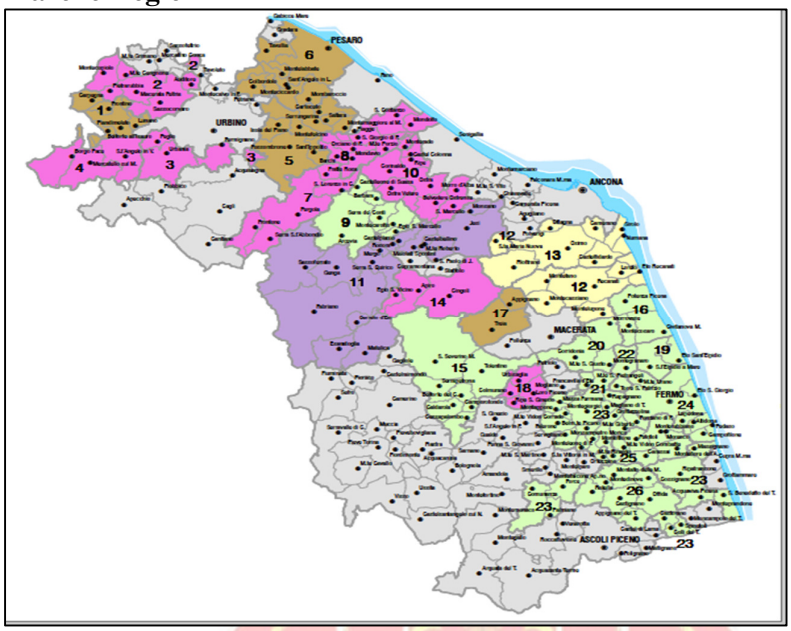
Sources: Adapted from -Schilirò, 2009, Brusco, 1993, Becattini, 1996, Becattini, 1989; ISME, 2014.

Figure 2.
Map of Italy's IDs



Source: ISTAT, 2010

Figure 3
Marche Region



Source: Industry Census and map of inlemarch.com

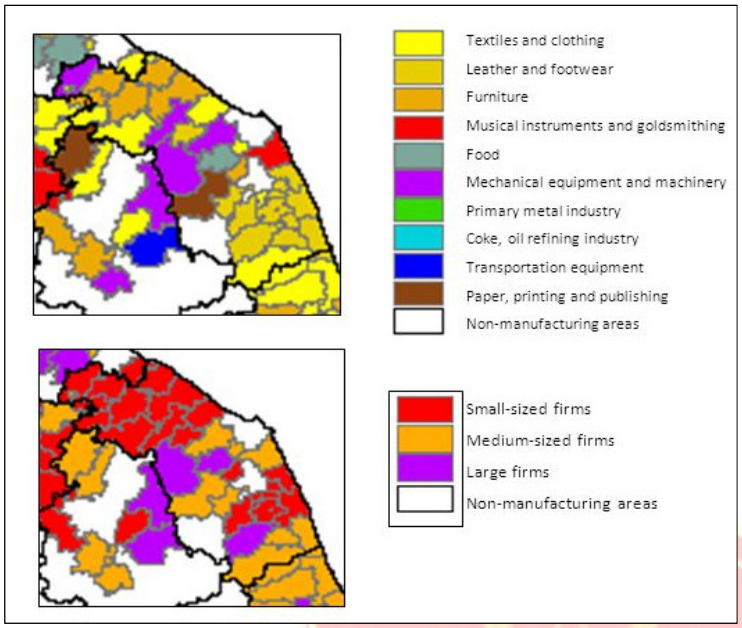
Figure 4.
Firms and Industries in Marche

CODAT	DESC	Active firms	New firms	Cessation firms
A	Agri/food and forestry	31318	818	1642
B	Mining	101	1	2
C	Manufacturing	20619	911	1496
C10	Food industry	1637	39	80
C11	Beverage industry	74	0	0
C12	Tobacco industry	0	0	0
C13	Textile industry	481	32	52
C14	clothing	1881	146	232
C15	Leather and shoes	4204	262	399
C16	Wood products	1247	39	95
C17	Paper	214	3	9
C18	Printing	544	19	39
C19	Coke and oil	8	0	1
C20	Chemical products	126	1	5
C21	Pharmaceutical products	5	0	0
C22	Rubber and plastic	548	18	23
C23	Other products	605	11	30
C24	Steel	94	2	6
C25	Metal	2899	89	141

CODAT	DESC	Active firms	New firms	Cessation firms
C26	Infor. & Comm. Technology (ICT)	361	21	21
C27	Electronic	509	20	45
C28	Unclassified	887	15	50
C29	Automobile	74	6	5
C30	Other lines	337	20	36
C31	Furniture	1540	47	85
C32	Other manufacturing industry	1526	48	89
C33	Repair services	818	73	53
D	Energy	414	33	17
E	Drainage system	271	5	8
F	Construction industry	23137	1152	1829
G	Commerce	37832	1792	3015
H	Transport	4324	113	258
I	Board and food service	9474	449	761
J	Infor. & Comm. Tech service	2604	183	180
K	Financial and insurance service	2920	172	234
L	Real estate	6605	121	246
M	Professionals	4828	340	412
N	Commercial agency	3123	241	251
O	Public administration	0	0	0
P	Education	456	20	39
Q	Welfare state	680	23	30
R	Artistic activities	2023	103	146
S	Other services	6775	257	386
NC	Unclassified	111	3695	654
TOT	TOTAL	157615	10429	11606

Source: ISTAT, 2014

Figure 5.
Map of Marches Firms and Industries



Source: Industry Census and map of inlemarch.com

Figure 6
Marche ID's Pathway to Globalization

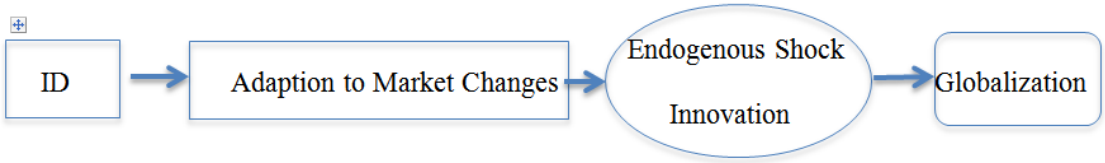


Figure 7
The Creative and Cultural Industry in Italy and in Marche Region

	Value Added (Million of Euros)		Employment (Thousand)		Value added per employee (Thousand)		Firms	
	2011	**2012**	**2011**	**2012**	**2011**	**2012**	**2011**	**2012**
Italy	75,805	75,519	1,390	1,397	54.5	54.1	443,653	458,243
Marche Region	2,339	2,341	50	50.5	46.8	46.4	12,700	13,186

Source: Rapporto 2013 Symbola[1]

[1] Unioncamere and Symbola (2013). Io Sono Cultura - L'Italia della qualità e della bellezza sfida la crisi - Rapporto 2013

Figure 8.
Entrepreneurial rate in high-tech sector in Marche provinces (2001-2011)