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Italian industrial districts and urban competitiveness

Name: Alessandro Piperno

Supervisor: Prof. Bas Karreman

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Name Alessandro Piperno

Country Italy

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Summary

The thesis wants to understand the relation between the urban competitiveness and the presence of industrial district in the area. This relation is particularly interesting because the increase of competition. On one side, there are cities that are pushed by the global flow of capital, financial and human, to pursuit new competitive advantages that allow them to be attractive. Especially for small and medium cities, it is impossible to compete in different sectors and the specialization of local factors became necessary. On the other side, the power of the IDs to boost the regional economy is putted at risk. Industrial district were the best case of how the SMEs could create economies of agglomeration without the necessity of a central control of the authorities. Economies of agglomerations make companies perform better compare to others outside the cluster and increase the productivity of the entire district. The goal of the analysis is to understand in which measure this spillovers influence the innercity and which kind of relations can be created between the agents in order to increase the number of employees, decrease the number of poor families and increase the foreign direct investments in the city. In particular the analysis focus on three important aspects of industrial districts, the dimension of companies, the geographical structures of cities and the performance of the districts. In order to have valid results, the analysis study all the Italian cities within an industrial district and compare their performance with a comparison group. The analysis is based on quantitative and secondary data collected by the ISTAT and FDI Markets and the dataset in analysed scientifically thank the use of statistical packages as STATA. The results suggest how the cluster theories tend to overestimate and oversimplify the importance of the agglomeration economies. The analysis discover that in order to make a district influence the competitiveness of the city an equilibrium has to be found. This equilibrium is between big and small companies, specialization and diversification and between proximity and distance. First, cities, in which there are different companies' structures, over perform the comparison group. When companies of the same sector exchange different organizational ideas, they make the city perform better at all the point of view. Second, the geographical concentration of different industrial districts promote urban competitiveness. In this case is the different cognitive background and knowledge create an exchange of ideas that contribute to the innovation process. Third, the good performances of the districts are necessary to create the inner dynamics that boost the cities'economy. In conclusion, the analysis reveal the possibility of industrial district to be engine of the urban competitiveness, but this has to be pursued with equilibrium, saving the heterogeneity of the region and structures.

Keywords

Industrial district, urban competitiveness, agglomeration economies, specialization and diversification.

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Proximity; Accepting the needs of others.

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Specialization. Deciding what it is right for me.

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Abbreviations

IHS	Institute for Housing and Urban Development
ID	Industrial district
SMEs	Small and medium enterprises
LEAs	Large enterprise areas
FDI	Foreign direct investments
ISTAT	L'Istituto nazionale di statistica (National institute of statistics)

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Chapter 1: Background and Problem Statement

1.1 Background

The world is changing fast; national borders are losing their ability to constrain ideas, people, and goods. Thanks to new technologies, people can communicate across space and access information globally. Individuals can interact virtually and the possibility to cover long distances in a short time is emerging because of the collapse of transportation costs. This new global communication network is shaping the view of the world and is increasing the possibility to influence others and learn over long distances. Thanks to this revolution, it is easier to imagine a world where geographical distance does not influence the choices of production and allocation anymore. A world where financial capital and labor are sourced globally, where the rapid pace of innovation makes economies strictly connected with international trades, and where people and companies do not need to be in reciprocal proximity (Andersson, Hansson, Serger, & Sörvick, 2004; Edward Ludwig Glaeser, 2010; Porter, 2000; Saxenian, 2006; United Nations, 2003).

On the other hand, people tend to live close to each other; the growth of urban populations is one of the examples that clarify this trend. In fact, co-location produces externalities. People get benefits by living in the same area. Living in cities increases habitants' opportunities and gives them the possibility to find the necessary social communications. In fact, face-to-face interactions are still required for most daily activities (McCann, 2007). Social relations create benefits that can increase their personal utility. Information spillovers are an example of these 'technological' externalities that make cities a source of creativity and socio-economic change (Scott, 2013). Also, other categories of externalities are products of co-location. As an example, citizens get advantages from the division of labor, which increases their possibilities to find jobs and enhances their utility (Fujita & Thisse, 1996).

The benefits of agglomeration are not only for people. Companies benefit from urbanization economies as well. The size of cities generates these economies. The concentration of individuals influence the productivity of firms and allows them to reach large numbers of consumers and suppliers (Moomaw, 1988). However, the companies' positioning decision is more complicated because different types of externalities affect the decision process. Especially, localization economies have a high impact on it. Companies profit from the location in proximity to companies within the same industry. These particular externalities have a substantial impact on the ability of the companies to gain a competitive advantage. The benefits of this factor are well described in the literature (Belussi & Caldari, 2009; Graham, Gibbons, & Martin, 2009; Menghinello, de Propriis, & Driffield, 2010; OECD, 2013). Co-location offers direct economic benefits. First, the concentration of people with specialized skills supply companies a pooling of specifically skilled labor. Second, proximity promotes technological learning and knowledge spillovers. Third, sharing resources produces economies of scale and scope. All these factors push similar companies to co-locate. This co-presence results in the creation of a particular atmosphere that leads to an increase of the competitiveness of single firm, with higher productivity and a higher probability of innovation. These factors lead to concentrating the economic activities in a small number of places (Fujita & Thisse, 1996).

The simple agglomeration of companies often evolves, creating stable relations between companies and other agents and transform in an industrial district. Industrial districts (IDs) are a particular type of agglomeration in which firms specialize in a market niche. The ID has all the characteristics of a cluster: concentration of firms and other actors in a geographical proximity that competes and cooperates to improve their collective competitiveness (Andersson et al., 2004; Porter, 1998b, 2000). The Italian ones, specifically, were the best

example of how the clusters could efficiently promote the development of the regional economic structure. The peculiarities of this particular agglomeration are the high quality of the products, distinguished by the definition “Made in Italy”; the small dimension of the companies; and the production of manufactured goods that are strongly linked with the culture and the tradition (Alberti, 2007). Over the years the districts were able to conquer an important position in the Italian and global markets of shoes, glasses, cars, and many others (Andersson et al., 2004). The region in which they are concentrated, Third Italy, became the symbol of success of small-scale flexible capitalism. Individualism and competition, the ability to create employment, increase incomes, and boost exports without assistance from the central state were emphasized (Hadjimichalis, 2006a).

Industrial districts can become instruments to create specialized urban regions. In fact, cities, like companies, have to find the right goods and services that meet the international demand of the market (Begg, 1999). Cities have to offer the best “product” to attract and make companies stay and develop distinctive capabilities that allow them to have a competitive advantage (Michael Best, Paquin, & Xie, 2004). This necessity is caused by the globalization of factors and knowledge that allows companies to allocate their productive system all around the world. Hence, from a city’s point of view, it is almost impossible to compete in every sector. Specializing in a particular industry is considered a vital element in finding the right combination of input and output and guaranteeing a long-term comparative advantage in this market niche (Deas & Giordano, 2001). To avoid economic recession, cities, and in particular small and medium ones, need to focus on the market they are best at, in a unique way (Illiam & Lever, 1999; Kemeny & Stopper, 2012; OECD, 2013). However, the concept of competitiveness of cities is more elaborate. The measurement of performance of cities is not limited in the ability to attract companies. The competitiveness of a city is a complex subject, composed of a combination of social, economic, and environmental variables. The discussion can focus on the outputs of competition, what the city needs to attract (FDI, companies or people) (Begg, 1999; Florida, 2002) and/or on the key asset that influences the attractiveness of the region (economic, institutional, physical or social environment)(Deas & Giordano, 2001).

1.2 Problem statement

From one side, the economic and social structures of the world are changing. The OECD countries are facing one of the deepest recessions in history; the financial then the public debt crisis have created an atmosphere of depression and immobilization and economic stagnation. Cities are under the same pressure of nations and companies. Energy consumption, pollution, financial and human capital concentrate in a small number of locations. Few global cities are increasing their importance as world hubs while the others risk losing investments and people. Small and medium cities have to find their competitive advantage. From the other side, the emergence of new players (China and India), and the diffusion of ICT and the “new economy” are diminishing the power of the traditional industrial districts. To survive, the IDs have to change as well. The Italian industrial districts had a strong identity that made them differentiate their products to be competitive. However, the same distinctiveness creates inertia and resistance to the new opportunities (Stimpert, Gustafson, & Sarason, 1998; Zamparini, 2010). The pressure of globalization is pushing the Third Italy in a tough phase of its economic history (Calafati, 2014). Some districts were able to resist the pressure and extend their influence in the global chain, conquering huge shares of the world market. In other cases, the stagnation opened the door to the development and entrance of large firms in the centers of excellence. The relationship between them and the cluster changed the structure of the district. The results are that, nowadays, the impact of the agglomerations on the regions are heterogeneous (Calafati, 2014). The IDs produce different costs and benefits for regions and cities which are

influenced by the intrinsic characteristic of the district (Gordon & McCann, 2000; Markusen, 2016; Storper & Harrison, 1991). The main problem is to comprehend if industrial districts can be the source for the future development of Italian cities' competitiveness. If even in a global context a local agglomeration can boost the cities' economy. Because of the change of identity of the ID, it has to be understood if these different structures can lead the regions to be competitive again, increasing the number of companies, or if it might make districts continue to decline, losing the ability to contribute to boosting the economy. Particularly in this moment of change, taking in consideration their dominant structure is essential to analyzing the performance of clusters (Gordon & Mccann, 2000) and their ability to create wealth and competitive advantage not only for the district but also for the city (Michael Best et al., 2004).

1.3 Research objective:

This study aims to demonstrate that Italian cities located in an urban region characterized by industrial districts outperform urban areas without industrial districts. The effect of the specialization and the localization on cities' competitive advantage is ambiguous. It is not clear if industrial districts can transmit to the whole region the economies that are developed inside the industrial agglomeration. The second step of the research is focused on understanding how the different structures of the district affect this ability. The goal is to figure out if there are particular typologies of actors or locations that contribute more to the relationship between district and city. This research has the goal of enriching the vast knowledge of industrial districts, by giving a particular vision in their relations with cities. The research is focused on output more than inputs. It does not aim to understand the causes of the creation of economies of agglomeration and urban competitiveness, but only to their relations and the output of the influence of the former on the latter.

1.4 Main resource question:

Do Italian industrial districts affect urban competitiveness?

1.5 Sub-questions:

Which is the impact of large enterprise areas (LEAs) on Italian cities' competitiveness?

Does a district's geographical structure influence the impact that industrial districts have on Italian cities?

To what extent does the performance of the district affect urban competitiveness?

1.6 Significance of the study:

The study is centered on Italian industrial districts and their ability to increase the competitiveness of a city. Districts have been, since their conception, an interesting topic for economists and policies makers. The concentration of companies has been defined as one of the primary sources of economic growth. The Italian case was the best example of the power of a series of agglomerations of small companies to create a spread of economic growth. However, in the last decades, the literature has focused on the crisis of the clusters and their inability to adapt to the new challenges. This study aims to understand the location of the industrial district in the new global context and comprehend its influence in the promotion of urban competitiveness, which remains a discussed topic. Hence, the Italian industrial framework is used by different policy makers all around the world as an example of the benefits of the creation of clusters in a particular region. The proofs of the efficiency of this method are well spread when the competitiveness of companies is taken into consideration. However, there is a lack of understanding of their power on a larger scale—on cities. This study will help reveal

if urban managers should promote the development of industrial districts to improve the economic structures of the inner city.

1.7 Scope and limitations:

The research's goal is to test the impact of districts on the competitiveness of cities. For this reason, a quantitative scientific analysis has been performed. Hence, a series of regressions is settled to estimate the influence of the cluster on city competitiveness. Italian cities are divided into three main categories: the ones with an industrial district (ID), the ones with a concentration of large and small companies (LEA), and a comparison group of cities which do not present these typologies of concentrations. This approach allows a comparison of the economic performance of the towns based on the presence of a ID in the urban region. However, even if the large sample allows generalizing for Italian cities, the research cannot express judgment on the more general topic of clusters and of cities' competitiveness outside national borders. Also, in the analysis of the different structures of the districts, the research has been limited in the understanding of the surfaces of the relations. The goal of the study is to create reliable results on the population of Italian industrial districts and their impact on urban competitiveness. To increase the reliability of the results, only institutional and secondary data are used in the scientific analysis. The ISTAT and FDI markets are sources of the databases taken into consideration. The aim of the research is to utilize and create a relationship between different sources; one measuring the performance of cities, districts, and companies.

Chapter 2: Literature Review / Theory

2.1 Cities' competitiveness

2.1.1 Origins of Competitiveness

Globalization has altered the terms and the importance of competition between cities (Andersson, Hansson, Serger, & Sörvick, 2004; Begg, 1999; Perianez-Forte & Cervantes, 2013; United Nations, 2003). Cities are becoming the center of both local and global economies. In fact, the performance of cities will affect the national economy considerably. This new central position in the global economy has evolved the concept of 'city' itself. Globalization has created pressure on the ability of cities to attract companies, investments, and talents (Begg, 2002) putting them in a continuous state of competition (Martin, Florida, Pogue, & Mellander, 2015). In the last decade, different paradigms have tried to define the role of the city and to understand what makes them special and important for the world. Different concepts were developed to express these trends: global cities, smart cities, and creative cities (Arup, 1999; Florida, 2002; Sassen, 1991). Often, when definitions are given, terms are used in many different ways and contexts (Turok, 2004). In fact, indicators of competitive cities are multiple, and take into consideration economic, social, and cultural factors. (Begg, n.d.; Illiam & Lever, 1999; World Bank, 2015).

2.1.2 Definition of Competitiveness

A city whose economy grows faster over time is defined as competitive. This ability expresses the higher productivity of the city, which influences the level of prosperity and the rates of return that the urban region can offer (Sala-I-Martin et al., 2015).

2.1.3 Manifestations of Competitiveness

2.1.3.1 FDI and international connections for competitiveness

Globalization has created a need for cities not to rely only on national economies. A competitive city participates in the flow of goods, people, and financial capital; outperforming cities that are not connected (Begg, 1999). Thus, FDI is surely one of the main indicators of urban competitiveness (Rabellotti, Carabelli, & Hirsch, 2008). In fact, the inflow of investments from overseas represents the ability of a city to convince foreign investors of the productivity of the city. The ability to attract this inflow of capital is not linear and is influenced by different aspects. Hence, thanks to the inflow of capital in the city, the economy has new forces. FDI contributes to the generation of spillover effects (World Bank, 2015); it plays an important catalytic role in knowledge creation (Pietrobelli et al., 2000); and provides good visibility outside the nation (Birkinshaw, 2000). It contributes to creating the financial conditions for companies to perform better (Rondinelli, Johnson, & Kasarda, 1998). Moreover, it promotes new cluster formations and increases social returns on investment (De Propriis & Driffield, 2005). The internalization of a city and participation with the global market is a necessary prerequisite for a sustainable growth (Metaxas, 2010). Only cities that attract investments from overseas can be considered competitive.

2.1.3.2 Employment and entrepreneurship for competitiveness

Strong economic connectivity is not enough to guarantee high performances (Mier, 1993). Other factors are essential to increase the standard of living. In particular, cities have to prioritize in their agenda market efficiency and business productivity of their company as a main goal. Job efficiency and average incomes are essential to boost the economy and the competitiveness of a city and give benefits to the entire population (Begg, 1999; Rondinelli et

al., 1998; Sala-I-Martin et al., 2015; Turok, 2004; World Bank, 2015). First, higher employment level guarantees to workers higher income. Second, the higher efficiency of a city makes it more attractive for new investments, the creation of new firms, and the survival of the old ones. Third, it influences the physical environment and image of the city. All these factors contribute to increasing the overall quality of life (Bailey, Docherty, & Turok, 2001). Hence, one of the main indicators of a positive economic status of a city is a high level of employment (Turok, 2004). The ability of a city to create jobs depends on companies' prosperity (Turok, 2004). Only successful companies can hire people and create modern ways to work.

2.1.3.3 Wealth and social cohesion for competitiveness

Economic development is an essential factor in the creation of a competitive city. However, it is a necessary but not sufficient element. In fact, economic growth might not be supported by improved equity (Begg, 1999). There are bigger difficulties to find opportunities for the poor, women, and young people who are most likely to be marginalized (Kabeer, 2012). These certain groups of people need to find jobs and economic security to make the city prosper (OECD, 2014). Poor communities suffer from economic marginalization and social isolation, which make them skeptical of grand schemes to improve the quality of their lives (Rondinelli et al., 1998). It is important that the different categories participate in this growth and that there is equality and social cohesion (So & Shen, 2004). In fact, the consequence of inequality impacts on the competitiveness of the city. First, inequality is bad for business. Eliminating geographical and socioeconomic disparities help companies to perform better. A competitive city fully develops its human capital potential, giving everyone opportunities of self-development, and it can deal with the problems of economic disparities (Rondinelli et al., 1998). Second, inequality is linked strongly with three fundamental aspects of the creation of competitiveness: education and literacy training, family and child development, and drug and crime prevention. These three areas are crucial. Urban businesses are unlikely to be competitive, and communities are unlikely to prosper if the local population is poorly educated, families are unstable, and drugs and crime are pervasive problems (Rondinelli et al., 1998).

2.1.3.4 Companies dimension for competitiveness

All the three aspects of urban competitiveness are related to companies performance and in particular to their dimension and structures. The different structures of companies do influence the impact that companies have on the territory. SMEs and large firms address the opportunities and threats they perceive in their industry environments in their ways (Kumar, Boesso, Favotto, & Menini, 2012). Small and large firms possess different assets and capabilities that have a more pronounced effect on their performances. Small firms and start-ups develop the ability of locals and create a stronger sense of ownership on people's life and territory. In fact, the benefits of entrepreneurship and SMEs are various. They have the ability to create knowledge and use it, together with information, to create competitive firms and, indirectly, economic growth (De Hoyos-Ruperto & Romaguera, 2013; Stevenson & Jarillo, 1990). Entrepreneurship summarizes the ability of a city to be open to new companies and technologies (Chatterji, Glaeser, & Kerr, 2013). The entrepreneurial spirit is essential for a competitive city (Stevenson & Jarillo, 1990). However, the small dimension of companies also creates barriers. Large companies collaborate in the attraction of international investments and the development of efficient ways to produce (Kumar, Boesso, Favotto, & Menini, 2012).

2.1.4 Advantages of cities

If the outputs of the competitiveness of cities are clear, there are discussions on the causes of it. There is increasing evidence that cities are now seeking to identify their advantage to compete for economic growth. The theory of competitive advantage was typical of business. Companies were subject to the global economic forces first. The higher intensity of competition has pushed them to pursue different strategies such as taking advantage of lower trade costs and the development of new technologies (Ketels, 2009). For cities, the sources of the advantage can be different (Illiam & Lever, 1999) and they can be divided into comparative, competitive, and collaborate advantages. The comparative advantage arises from the differences in factor endowments and it is caused by the macroeconomic characteristic of the territory, which marginally differentiates between cities. However, the increase of the power that has been given to a city allows it, more every day, to increase these strategic resources. The main ones are the minor costs of land and labor typical, for example, for developing countries; lower levels of taxation and cost of capital typical of the fiscal paradise; and proximity or availability of raw materials and resources, oil based economies or port cities as examples. It is clear that these advantages bring regions to develop products or services that are strongly related to these resources. A second category is the pure competitive advantage. Thanks to this economy, firms and cities are more efficient in the means of production. These inner qualities of a city are not directly linked with the territory but due to investment and tradition, they are typically of few regions. As an example, the social capital or the investments in R&D of a city can differentiate from the others and increase its possibility to attract IT companies. The third category focuses on the advantage that the reciprocal trust through collaboration creates. The context of reciprocal trust leads to a reduction of the cost of control and an increase in the efficiency of resources. Also, the spirit of collaboration and the sharing of information facilitates the innovation-making process and the solution of problems (Choe & Roberts, 2011). The ability to create PPP, open governance and all the collaborative networks at different levels are examples of this category.

2.1.5 Competitive advantage and specialization

Each city has to find the most fitting competitive advantage, which would make it preferable to the other ones (Cuadrado-Roura & Rubalcaba-Bermejo, 1998). Successful cities, as firms, need core competencies or distinctive capabilities that give them an advantage (Michael Best, Paquin, & Xie, 2004) and allow them to attract resources that could have gone somewhere else. Cities need to have something that other places do not have—a specialization factor (Cuadrado-Roura & Rubalcaba-Bermejo, 1998). Only the true ‘world’ cities are likely to succeed competitively across a broad range of dimensions (Illiam & Lever, 1999). Specialization is particularly important for small cities and its importance tends to be less as cities increase in size. This specialization has to be meaningful in absolute terms, rather than relative, to lead to a competitive advantage (Begg, 1999). This means that, to be competitive, cities have to take advantage of world trade and be the best in the world, a relative supremacy would not be enough (Union et al., 2003). Hence, medium and small cities have to find a market niche which specializes their factor endowment. The region has to be the fulcrum of a limited number of productive activities. The fulfillment of a market niche creates an inter-firm and inter-region dynamic, which increases the opportunities for all the agents. The creation of a specialized industry tradition increases knowledge creation and learning (Michael Best et al., 2004). These are not purely economic factors; they are “in the air” of the city, which make them almost impossible to copy.

2.1.6 Competitive disadvantages of specialization

However, there are negative aspects of specialization. An over-specialized city is vulnerable to economic change; the risk is to put all the eggs in the same basket and decrease the resilience of the region (Cuadrado-Roura & Rubalcaba-Bermejo, 1998). An external shock, as the decrease of the demand for a particular product, can have dramatic repercussions on the economy of the region. Second, the more diversified the regional structure, the better it is, because diversity triggers new ideas, induces knowledge spillovers, and provides valuable resources required for innovation (Asheim, Boschma, & Cooke, 2011). The studies of Jacobs have clarified how innovation is originated by spillovers of diversified industries, especially when the sectors' distance is limited and they are complementary regarding knowledge and skills (Asheim et al., 2011).

2.1.7 Cooperative advantages of cooperation

Another source of advantage is the collaboration between the different stakeholders of the city. Many economic problems can be read as promoting competition among agents. However, most of them can find a more profitable solution in collaboration. The management of common pool resources, taking part in collective actions, and the provision of public goods can be an occasion for maximization of outputs for the community (Gächter, Herrmann, & Thöni, 2004). Competitive cities can encourage and support cooperation among the public, private, and civic sectors (Rondinelli et al., 1998). Collaborations contribute to making the city more flexible and adapt to change. Hence, collaborative cities more easily maintain economic vitality in the global economy and have the power to rebuild their competitive advantage (Rondinelli et al., 1998). Another important factor that leads to cooperation being an important factor for cities' competitiveness is its contribution in the selection of cities as locations for international companies. The ability of local groups to work together is mentioned as one of the first causes of the attraction of new investment (Graff, 1990).

2.2 Industrial Districts

2.2.1 Definition of industrial districts

“Industrial districts are socio-territorial entities formed by a community of firms and people. In addition, the co-presence creates socio-economic links and ties to the territory. Companies belong to the same industry and they are normally of small and medium dimension” translated from (page 2, Istat, 2011)

2.2.2 Traditional Italian industrial districts

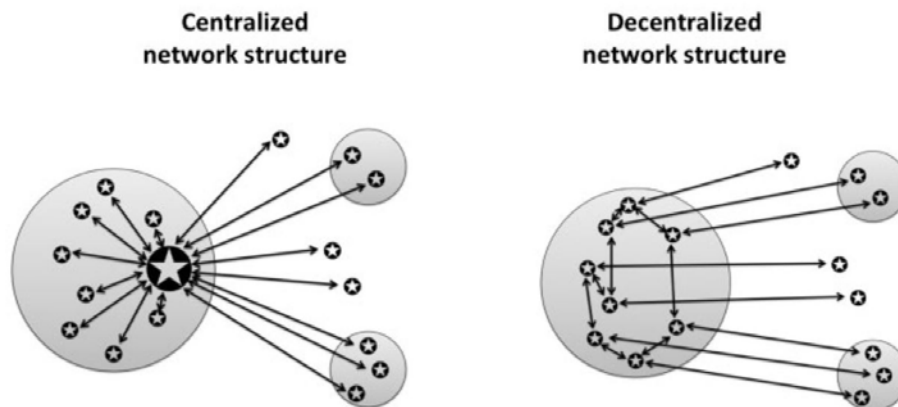
Based on this definition, an industrial district presents few essential characteristics. Italian industrial districts are a particular case of the industrial district presented by Alfred Marshall and follow most of Marshallian characteristics: as the definition underlines, the IDs are characterized by small, locally-owned firms (Markusen, 1996). The presence of a critical mass of companies activates the inner dynamics of the area and decreases the dependence of the region to single players (Andersson et al., 2004). Everyone is important; no one is fundamental. The presence of small companies contributes to the creation of an entrepreneurial spirit enhancing the opportunities for innovation and decreasing the cost of starting a business (Brunello & Langella, 2014; Chatterji et al., 2013; Delgado, Porter, & Stern, 2012; Guiso & Schivardi, 2011). These family-owned companies are highly specialized in small tasks, which are part of the productive chain. They buy and sell materials and products from each other and there is almost no exchange outside the district. Overall, the region has low integration, different actors for different mansions. The consequence is a structure with high decentralized and high collaborative firms (Gordon & Mccann, 2000). The relation is even stronger; in fact,

the community and the territory actively participate in the mechanism of the districts. The geographic and social closeness make the majority of the inhabitants of the region work in the same industry and become significant parts of daily life of the community (Becattini, 2003). The district became a social-cultural identity with the creation of non-commercial agents with the goal of coordinating and developing collaborations. In addition, the spirit of collaboration influences the relations between companies and workers; the workforce commits to the figure of the district itself rather than to the companies. This entire characteristic makes the secrets of the industry in the air rather than in a specific firm or agent. People, and competitors share the same work field, they go to same bars, and send their children to the same school. This combination of informality and collaboration create an environment where it is almost impossible to keep secret the competitive advantage for long inside a single company. However, at the same time, the atmosphere promotes the share of information and knowledge that mixes with competition and the desire to emerge promote a breeding ground for innovation and economic growth.

2.2.3 Alternative structures

This structure is traditional of Italian industrial districts, but is not the only one. An alternative to the Marshallian model is the hub-and-spoke structure (Gray, Golob, & Markusen, 1996), which is almost opposite to the previous one. The center of the cluster is a key company that acts as a hub. The other small enterprises are largely dependent on the main ones, function as simple producers, and rarely cooperate between themselves and with the hub. The key firms are vertically integrated; they buy from internal and external suppliers and sell to external ones. For what concerns the other functions, as a marketing and R&D, they are completely confined to the main company. The dynamism of the region is, for this reason, strongly dependent on the initiatives of a company which can attract most of the workforce and investments. The labor force loses any commitment to the region. The hubs of the system have 'long arms' that allow passing over the local boundaries (Gordon & Mccann, 2000; Gray et al., 1996). The dimension of companies is not the only factor that differentiates industrial districts' structure; their position in the region can be very different. The choice of location focuses especially on the distance between other centers of production and from cities. Most of the IDs develop in the countryside where they can benefit from specific advantages. The distance from big cities increases the possibility to create a community thanks the sense of 'intimacy' or 'coziness' (Hutton 2006) that people can experience; the pedestrian friendly streetscapes that make the city walkable with the 'feel' of an urban village. Polycentrism and localization economies seemed to make the ID model competitive on the international scene (Fuà, 1991). On the other hand, there are IDs that develop in cities and their proximity. In these cases, cities help in recreating urban economies thanks to the overall activity of the area (Union et al., 2003), the concentration in the proximity of different and not interrelated economic activities, the sharing of transport infrastructure, public services, and highly advanced services (Amin, Graham, 1999).

Figure 1, Different cluster structures



From (Gordon & Mccann, 2000)

2.2.4 Risks of the industrial districts

The creation of IDs is also linked to risks. First, the ID may close the connections from outside the cluster, making itself entirely dependent on its resources and, in this way, increases its vulnerability and lock-in effect (Amin and Cohendet, 1999; Martin and Sunley, 2001). The second is the loss of balance between competition and collaboration; diminishing or exterminating one of the forces may induce the loss of the equilibrium that contributes to innovation and growth (Ketels, 2009). Hence, IDs that used to be successful in the past may fail or be less prone to change the winning structure, to adapt to the new challenges, or try to avoid the incremental change that is essential to adapting to the changing environment. The benefits and risks are connected with two different and emerging forces arising from agglomeration; one feeds the growth the other contrasts it. If the centripetal forces dominate the centrifugal forces, firms benefit from the collocation (Union et al., 2003).

2.2.5 Centripetal forces

Industrial districts originated thanks the positive economies of agglomeration. The companies that are in the district have higher productivity than firms located elsewhere (Jaffe et al., 1993; Audretsch and Feldman, 1996; Van Oort, 2004). The geographical concentration of economic activities can be viewed as a snowball effect, the economies arise with the increase in the number of firms, creating a self-reinforcing circle (Fujita & Thisse, 1996). These forces are call centripetal; in fact, they tend to increase the probability of attracting players and push them to stay together. These economies can be divided into two different typologies: location and urbanization externalities.

2.2.5.1 Localization economies

Localization economies arise from a larger number of firms in the same industry and the same place (World Bank, 2009). First, companies get benefits from the reduction of the cost of accessing and transferring knowledge. Co-location contributes to the creation of situations that promote the exchange of ideas and information (Choe & Roberts, 2011), in particular, in the manual jobs where the transfer of tacit knowledge is essential. Also, this transfer of knowledge increases the possibility of innovation (Beaudry & Schiffauerova, 2009). In particular, the experiments of local firms have a higher possibility to not be unnoticed and to be developed (Maskell, 2001). Another important aspect of the flow of information is about market information; proximity allows customers and suppliers to stay more abreast of the fast market

changes (World Bank, 2009). The reception of this information is facilitated by the receptivity of the players. Being part of the same district allows people to speak the “same technical language” (Antonelli, 2000). Second, companies take advantage of economies of scale. In a contest of small firms, the possibility to share fixed costs and have access to a wider number of consumers contributes to the reduction of cost and in the increase of quality of the inputs (Kaldor, 1970; Markusen, 1996; Myrdal, 1957). In particular, a common specialized pool of labor allows firms to find the specific skills that they require in a short time, which leads to a reduction of transaction costs and an increase in production (Cortinovis & van Oort, 2015; Graham, Gibbons, & Martin, 2009; Kemeny & Stopper, 2012; Menghinello, de Propriis, & Driffield, 2010). Third, economies of agglomeration are linked to the co-presence of the different steps of the chain in the same place. A large local market creates both backward and forward linkages that lower the cost of upstream and downstream and allow collaboration between the two sides increasing the compatibility of the products and the quality (Krugman, 1998). Also the proximity of competitors contributes in the innovation process; the pressure to emerge and gain competitive advantage pushes people to experiment and find innovative solutions.

2.2.5.2 Urbanization economies

The second source of centripetal forces is more linked with the relation between companies and the city. These forces push companies to locate in cities. This benefit is related to the size of the city and the urban interaction within it. Urbanization economies arise from the location of firms inside or in the proximity to cities, which offer the possibility to be close to the multitude of actors and a wide range of commodities and services (World Bank, 2009). The economies are linked to the possibility to interact with a larger number of agents of different industries. Hence, in cities there is the possibility to interact with related and not specialized actors, for example universities or marketing firms. These interactions can foster the exchange of knowledge and technology between different sectors and increase the possibility of radical innovations. Also, cities increase the possibility of matches between demand and supply, consumers and firms (Quigley, Henderson, & Malpezzi, 2008). In addition, cities contribute to creating the infrastructure and amenities that allow people to interact and find the correct place for their needs easily.

2.2.5.3 Actors proximity

Most centripetal forces are the consequence of the reduction of the distances between agents. As Boschma summarizes, increased proximities create higher opportunities of interactions with the consequences that the stakeholders learn and innovate more (Boschma, 2005). Proximity is not only geographical. Sharing the same industrial tradition and geographical location contribute to the creation of cognitive, organizational, social, and institutional proximities. People are not only close to each other, but also share the same knowledge base and expertise. Also, the way people organize themselves and their companies are similar. Most structures of small family-based companies are almost identical. In the last analysis, also the way the agents relate at a micro level, social, and a macro level, institutional, is similar and contribute to the creation of the inner dynamics that contribute to the creation of value.

2.2.6 Centrifugal forces

The forces that affect industrial districts are not only positive. Opposite forces emerge because of the agglomeration. These forces are called centrifugal because they push companies and people to spread instead of concentrate. There is a point in which the closeness creates negative

effects (Boschma, 2005). The proximity of all the competitors can create an excess of competitiveness for the firms that may not find their space in the local market. Especially, the competition of the productive factors creates a price competition with the increase of the price of the input and a decrease of the one for the output that may push companies to change location and explore new markets (Fujita & Thisse, 1996; Ketels, 2009). Another negative externality of agglomeration related to the increase in prices is the high request of infrastructures and land. As the land and houses are limited, to an increase of demand responds an increase in price. This appreciation rises the fixed cost of companies and decreases the utility of workers (Fujita & Thisse, 1996; Krugman, 1998). The immobility and inelasticity of factors militate against the concentration. In addition, others resources, such as natural ones, may be limited and make it impossible for everyone to use them or create congestions in their utilization (Krugman, 1998). Proximity to cities can also push companies to relocate. Cities increase the cost of transport and the time spent in congestion and commuting (Duranton, 1999), not only for employees but also for the delivery of goods (Quigley et al., 2008). Cities increased risk of criminality and decreased air quality can be demotivating factors (Glaeser, 1998).

2.3 Industrial districts and Competitiveness

2.3.1 Industrial districts and the creation of competitive advantage

Specialization and agglomeration contribute in the creation of competitive advantage. Both economies increase the possibility of companies to gain market shares and have a better competitive position. Hence, these economies are not limited to the district. As already mentioned, districts are strongly related to communities and territory; these links make the city itself benefit from the economic growth that the ID create. In fact, thanks to the circular causation of the agglomeration, higher productivity guarantees higher profits and workers' real income. The increased capacity to spend, of part of the population, increases profits of companies of different sectors, creating spread benefits (Fujita & Thisse, 1996). An industrial district is the spark able to boost the economy. The presence of an agglomeration of SMEs is an important factor for the creation of jobs and a dynamic environment, which contribute to the development of the area. The presence of a cluster itself contributes to the number of start-ups not only related to the sector. The more companies there are, the more space there is for others. In particular, the creation of small firms is strongly related to the presence of other small firms (Glaeser, Kerr, & Ponzetto, 2009), creating the connections and environment that start-ups need. Hence, in the districts, there are lower costs of starting a business and better access to resources (Delgado, Porter, & Stern, 2010). In addition, co-location increases the spread of knowledge and the perception of opportunities for innovation (Porter, 2000).

2.3.2 Industrial districts and collaborative advantages

Collaboration is one of the main indicators of the industrial district. The balance between competition and collaboration characterizes the inter-firms relation of the districts (Newlands, 2003). First, collaboration increases the efficiency of companies and improves their mutual learning (Humphrey & Schmitz, 1996). The industrial districts promote the idea that the different productive chain can collaborate in improving their reciprocally competitive advantages and push people to find new marketplaces (Pyke & Sengenberger, 1990). Second, they introduce important elements of cohesion and a willingness to work together to resolve potential clashes of interest (Pyke & Sengenberger, 1990). The industrial district creates an atmosphere of community in which the entire city is part. Third, the agglomeration of companies contributes to the creation of associations for the development of the local economy. Cities with an industrial district have a proliferation of associations of small enterprises, co-operative leagues, industrialist associations, and universities (Pyke & Sengenberger, 1990).

2.3.3 Industrial districts and the creation of knowledge and innovation

One important aspect for cities' competitiveness is the ability of districts to create innovations. The location of a determinate industry in the territory contributes to the creation of a technology genealogy. The know-how, the technologies, and the organizational structures melt with the territory itself. These qualities make companies highly productive, hard to imitate, and with peculiarities that cannot be purchasable in the marketplace. The industry and these inner qualities become manifest in distinctive industrial districts (Michael Best et al., 2004; Porter, 1998). Hence, industrial districts, in a relationship with cities, contribute to the creation of knowledge in three different ways. The agglomeration makes communication less costly thanks to the shorter physical distance between the participants, related to proximity, or affinity, in a social and cultural sense. Second the proximity and the high decrease of specialization increase the share of tacit knowledge, thanks to mutual trust and understanding (Malmberg & Maskell, 1997). Third, the presence of companies in the city creates innovation. Thanks to diversification there is a comparison of different related industry and sectors, increasing the possibility of radical innovation (Jacobs, 1969).

2.3.4 Industrial districts and attraction of FDI

Industrial districts could have the ability to open the door of the world also to little cities. The high quality and world supremacy in niches could allow a community to be integrated into the world chain and to attract investment and talent. These competitive advantages increase the remuneration of local factors and enlargement of these factors to the local environment (Becattini, 2003). On the other hand, the international investments are not affected by the agglomeration; rather the closeness of the territory discourages the investors. Italian industrial districts had limited international relations, focused on export activities (Basile and Giunta, 2004), and spread incapability to attract FDI. The main determinant of this lack was the small size of the firms, which led to organizational and managerial difficulties (Barba Navaretti & Castellani, 2004). The transformation of the structures of the clusters, with the growing importance of medium-sized firms and groups, will affect their attractiveness and their ability to internationalize. In fact, the presence of large firms and the intensity of domestic rivalry positively influences the inflows of foreign investments (Mariotti et al. 2008). Nevertheless, factors such as specialization, infrastructures, and technology play a key role (Sala-I-Martin et al., 2015).

2.5 Empirical background

2.5.1 Third Italy

"Third Italy" is the Northeast part of Italy, which is characterized by a high concentration of firms clustered together in more than 100 industrial districts. After World War II, the region had higher economic growth compared to the Italian average, and it decreased the unemployment rate. Industrial districts are a fundamental base for the Italian economy. Companies can establish a strong position in the world market in their market's niches. The region is characterized by the production of traditional high-quality and high added-value products represented by the brand 'Made in Italy'. The main product categories are shoes, furniture, tiles, musical instruments, etc. A system of small and medium firms, positioned along the chain of the production, form the clusters; these companies are strongly connected to their local communities, culture, and social values. For this reason, the workforce was typically local and highly specialized. This atmosphere, characterized by inter-firm relations, contributes to the development of innovative outputs, creating a center of excellence (M Best, 1991). The success of firms is displayed by the fact that the region produces one-third of all Italian exports,

conquering enormous shares in the world market (Alberti, 2007; Andersson et al., 2004; M Best, 1991; Cainelli & Zoboli, 2004; Porter, 1990).

2.5.2 Necessity of Evolution

In the last few decades, a huge gap between the entrepreneurial skills of small firms and the ones necessary have led to the start of the crisis of the industrial districts. From one side, the world market has discovered the rise of multinational, multiproduct, and multi-brand giants. They control most of the market of low-tech industries, with a central distribution of products and production in developing countries (Saviolo and Testa, 2000). On the other side, Italian small firms are facing the hereditary succession problem. (Iannuzzi, 2008). Four important trends put at risk the pillars of the community. First, the inflow of migrants transforms the quality of the labor force. Second, change in the family structure puts family businesses at risk. Third, the generation that was the promoter of the economic boom of the industrial districts was too production-oriented with a short-run perspective. Fourth, the competence in the firms was limited, without the necessary technological, financial, and managerial resources. The Italian economy was in a moment of stagnation, and the specialized industry was seen as the main cause of the crisis. The Italian “dwarfs” were not able to respond to the challenges of globalization and innovation and to remain competitive (Hadjimichalis, 2006). The level of competitiveness of the local production network depended on the ability of some nodal points in this network to gain strength and project themselves outside the district (Corò & Grandinetti, 2001). The research of the competitive advantage goes through the creation of different structures: traditional local company, commercial openness, supply openness, and open network (Guelpa & Micelli, 2007).

Figure 2, International openness of Italian companies in the district

<i>Geography of supply relationships</i>	Global	Supply openness	Open network
	Local	Traditional model	Commercial openness
		Only export	Structured

Presence in the international markets

translate from (Guelpa & Micelli, 2007)

The traditional model: the model utilized by the industrial district during the 90s. It is characterized by the inter-production process in the region and a weak commercial structure that does not have international outlets.

Commercial openness: these structures are more developed; the company has commercial structures abroad that allow the company to control and understand the international market better. This structure maintains the productive chain anchor to the territory.

Supply openness: companies outsource overseas the beginning of the production chain, supplying the raw materials from outside the region and investing in foreign markets. However, the relation abroad is limited to this part of the chain. Export is the only way in which companies explore the opportunity abroad.

Open network: this is the case of the modern companies, which are able to explore the productive chain in both directions and create relations with international agents. These companies are leaders in their sector and attract investments on a global scale.

Italian companies of the district were almost in their totality traditional. The territory was the cornerstone of their market and the center of the production system. Globalization is pushing companies to evolve and change their structure, opening their borders in different parts of the chain. Companies and cluster organizations are strongly connected. The ability of national districts to adapt and get direct access to the global market, with a clear image of the brand, is an essential element for the success of the companies of the district (Camuffo, 2003). Few communities were able to explore the global market. These districts were able to open-up to external networks making people and knowledge inflow into the cluster (Corò & Grandinetti, 2001; Zamparini, 2010). In these clusters a large number of companies were able to upgrade, the cluster maintained the same structure of a variety of small players, which are interconnected and autonomously participate in the global market. The mechanism that creates external economies inside the district remain unchanged (Corò & Grandinetti, 2001) and, thanks to this development, small firms increased their competitiveness and their dimension (Rabellotti et al., 2008).

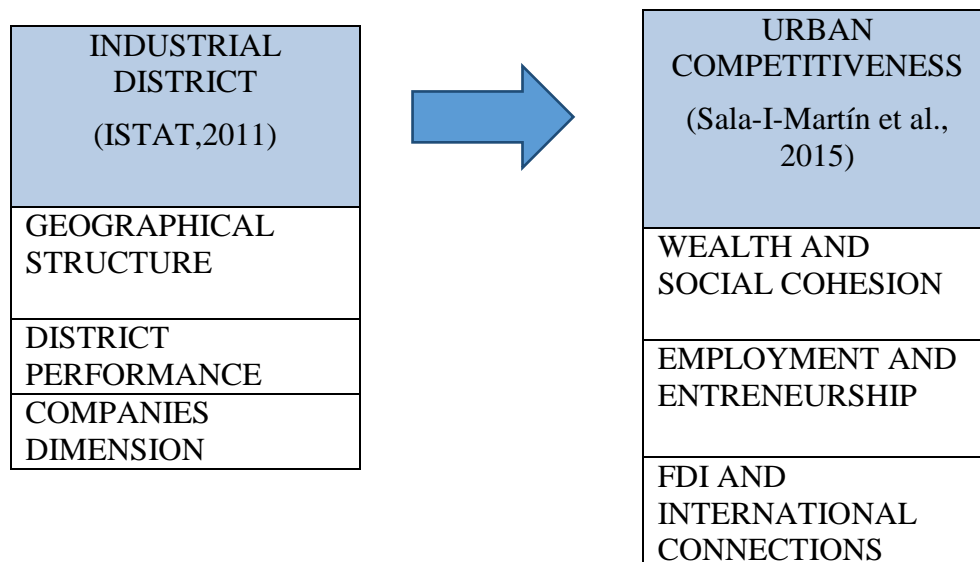
On the contrary, where the territory was not able to offer support and firms act individually, isolated success cases emerge, influencing the entire system (Zamparini, 2010). Hence, most of small companies decided to downgrade their activities. Firms needed to change their competitive orientations along with the district's transformation (Arikan & Schilling, 2011). The small firms recognized their inability to grow autonomously and to invest in innovation and decided to abandon few core activities, such as design and sales, to focus on the simple production of the product (Corò & Grandinetti, 2001; Rabellotti et al., 2008; Rabellotti, 2001). This adaptation with the abandonment of activities makes the subcontracting firms perform better, compared to the other ones. The new structure resolves the passive inertia in the internationalization of the cluster (Mariotti and Mutinelli, 2003). Global companies develop greater relational capacities with the market and other global stakeholders managing the transfer of financial resources, managerial skills, international market knowledge, and competences to the district (Iannuzzi, 2008). Such long arms have both positive and negative consequences for the district. On the positive side, they act as sensors for innovation and creativity in other localities, helping to overcome isolation, and, therefore, enabling the transplantation of new ideas or techniques to the locality. On the negative side, they inform the parent company of comparative costs and opportunities elsewhere, which can be used as threats or alternatives to localized production and purchases (Gray et al., 1996). However, the change in the relations between companies strongly modifies the cluster structures. From a horizontal structure to a vertical one characterized by hierarchy between actors (Guelpa & Micelli, 2007). Few large companies take care of almost all of the marketing and design activities, the management of worldwide logistics, to fully control the quality of the products and to create an image outside the clusters (Corò & Grandinetti, 2001). A centralized structure also has negative aspects; the cluster can lose the qualities that made it able to develop economic growth and became a mere production system (Rabellotti, 2003). In fact, the concentration of all the decisions and the talents threaten the entrepreneurial spirit of the cluster (Corò & Grandinetti, 2001), and it risks losing the peculiarities that are the base of its competitive advantage (Guelpa & Micelli, 2007).

2.6 Conceptual Framework

The idea behind the conceptual framework is to create a bridge between Italian industrial districts and urban competitiveness. The industrial districts were chosen because of their

importance in the tradition of the Italian economy and because of their evolution. The literature presents the fact that the regions with an industrial environment were able to outperform the others. However, the ability of IDs to impact the regions might be put at risk. For this reason, it has been decided to measure and test the impact of industrial districts on the performance of cities. Especially in this highly-competitive moment of the world economy, cities have to find their competitive advantages. To understand which are the elements that impact urban competitiveness, three different characteristics of the districts are taken into consideration: their geographical structure and their relations with cities, the ability of the districts as whole to perform, and the dimension of the companies of the districts. This division allows understanding if the sources of competitive advantages are geographical, institutional, or managerial. On the other hand, it has been decided to divide urban competitiveness into three different sub-categories. The goal is to measure the economic ability of the city in all aspects. Wealth, employment and international connectivity are all essential elements to create a competitive city that can grow and guarantee the high quality of life to their habitants.

Figure 3, Conceptual Framework



Author 2016

Chapter 03: Research Design and Methods

3.1 Revised Research Questions

3.1.1 Main resource question:

Do Italian industrial districts affect urban competitiveness?

3.1.2 Sub-questions:

Which is the impact of large enterprise areas (LEAs) on the cities' competitiveness?

Does the district's geographical structure influence the impact that the industrial districts have on cities?

To what extent does the performance of the district affect urban competitiveness?

3.2 Research approach and techniques

The analysis has the goal of understanding the relations between the dependent and independent variables. In the case of industrial districts, it has been preferred to utilize a quantitative approach and understand the general trends for the entire population of industrial districts. The quantitative approach has been preferred because of the particularities of the sample. Studying the category ID as a whole, without taking into consideration the single case, allows the researcher to understand the effect of the main components of its definition. This typology of analysis is completely based on secondary data and, for this reason, does not require fieldwork and a primary collection. In fact, thanks to interest in the two components, city and industrial district, a multitude of databases and sources are available. The goal is to analyze two different sources and connect between them. The data have been analyzed thanks to the use of statistical software STATA.

3.3 Operationalization: variables, indicators

3.3.1 Dependent variable(s).

The goal of the analysis is to study the impact of IDs on urban competitiveness. It is defined as a competitive city, one that can grow faster over time. When a city is competitive, it shows different characteristics.

3.3.1.1 Wealth and Social Cohesion

Guaranteeing a high level of income to inhabitants is an important condition to consider a city competitive. However, a city needs different factors to be considered competitive. In fact, a city with a high level of wealth concentrated in a small portion of the population is not considered competitive (Choe & Roberts, 2011; Godfrey, 2008). In the analysis, to proxy the prosperity of the city, the distribution of the richness has been taken into consideration. A prosperous and competitive city is considered as having a small number of poor families. The analysis uses as an indicator of this variable the definition made by the ISTAT. A poor family is defined as one in which not one of their components has revenue. The amount of income is not taken into consideration, families with a very low income are not considered poor. This definition allows separating the concept of poorness from the one of employment. People that do not have jobs but have different sources of income are not considered. Pensioners, the disabled, or people with social assistance are part of this category.

3.3.1.2 Employment and Entrepreneurship

A competitive city should be able to create fruitful conditions for companies to grow and develop. This environment may attract more companies and, consequently, is likely to offer

more possibilities for its workforce. Employment is the connecting ring between companies and citizens. The efficiency and flexibility of the labor market are important for ensuring that workers are allocated to their most effective use in the economy and provided with incentives to put their best effort in their jobs. For the analysis, the percentage of employment as an indicator of city competitiveness is utilized. It has been preferred to utilize the employment rate to the unemployment one to avoid the exclusion of people that are not even looking anymore for a job. This situation would have led to under evaluation of the problem (Hull, 2009; OECD, 2014; Rondinelli et al., 1998; Sala-I-Martin et al., 2015). The analysis follows the definition done by the ISTAT. It utilizes the percentage of people with a regular job in the population of the city. However, this indicator cannot take into consideration the workers in the informal market.

3.3.1.3 FDI and international connections

In the era of globalization, cities are increasingly connected to other cities worldwide. These connections reflect an increasing degree of competition between cities. A competitive city should be able to attract relatively more investment from all around the world. One of the important indicators of the centrality of a city in the world panorama is the ability to attract foreign direct investments. The number of investments can be used as an indicator for the economic centrality of the city. Indirectly, this indicator describes the ability of the city to convince different investors that the city is competitive. This indicator is more resilient of the amount of investment to the change of different sectors of the analysis. In particular, FDI counts are used because of more reliable data.

Table 1. Operationalization of the variables urban competitiveness

Variables	Definition	Indicators	Sources
Wealth and social cohesion	The dimension of wealth in the city	Number of poor families	ISTAT
Employment and entrepreneurship	The level of people with a job	Percentage of employment	ISTAT
FDI and international connections	The ability of the city to attract capitals	Number of FDI inflow	FDI markets

3.3.2 Independent variables.

In the analysis, the correlation between the competitiveness and the industrial district is studied. To do so, defining industrial districts is necessary.

3.3.2.1 Industrial District: In order to have the clearest definition of this particular type of agglomeration the definition made by ISTAT is used:

“Industrial districts are socio-territorial entities formed by a community of firms and people. The co-presence created socio-economic links and ties to the territory. Companies belong to the same industry and they are normally of small and medium dimension” translated from (page 2, Istat, 2011).

The same institute presents a list with all the names of cities within an ID. This list allows the researcher not to create arbitrary definitions and complicated analyses to delimitate cities with

the ID in their urban region. A dummy variable is created in which cities with an ID were considered as 1, in the opposite case as 0.

3.3.2.2 Large enterprise areas (LEAs)

In order to enrich the model and clarify the impact of the different components on urban competitiveness, another similar variable was added. The ISTAT defines LEAs as the industrial district with large enterprises. This typology of cities has the same characteristic of an industrial district, but the workforce of the city is subdivided almost equally between SMEs and big companies. The big dimension of companies is the only factor that does not allow the institute to present them as IDs. This differentiation allows understanding separately the influence of the agglomeration and the dimension of companies. In other words, the ability of small and medium firms, compared to the one of big dimension, to produce the economies of agglomeration and to boost the local economy.

Table 2. Operationalization of the dependent variables and the control sample

Local system of labor (LSL)	The main sample, all the cities in Italy in which citizens exercise, most of them, social and economic activities
Industrial district	Subcategories of the LSL, the difference to other LSLs is the agglomeration of companies of small to medium dimensions
Large enterprise areas	Another sub-category of LSL; the cities present the same characteristic of industrial districts, but the companies are of big dimension

Also, in this case, a dummy variable was created. It emerges from this two variables the creation of a third one called “City”. This category is formed by cities with no ID with companies neither small nor big. The variable is utilized as a reference category.

3.3.2.3 Geographical structure

What the first characteristic of the district takes into consideration is its geographical position in the region. It wants to analyze the relationship between cities and industrial districts and in the same moment between the different industrial districts. This indicator is the sum of three different sub-indicators. First, cities are divided between main and small cities. Main cities are defined as the ones that are the county seat of the sub-region, “Provincia”. This definition is chosen with the idea of analyzing the trade-off between urbanization economies. The second step defines cities based on their proximity to IDs. A city is considered in the proximity of an ID when it is in the same “Provincia” or “Citta metropolitana”. This definition allows understanding if there is a relationship between the presence of different districts in the surroundings and the diversification of the economy within the region. The final step is to add the variable previously-defined ID.

Table 3. Definition of the sub-indicators

Industrial district	A city that has an ID in the urban area
Main city	A city that is a county seat of the region
Proximity of ID	A city that has an ID in the same Provincia

The three variables together create a matrix of eight different typologies of cities, which are divided into two main categories, cities with ID and those without. To insert the variables in the regression, a dummy variable has been created for each geographical structure.

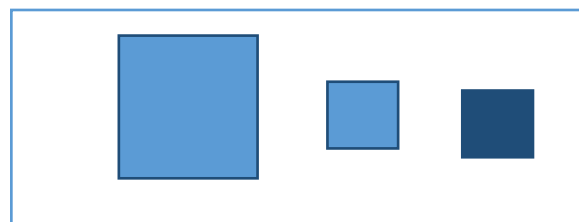
Table 4. Operationalization of the variable “Geographical structure”.

Structure	ID	IDs in proximity	Main city
Industrial districts:			
Small central ID	Yes	Yes	No
Main central ID	Yes	Yes	Yes
Small isolated ID	Yes	No	No
Main isolated ID	Yes	No	Yes
Cities without an industrial district:			
Small central city	No	Yes	No
Main central city	No	Yes	Yes
Small isolated city	No	No	No
Main isolated city	No	No	Yes

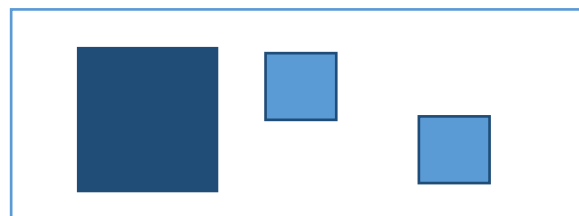
3.2.3.3.1 Graphical representation



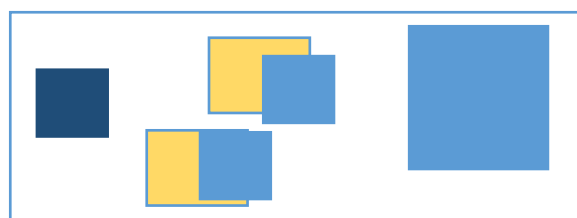
A small isolated city is a city that has no ID and has no IDs in its proximity.



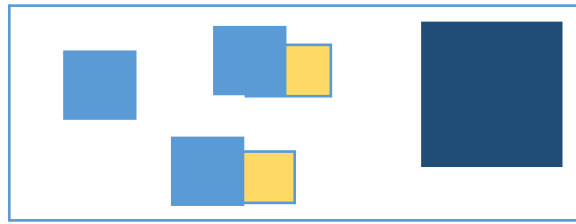
A main isolated city is a big city that has no ID and has no IDs in its proximity.



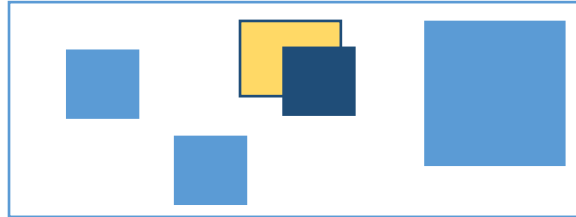
A small central city is a city that has no ID and has IDs in its proximity.



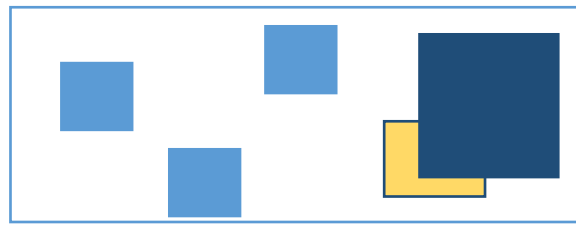
A main central city is a big city that has no ID and has IDs in its proximity.



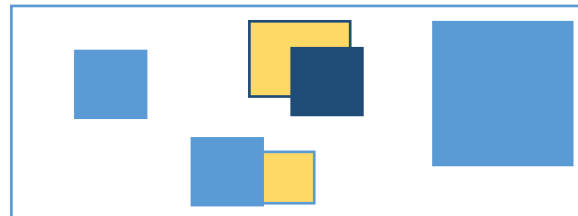
A small isolated district is a city that has an ID and has no IDs in its proximity.



An isolated main district is a big city that has an ID and has no IDs in its proximity.



A small central district is a city that has an ID and has IDs in its proximity.



A main central district is a big city that has an ID and has IDs in its proximity.

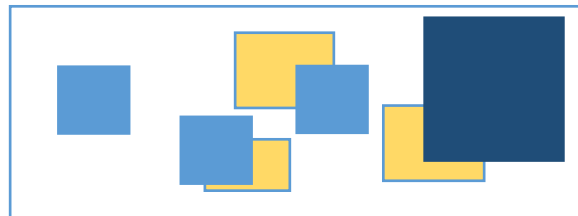


Figure 4, Author 2016

3.3.2.4 Performance:

This variable has the goal of measuring the performance of the districts and their evolution between 2001 and 2011. This variable has been extracted from the data concerning the evolution of the districts that compare the data between 2001 and 2011. This data was obtained

thanks the union of companies and local authorities' datasets. However, this variable does not take in consideration important aspects of the company's balance sheet. In particular, most vitality indicators of the companies, as profits and debt leverage, are not taken into consideration. This variable accepts as well-performing districts the ones that were able to increase the number of employees in the ID and maintain the territorial distribution. For what concerns the analysis, these indicators are sufficient to give an idea of the relation between the performance of the district and the one of the city, even if simplified. Hence, the ISTAT creates five typologies based on the trend of employment and geographical occupation of the districts.

Table 5. Description of the variable performance

Persistent and suffering	IDs that persist from 2001 (previous census) and have maintained their specialization and territorial distribution. However, the number of employees has been decreasing.
Persistent and reactive	IDs that persist from 2001 but have changed the main specialization and have increased their territorial distribution.
Winning	Old and new districts that display a high increase of employment.
In crisis	Old and new districts that display a high decrease of employment.
Expanding	Old and new districts that are expanding in the territory and steeply decrease employment.
No districts	The control group, cities without an ID.

A dummy variable has been created for each status. This makes the variables number five, each of them with a value of 1, in the case of the ID being in that status, and 0 if not.

3.3.3 Control variables

3.3.3.1 Sector:

The variable 'sector' describes the different industry specialization of the district. The sectors considered in the analysis are textile, leather, home furniture, gold, food, mechanic, metals, chemical, and paper. The different sectors have peculiar characteristics that influence the level of employment and the other indicators of competitiveness. It is added as a control variable to understand if there are particular impacts of sectors in the components of urban competitiveness. It is another indicator that would help to understand more deeply the influence of IDs on cities and how this happens. Also, in this case, a dummy variable has been created for each sector.

3.3.3.2 Region:

The Italian territory presents a huge economic and social differentiation between regions. The historical division between north and south is still present. However, the heterogeneity of the economy cannot be reduced to the simple binomial north and south and, for this reason, the regressions are controlled by the more general belonging to the region. In this way, the influence of competitiveness takes into consideration the geographical location of cities, isolating the possible influences. To insert the variable in the regression, a dummy variable for each region has been created.

3.3.3.3 Population:

This variable describes the number of official citizens of the city. The scope is to avoid underestimating/overestimating the importance of industrial districts because of the dimension of cities. Without this control variable, higher competitive advantage of big cities is easy to imagine without the control of the number of citizens.

3.3.3.4 Density:

This variable describes the density of the city, putting in relation the number of householders and the space occupied in the city. It has been decided to control the regression for the urban morphology because it can have a huge impact on the distribution of wealth and it can influence the efficiency in the management of the territory.

3.3.3.5 Education:

The impact of the independent variables on the competitiveness of the city is controlled by the level of education. Different studies present education as one of the main indicators of competitiveness. In the analysis, the number of adults with higher education is utilized. This variable allows isolating the impact of the level of education on the competitiveness of cities and contribute to clearer results.

3.3.3.5 Demographic:

The variable 'demographic' is added to the regression. It describes the age of citizens. Especially in little cities where the age average might be high and lead to a low level of people of working age, the urban competitiveness might be affected and influence the results of the analysis.

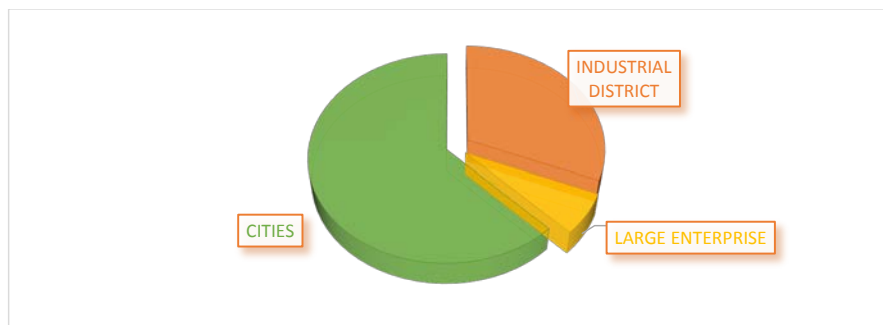
3.3.3.6 Mobility:

It describes the number of people that need to change city for work. It allows isolating the risk that the income of the citizens is not directly related to the competitiveness of the city but the ones surrounding.

3.4 Sample Size and Selection

The decision of the methodology strongly influences the sample selection. To be able to generalize on the totality of the population, it has been decided not to take into consideration the single cases but to launch an analysis of the population of the IDs. The complete list of cities within an industrial district is compared to a bigger sample of cities. The control group allows isolating external factors and measuring the impact of the variable. For this reason, the most similar groups of cities have been selected. It has been decided to use as a control group cities that are considered as "local system of labor" (LSL). LSLs are defined by the ISTAT as cities in which citizens exercise most of their social and economic activities. This particular list of cities allows excluding cities in which people do not work, and for this reason, there is not a direct relationship between the competitiveness of the city and their inhabitants. IDs are sub-categories of LSLs; this underlines how the only difference between them is the specific agglomeration of companies, which is the main variable of the research. These similarities allow isolating possible external variables that would affect the results and to which would have been impossible to control. The sample taken in consideration is of 420 cities, of which 251 are LSL without IDs, 131 IDs, and 27 LEAs. They are distributed in 15 regions from the north to south of Italy.

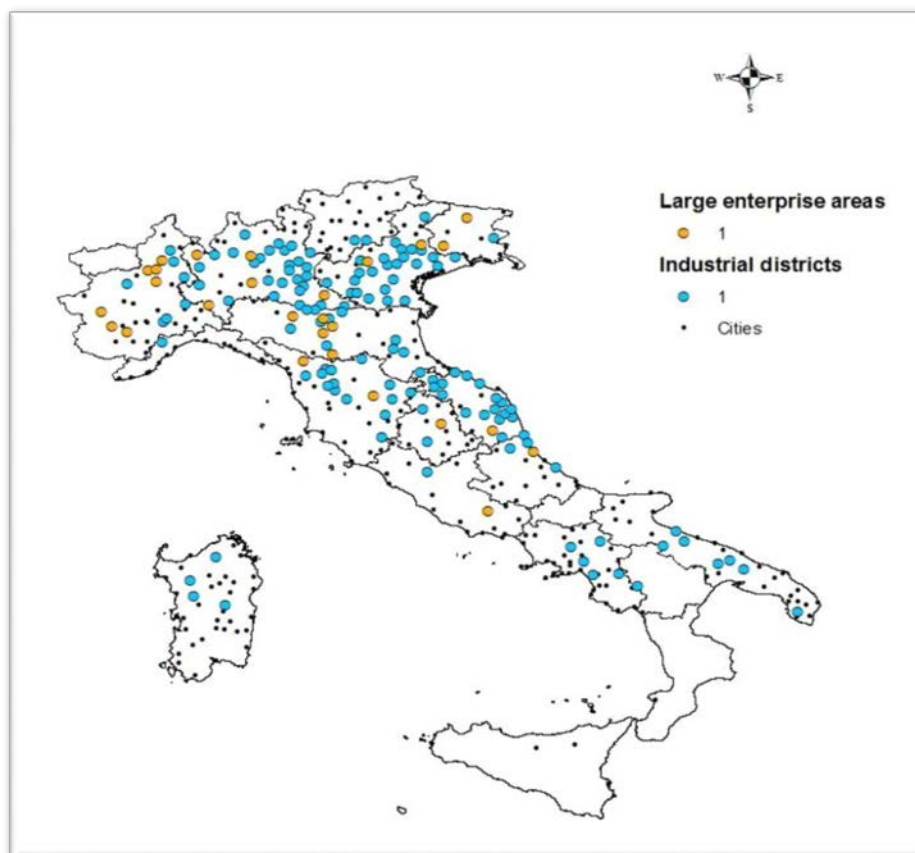
Figure 5, Pie chart of the research sample



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The industrial districts are well distributed in the Italian territory, covering almost all the region of Italy. However, IDs are concentrated most in few regions. In particular, the Northeast of Italy present most of the IDs; this concentration has led the area to be called Third Italy to differentiate it from the industrial North West and the agriculture south. The largest number of IDs is in Lombardia, Veneto, and Marche. The concentration of large companies follows a different distribution. The highest concentrations are in Piemonte and Emilia Romagna. When the exact location of the districts is taken into consideration, thanks to the creation of the map, the distribution is clearer, and it displays how districts tend to be within proximity. This characteristic of districts to agglomerate in small subregions already gives input on the probability that a district gets a competitive advantage as a result of being within proximity of other districts.

Figure 6, Distribution of IDs, LEAs, and cities of the analysis on the national territory



Author 2016

3.5 Validity and reliability

The decision of the strategy influences also the validity and reliability of the analysis. The secondary data and the quantitative analysis can constrain the quality of the results. When secondary data is utilized, it is impossible to modify their essence and they might not completely match the scope of the analysis or the definition of the variables, forcing the authors to exclude them or limit the timeframe of the analysis. In addition, difficulties may occur because of the big dimension of data, which may lead to a depreciation of the information. Even more important are the limitations of the quantitative research, which do not allow going deep into the problem but just understanding the general trend. However, the internal validity of the research is guaranteed; two of the main problems of secondary data are avoided. First, thanks to the use of only institutional association and governmental entities for the collection of data, the quality of them is likely to be good. In fact, these institutions have a strict data collection framework, which ensures the quality of the procedure. Second, the manipulation of the data at the moment of the collection is partially avoided. In fact, records were collected with the only goal of describing the actual situation, the lack of a specific purpose increment, the possibility not to be influenced by the collector, and the scope of the analysis. There are also positive aspects of the utilization of only quantitative secondary data. They guarantee the replicability of the test. The data are public, and they are scientifically studied, which allows everyone to reproduce the analysis and check the results. Hence, the main purpose of the research strategy is to give scientific validity to the research and make the result easily replicable and objective.

3.6 Data collection methods

Thanks to the interest in the topic, it has been possible to find all the data necessary for each city without the need to integrate them with data collected by the author. Industrial districts and cities have been interesting topics for national and regional development; this has pushed different stakeholders to investigate and collect data. The analysis' dataset would combine different sources, which would allow the creation of a new and original dataset. The study investigates different databases ISTAT, Osservatorio per i distretti Industriali, openbilanci, FDI market, and the University of Venice, but it was decided to limit the number of them in order to not risk the mismatch of definitions and the lack of data. The two only sources of data are:

3.6.1 Istat:

The National Institute of Statistics (ISTAT) is the main source of data for the national territory. It is the agency in charge to collecting and analyzing data, which, depending on the interest of the research, can be presented on the different scales: national, regional and city level. The data collected are various, from prices' index to educational quality, with the goal of describing the different situation and give a complete image of the condition of citizens within the national borders. The institute creates a multitude of data; however, the necessity to collect them to a city level has decreased the possibility to take advantage fully of all the datasets. In most cases, it is not necessary for the Institute to present the data to city level but only to a regional one, making it impossible for the researcher to get access to the metadata. For this reason only datasets, which were covering the totality of cities, were taken into consideration. The first one is the national census of 2011. This research is more specific and detailed than the normal ones, presenting data for each Italian city. The census has been used in order to collect the geographical and demographical information. Unluckily, the collection of data for all the cities required an important amount of work and huge costs that led the institute to do it only every 10 years (1991-2001-2011). This particular widespread collection of data allows researchers to

have a complete image of cities' different aspects in the same year, and to collect information about demography and general characteristics for each city. The analysis conducted in the interpretation of the Local system of labor is the second source of data utilized by the Institute. In this case, the Institute has collected data for all the economic independent urban areas in which people spend most of their economic and social activities. This data has been essential to reinforce the creation of the dataset with economic and social variables and to create the different definitions (LSL, IDs and LEAs) and the decision of the sample for the analysis. The third report utilized is more specific about the IDs and large enterprise areas. These two datasets indicate the cities with this particular form of agglomeration and describe their characteristics as the sector and the number of employees of the districts.

3.6.2 FDI Markets:

The last database taken in consideration is the FDI market. This database was created by the Financial Times and has the goal of describing overseas investments all over the world. This international flow of capital gives a concrete idea of the connections between the states and makes it possible to measure the attractiveness of a territory for foreigner investors. The data taken into consideration in the analysis starts from 2003 until 2014 and they give information about the number of investments, the amount of investments, and the number of jobs created by the investment. The database was inserted in the analysis thanks to the specification of the city from which the investment comes from and goes to, which allows describing the inflow or outflow of capital within cities. However, because of the global dimension, there is the possibility of a lack of information on the micro level, the specification and geographical identification may not be clear or defined, making it impossible to add the unclear one to the dataset, generating few missing data.

3.7 Data Preparation:

Once the database is complete, the quality has to be checked. The first step is to exclude cities that do not present all the data necessary. Cities that lack one or more indicator are not taken into consideration in the analysis because they might compromise the results. The second step is to remove cities in regions that do not present the necessary variance, in particular regions, in which there are no industrial districts. This step has led to omitting cities from Sicilia, Calabria, Basilicata and Val d'Aosta. The presence of cities with IDs and cities without them in the region is necessary to create the variance that allow comparing the performance of cities and analyzing the impact of the independent variable on the dependent. After this process, the cities with all the data necessary are 420. This sample is big enough to proceed in the analysis. Once the dataset is ready, the variables have to be analyzed in order to improve the quality of the regression.

3.8 Modelling Techniques:

For each question, a combination of two models is used. Every table describes the competitiveness of cities dividing them in three indicators. The two dependent variables, number of poor families and employment, are analyzed thanks to the use of OLS, while the last one, FDI counts, with the NB model. This typology allows enriching easily the model and adding different typologies of variables, having valid results. It has not been possible to launch a panel and test this influence over a period of time because of the time-limitation of data. For this reason, a cross section will be utilized. Each regression analysis separates each indicator and understands for each of them the influence of industrial districts and their characteristics. Two of the dependent variables are continuous, making the OLS model the preferred estimation technique. Alternatively, the negative binomial regression is utilized to analyze dependent variables that represent count data. In both models, the first regressions are structured in order

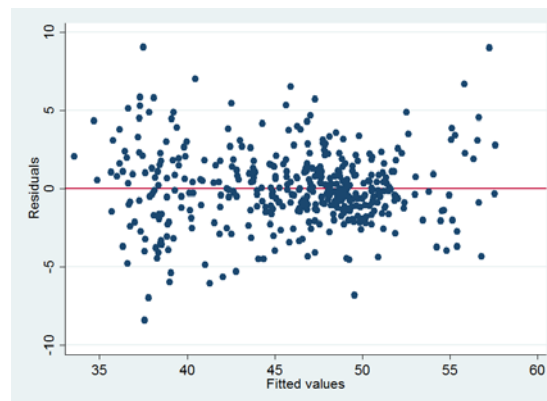
to show the correlation between the variable industrial districts to the dependent ones. In the second analysis, the model is enriched by the characteristic of the districts. In this stage, the objective is to understand the impact of the different structures and the influence of each agent and factor in the process of the pursuit of a competitive advantage.

3.9 Pre-Analysis:

3.9.1 OLS Model:

As already mentioned in the description of the two variables, an OLS model is used. In order to launch adequate regressions, the models have to be tested for the hypothesis of the model. The pre-analysis of the fulfillment of the requirements of the OLS allows reducing the risk of a negative impact on coefficients. The first is the normal distribution of the residuals. In the case of this analysis, the distribution of the standard errors of the dataset was already normally distributed in most of the variables. The cases in which the data has to be edited were for the control variables: population, density and the dependent poverty. In all cases, it has been necessary to create the variable log, which standardizes the distribution as normal. Even if the standard error distribution is not perfectly normal, in this case, the dimension and the utilization of robust standard errors guarantee that the normality of the residuals is not relevant issue of the different variables. In the second step, the variables have to be tested for homoscedasticity and multicollinearity. The tests show that there is a risk of homoscedasticity. Figure 7 clarifies that the data is directed to a point. This tendency to a regular distribution signal that the standard errors are not independent. The risk was confirmed also by the Etest test. In order to minimize the effect that the correlation between the standard error and the independent variables might have on the coefficient and result, the analysis would use regression with the formula “robust” and reduce the probability of errors.

Figure 7, Distribution of the standard errors.



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The second test is for multicollinearity. To check it, the Collin test has to be run. After the test, the risk of having collinearity between variables is very low. Only in one case, the variables influence each other. Hence the variable sectors influence the other independent variables. In particular, the variable ‘sectors’ were strongly correlated with the variable ‘industrial districts’ and with the ‘geographical structures’. This result is mostly because of the strong specialization of the industrial districts. The economies of the district are based on one sector mostly, and splitting the influence of the district to one of the sectors is almost impossible. For this reason, even if it was considered important to control the results for the sectors of the industrial district,

it has been preferred not to include it in the analysis or the result and the coefficient would have been corrupted.

3.9.2 Negative binomial model:

Different steps have to be followed in case of the variable FDI number. Because of the huge number of observations with zeros as a result, which is only in a few cases the zero is the result of missing data, suggesting a different model. Mostly, the reason is that there is a huge number of cities, which do not attract any investment from abroad. The Voong test shows that OLS is not appropriate because of the excess zeros that make not present the distribution of all the characteristics necessary. For this reason, a new model has to be chosen. To understand which the best model is, different tests were done. The two best typologies that may be used are Poisson and negative binomial. Usually, a negative binomial (NB) is preferred over Poisson if the variance is greater than the mean. In this variable, the variance is considerably greater than the mean, indicating that an NB model is preferred. Another test is the Pearson's goodness of fit for Poisson, which gives the same results; Poisson is not the best to use and NB is a better-fitted model.

Chapter 4: Research Findings

4.1 Q1: do Italian industrial districts affect urban competitiveness?

4.1.1 Descriptive Statistic

Understanding the characteristics and distribution of the variables is the first step to answering the main question.

4.1.1.2 Dependent Variables

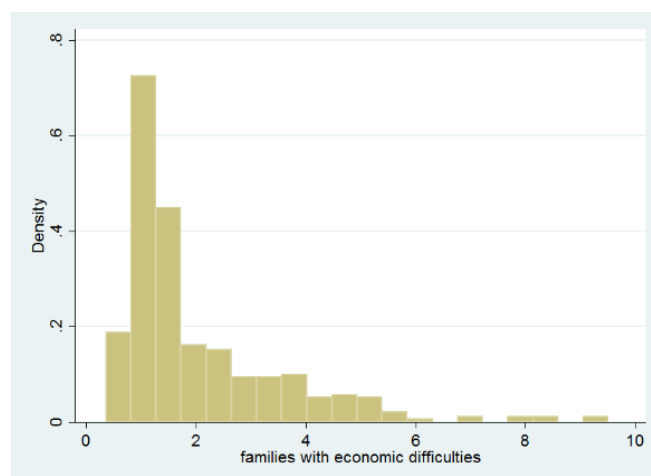
The preparation of the dataset has allowed all variables to have the same number of observation, 420. This follows the decision to omit from the regression cities that do not present all the necessary data. This allows launching regressions with the same number of cities and no distortions.

Table 6, distribution of the dependent variables

Variable	Obs	Mean	Std. Dev.	Min	Max
poorfamilies	420	2.040496	1.484064	.3691983	9.515852
employment	420	45.94188	5.694216	29.20082	66.23405
numberoffdi	420	3.064286	29.8808	0	558

When Table 6 is studied, a few trends emerge. The first result that emerges is high standard deviation of the number of FDI. In fact, the values of this variable are strongly higher to the others. Also, this variable is the only one that accepts having a value of 0. This data confirms the necessity of different elaboration of the variables. When the distributions are studied singularly, Figure 8, 9 and 10, their peculiarity emerge. In the case of the number of poor families, there are cities in which there are almost no families considered poor and, on the contrary, there are cities with a high impact of poverty. This huge variance underlines the huge differences within the territory. The distribution underlines that no poor cities are prevalent. Most of the cities are around 0 and 2 and that the number of cities with a high level of poverty decrease fast. This trend is underlined by the low value of the mean, which is closer to the minimum.

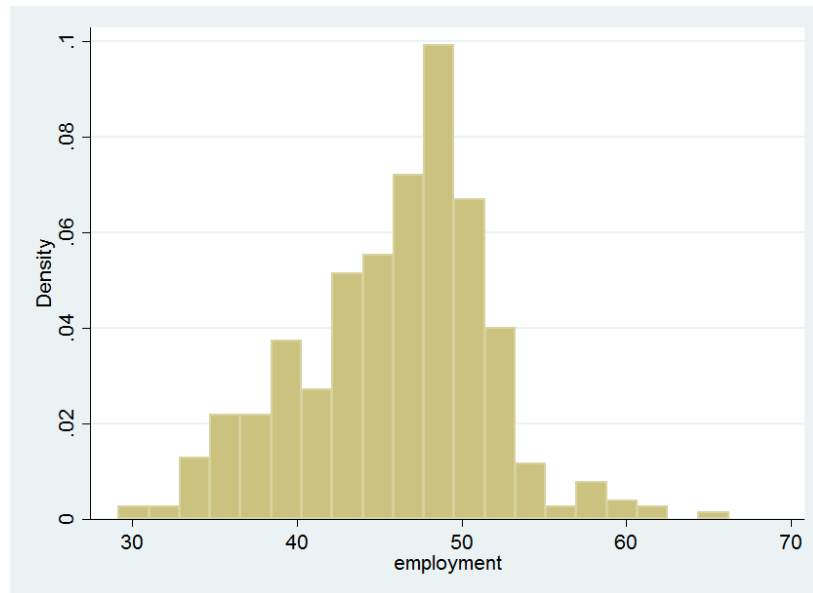
Figure 8, Poverty distribution



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However, the number of very poor cities is dramatic and it underlines cities with a clear emergence. In the case of employment, the distribution has a different shape, Figure 9. Hence, in this case, the results suggest a large majority of cities performing in the average, or worse than the average and an elite of cities able to guarantee a high level of employment. In fact, the left tail of the distributions has higher values compared to the right part.

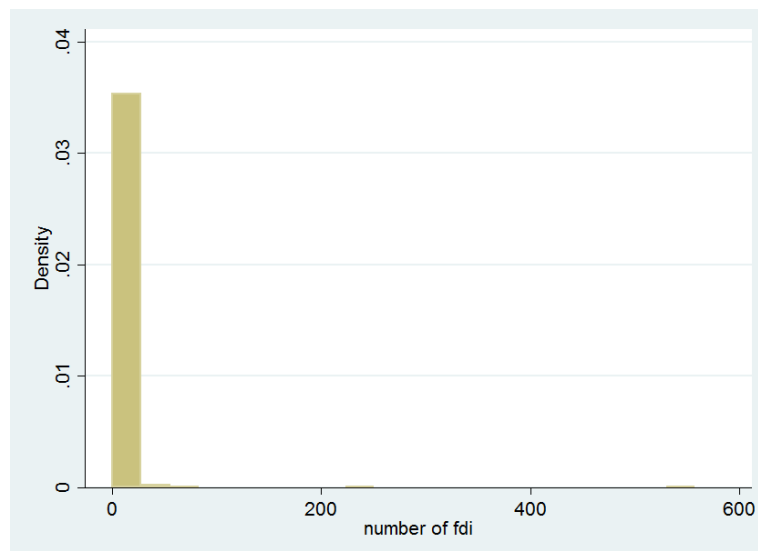
Figure 9, Employment distribution



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The last distribution taken in consideration is the number of FDI. When Figure 10 is analyzed, it is clear from the first glance that the distribution is radically different.

Figure 10, Number of FDI distribution.



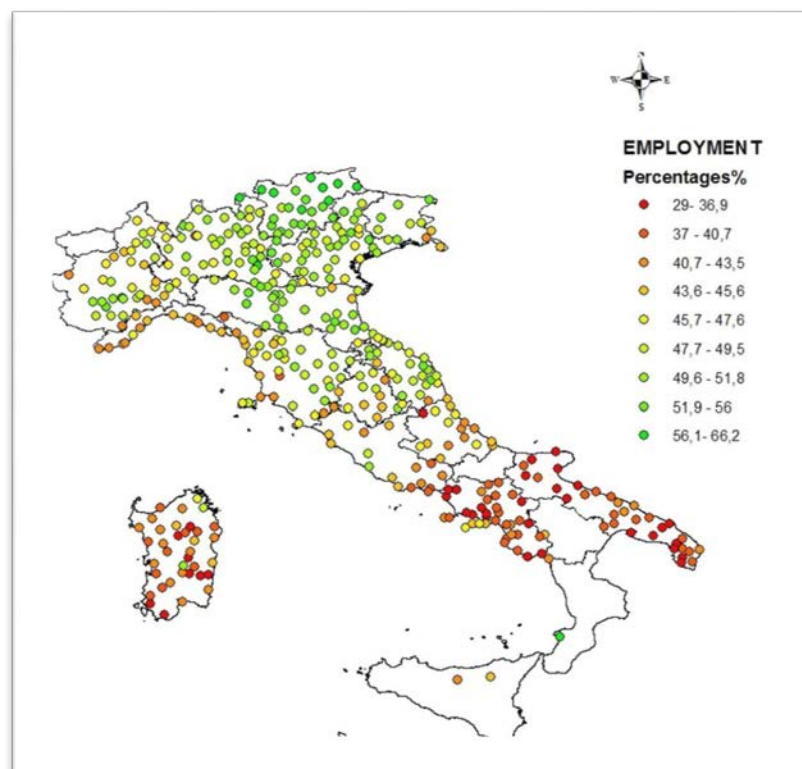
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There is a large predominance of cities without investments and the other cities spread singularly for other possible results. The large majority of cities is not able to attract any investment, signaling the big difficulties of cities to participate in world market.

4.1.2 Graphical analysis

The analyses of the distribution suggest a huge gap between cities. A large majority perform on average and only a few cities are able to be competitive in all the different aspects. This trend also emerges in Figure 11 and 12. However, it can be noticed how this huge difference has a specific pattern; the difference is between the north and south. This gap is part of the Italian heritage and culture. The south in deep recessions and the north following the fast pace of Europe. The two maps are similar, but it does not mean the indicators are necessarily related. As the World Bank underlines, job creation and income growth do not necessarily go hand in hand. Some cities experience income growth but not job growth (World Bank, 2015). It can also be noticed on maps. Cities that perform well on the first map present the opposite performance on the second (for example, cities in Sardegna). When Third Italy is studied, it can be noticed how in these regions the level of poverty is low and the level of employment high. However, the relation with the industrial districts cannot be studied without the control variables. In the graphical analysis, it is not possible to isolate the geographical effect to one of the agglomerations that does not allow the research to affirm on the research questions. However, an important factor can be deduced. There are cities that strongly outperform the others in the same urban areas or contrary cities that suffer more. This leads to thinking that different results are possible and that urban management can have an impact on the wealth of the city and lead to solutions, even in the dramatic regional contest.

Figure 11, Distribution of employment in the cities of the analysis



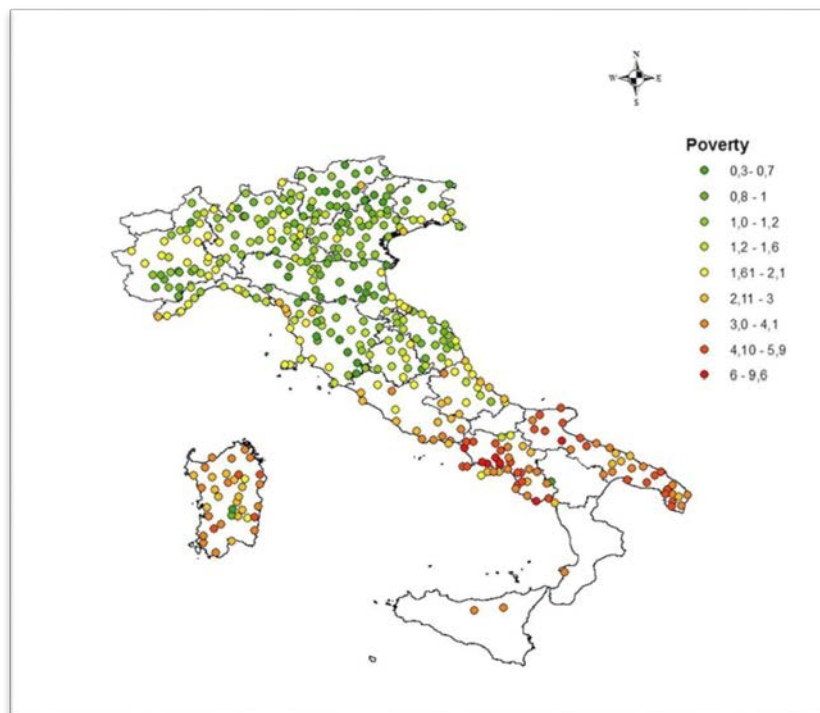
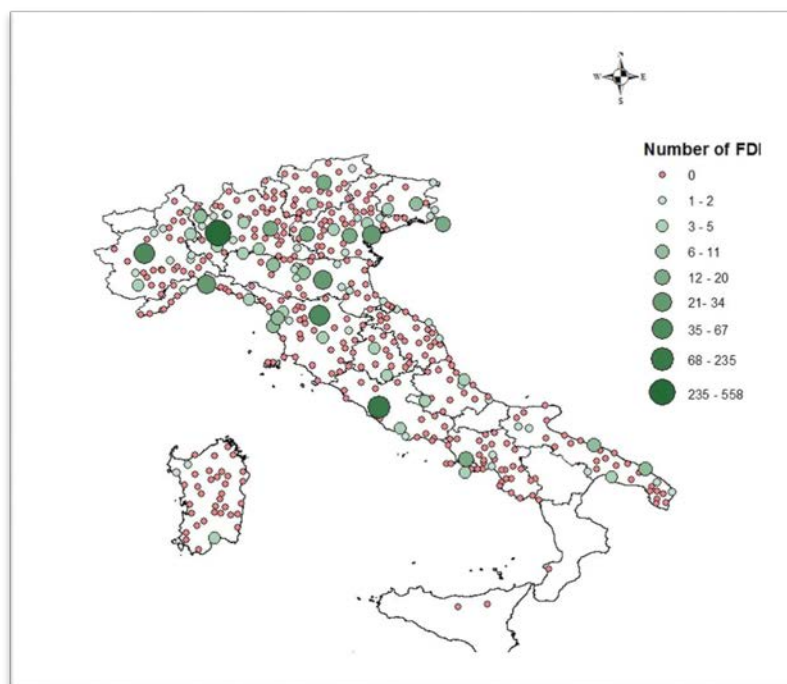


Figure 12, Distribution of poverty in the cities of the analysis

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Figure 13, Distribution of number of FDI in the cities of the analysis



Concerning the number of FDI in figure 13, the differences between North and South are confirmed. The north is more attractive for foreign investors and the investments tend to be alienated in the proximity of the river Po. In particular, the city of Milan evidences the difference between a global city to one that is not able to participate in the world market; and how not only the city, but also the surrounding urban areas benefit from the infrastructures and the environment of the city. The map also underlines how the largest number of investments is all in the urban areas of Milan, Rome, Venice, Florence, and Bologna. Third Italy does not seem to be able to create the conditions to attract investment and outperform cities of the same dimensions.

4.1.3 Inferential Statistic

The descriptive statistic and graphic analysis gave a first input of the distribution and the relation between the variables. However, it has displayed the necessity to have a clearer vision of the relations. In fact, it is necessary to isolate the external factors that might influence the regression. The statistical analysis helps to understand the influence of the independent variables on the dependent one *ceteris paribus*.

4.1.3.1 Characteristic of the Regression

The first goal of the analysis is to prove the relation between the variable ID and the different indicators of the performance of the city.

The main goal of the regression is to compare three categories of cities and their relation regarding urban competitiveness. For this reason, the variable ID and LEA are inserted into the model while the variable city is used as a comparison and is not inserted into the regression to avoid the dummy trap. Both variables were included in order to analyze two different factors. First, it wants to be understood if the agglomeration of firms of a specific sector does influence urban competitiveness. In this case, both categories are taken into consideration and are compared to the comparison group. Second, it wants to be studied if the dimension of companies influences the process. The goal is to understand if the traditional industrial district performs better than a more modern structure. To isolate possible influences, demographic and geographical control variables are added. The main important one that clearly emerges from the graphic analysis is to control if the difference in the competition is derived from the location in a specific region. Also, in the case of regions, it is necessary to choose one variable to exclude in order to compare the performance of the others. The region Marche has been chosen. The goal is to choose one region that was central and for this reason with average performances and a variety of IDs.

4.1.4 Results of the regression

Table 7: Inferential analysis of the variables IDs and LEAs on urban competitiveness.

VARIABLES	Poverty	Employment	Inflow of FDI
Industrial District	-0.123*** (0.0345)	0.582** (0.291)	-0.504*** (0.165)
Large enterprise areas	-0.169*** (0.0512)	0.818** (0.337)	0.374* (0.206)
Demography	-0.00267*** (0.000448)	-0.0494*** (0.00525)	-0.00146 (0.00255)
Mobility	0.00116* (0.000640)	-0.0199*** (0.00644)	-0.0197*** (0.00469)
Education	-0.00959*** (0.00255)	0.122*** (0.0252)	0.0746*** (0.0119)
Population	0.0533* (0.0286)	-0.609** (0.277)	1.063*** (0.119)
Density	0.0762***	-0.188	0.444***
Region dummies	YES***	YES***	YES**
Constant	0.104 (0.203)	53.27*** (2.021)	-19.57*** (1.154)
Observations	420	420	420
R-squared	0.799	0.823	

4.1.4.1 Significance of the control variables of the regression:

In order to control the validity of the regression, the impact of the control variables on the dependent variables has to be checked to see if their results are compatible with the literature and the reality of the Italian system. In order to do so, the coefficient of the control variables is studied in Table 9. First, the variable demography, which describes the age of the population is negatively related to the level of poverty. This result is comparable with the Italian pension system, the marginal increasing incomes by age, and the definition of poverty of the analysis. In fact, the definition does not take into consideration the amount of earnings but the fact that there is at least one in the family. Therefore, the older population increases also the number of people in a pension age. This segment of the population has a secure source of revenue that reduce the number of poor families. On the other hand, the increase of pensioners reduces the number of working people and the level of employment of the city. The results are coherent with the impact on the two dependent variables. Second, the level of education positively affects all of the indicators. In fact, to a higher level of education is followed positive results for all the dependent variables; lower level of poverty, higher employment and the attraction of FDI. These results are in line with numerous studies that indicate the level of education of the population as one of the main indicators and predictors of urban competitiveness (Checchi & Faini, 2007; Rondinelli et al., 1998; Sala-I-Martin et al., 2015). Third, the level of mobility

is negatively correlated with the variables. This result is in line with the definition of the variable, which defines mobility as the number of people who have to move from the city to work. A city that is not able to guarantee the jobs of its inhabitants is not competitive. This is demonstrated by the higher poverty and lower employment and FDI. The fourth variable taken into consideration is the effects of the cities' population. In this case, in the different literature cases can be found. In fact, urbanization leads to economies and diseconomies also depending on the morphology and the history of the city. In the case of Italian cities, the increase of the size of the city has a negative effect on the internal economy of cities, employment and poverty, and a positive one on the international openness, FDI. The results of the control variables give the first hint on the validity and reliability of the regression. These results are confirmed by the impact of regions on the dependent variables. The region Marche outperforms most of the south and central regions in guaranteeing minimum wealth to their inhabitants. The problem with the south is underlined by the high coefficients of the most southern regions, Campania and Puglia. Even clearer is the difference between regions if the difference in the employment levels is studied. In fact, it is clear that the region at the north of the Marche performs better, the one in the center equally, and the one in the south dramatically worse. The same trend concerns the attraction of FDI. This data matches perfectly the ones obtained by the graphical analysis. Once the control variables are checked the main variables and their effect can be studied.

4.1.4.2 Lesson Learned From Question 1:

The results of the regression give a clear image of which is the impact of the IDs and the LEAs on urban competitiveness. For what concern the internal economy of cities, both categories impact the level of employment positively and negatively the grade of poverty. The localization economies result in a higher productivity of companies, allowing them to grow and acquire more people (Arikan & Schilling, 2011), and create a positive circle, increasing the level of employment and reducing the number of poor families. The power of the agglomeration is also confirmed by the area in which this agglomeration is of large companies, signaling that the dimension of companies does not have a particular impact on the agglomeration economies. This result contradicts the literature. The entrance of large companies in the industrial districts does not lead the ID to miss the relations with the community and the citizens, but these relations remain strong, and the LEAs can boost the economy of the city. If the impact on the internal economy of cities is uniform, the one on the attraction of FDI strongly diverges, and underline, even more, the positive attitude of LEAs on the competitiveness of cities. Large companies' areas attract more international investments than the comparison group and IDs less. This already underlines the ability of big companies to create the internal and external conditions to make the city prosper (Perrini, Russo, & Tencati, 2007). These results underline the higher potential of large firms and the biggest limit of industrial districts. Compared to normal cities, even with attractive firms, IDs areas were unable to evolve and participate in the world market and shape companies to the international mindset (Menghinello et al., 2010). The entrance of foreigners in the market is still viewed negatively; the "secrets" of the products and the traditional way to produce them are defended from external agents (Rabellotti, 2001). However, because of the continued increase of competition, this mentality puts at risk the sustainability of the system of IDs and its ability to guarantee benefits to the population (Majocchi & Presutti, 2009). Hence the higher performance of LEAs are not only dependent on the internationalization but also on the reeling on both small and large companies. The presence of different structures of companies contributes to the differentiation and the creation of wealth. LEAs compare to IDs, are based on a network of local and non-local relations, in which large companies bring new variety into the territory (Camagni, 1991; Oinas, 1999). This new knowledge, absorbed by local actors thanks to the institutional and cognitive proximity, create an exchange of ideas and information that contribute to the innovation process (Bathelt,

2005; Wolfe & Gertler, 2004). This first regression already gives strong input on the analysis. However, to analyze deeper the factors that influence the process, the characteristic of the industrial districts will be added.

4.2 Q2: Which is the impact of large enterprise areas (LEAs) on the Italian cities' competitiveness?

4.2.1 Descriptive statistic:

4.2.1.1 Geographical characteristic:

The geographical characteristic is a variable formed by different dummy variables, one for each structure. The distribution of cities in these categories is irregular. In fact, the categories are the combinations of the three variables, which have different distributions. The number of main cities is limited, as there is only one for urban areas and just a few for regions. In fact, because of the definition, a city is considered the main city, when it is a county seat of the region. This implies that a small number of them is required. Hence, they are 78/420, and only 18 are districts. The other indicator IDs in proximity, as we have seen on the map, is influenced by the fact that districts tend to agglomerate in the same region, reducing the probability of having isolated IDs. The cities that do not have industrial districts within their proximity are 136/420, of which just 21 are districts. The combination of the two factors has led to having one category that is consistently smaller than the other ones. In fact, the isolated main district can count only five cities. This is a side effect of the volunteer to understand the impact of the three indicators at the same time. However, the analysis is not influenced as a whole. To avoid the dummy trap, one category is excluded from the model. The decision was to omit the variable city. This typology of the city, which is considered the elemental one for the analysis, is perfect for the comparison. In fact, this typology of cities isolates the impact of being a central city (it is not a central city), the impact of having ID in the surrounding (do not have IDs in proximity) and industrial district within the city boundaries (it is not an industrial district city). The comparison of all the different characteristic to the isolated city excludes the possibility of the small sample of the isolated main ID to influence the analysis as a whole.

Table 8: different geographical characteristics:

Structure	Number of cities
IDs:	
Central main ID	13
Central ID	97
Isolated main ID	5
Isolated ID	16
Cities:	
Central main city	31
Central city	133
Isolated main city	29
Isolated city	96

4.2.2 Inferential Statistic:

4.2.2.1 Characteristic of the Regression:

With these regressions, the relation between cities and districts needs to be studied; in particular, the relation between localization, diversification, and urbanization economies. The model used is the same as with the previous regression; neither the dependent variables nor the

control variables have been touched. The only difference is the decomposition of the industrial districts in four categories and the control group in the other four.

4.2.2.2 Results of the regression

Table 9: inferential analysis of the geographical structures on urban competitiveness.

VARIABLES	Poverty	Employment	Inflow of FDI
Central small city	-0.0406 (0.0448)	0.344 (0.415)	-0.293 (0.363)
Isolated small district	-0.113 (0.0839)	0.875 (0.621)	-0.229 (0.650)
Central small district	-0.175*** (0.0492)	0.989** (0.460)	-1.198** (0.542)
Isolated main city	-0.0986 (0.0608)	0.571 (0.564)	0.451 (0.322)
Central main city	-0.0983 (0.0609)	0.560 (0.565)	0.166 (0.314)
Isolated main district	-0.199* (0.114)	-0.200 (1.562)	-0.311 (0.477)
Central main district	-0.131** (0.0587)	0.409 (0.546)	-0.305 (0.326)
Large enterprises areas	-0.164*** (0.0535)	0.788** (0.355)	0.410* (0.218)
Demography	-0.00264*** (0.000456)	-0.0494*** (0.00529)	-0.00203 (0.00260)
Mobility	0.00103 (0.000653)	-0.0199*** (0.00672)	-0.0161*** (0.00490)
Education	-0.00887*** (0.00261)	0.119*** (0.0265)	0.0676*** (0.0131)
Population	0.0633** (0.0309)	-0.635** (0.289)	1.021*** (0.122)
Density	0.0741*** (0.0259)	-0.171 (0.267)	0.447*** (0.117)
Region dummies	YES***	YES***	YES**
Constant	0.0259 (0.243)	53.33*** (2.281)	-18.59*** (1.182)
Observations	420	420	420
R-squared	0.801	0.825	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source Authors, 2016 Calculating using STATA
Author (2016)

In Table 9, the results of the geographical characteristics are discussed. The first variable taken into consideration is poverty. The first thing that emerges is that there are only three structures that significantly reduce poverty: “small central district”, “central main district,” and “isolated district.” The relation between them and poverty is similar for each variable. Note that all coefficients in the poverty model, also one of the insignificant variables, have a negative coefficient. Similar, but not identical, is the situation with the employment level. In this case, only one category is significant. Only small central districts have a relationship with the dependent variable. This underlines how it is important for the districts to have other districts in the surrounding to influence the internal performances of the cities and only in this case the small central IDs outperform the comparison group. In the third variable, the results are the opposite. The best performer in the local economy is the worst in the international economy. In fact, central districts are still the only strong relation. In all three regressions it has a significance of more than 95%. However, in the last case, the coefficient of the relation is negative, as a central district reduces the investment coming from abroad compare to isolated small cities.

4.2.3 Lesson learned from question 2:

The results show how there is a predominance of one category of industrial districts that can boost the city’s economy. If the building factors of the variables are isolated, it is possible to understand that, in the case of poverty and employment, a combination of factors is necessary to boost the economy. Small cities not only need to have an industrial district within the city boundaries, but also the presence of districts in the Provincia is necessary. This statement makes clear different aspects of the economies of agglomeration.

First, the variable main city does not affect urban competitiveness and, when a deeper analysis is made, it appears that it affects it negatively. Main cities do not over perform the variables in the comparison group once their impact is controlled by the population. This underlines how the dimension and importance of the city tend to create diseconomies of urbanization more than economies and/or that the economies created do not exceed the increase in population. Hence, it underlines the inability of the main Italian cities to be the hub of the regional economy. The main Italian cities did not create productive relations with districts and they are not able to bring the city knowledge, investors, and capital. Industrial districts find it more convenient to create economies with a decentralized structure than a central hub, a structure in which every player communicates with others without the necessity of a central one (Arikan & Schilling, 2011). On the other hand, the same result underlines the strong abilities of the Italian community to create a favorable condition for an economic boost in small cities. This particular atmosphere in the air is partially lost in the main city, where a lot of people, the larger spaces, traffic, and pollution decrease the effectiveness of productivity without compensating it with other economies (Fu & Hong, 2008). However, it has to be taken into consideration that the main city faces bigger difficulties. The immigration of poor people, often not educated, into big cities makes guaranteeing higher-level employment and a low level of poverty almost impossible, if other indicators would have been taken into consideration, as the average income or GDP pro capita results might be different. Second, none of the sub-indicators of the city location is a sufficient condition for cities’ competitiveness. The most important results are that the variable ID alone is not able to create the necessary condition to boost the economy (Whitford, 2001). This data somehow contradicts the previous table. It demonstrates that industrial districts, to be able to impact citizens’ life, need to have some peculiar characteristics; the simple agglomeration is not enough. This result contradicts most of the theories on the creation of competitive advantages of clusters. Agglomeration economies are not a necessary factor to boost the urban economy. In fact, isolated districts do not outperform the comparison

group. Isolated districts have a higher risk of lock-in and a reduced ability of innovation threatening the performance of the district (Amin and Cohendet, 1999; Martin and Sunley, 2001). The isolation of an ID lead to an atmosphere of immobility (Boschma, 2005). Mainly dependent on the traditional way to do business, successful in the past, which have been strongly defended and safeguard from changes. This has led to a mismatching between the new world structures and the skills of ID. In other words, the demand of the market was different to the offer of the district. The isolation was limited in the cases in which different IDs were in the area. In this case, the meeting of different sectors has pushed the districts to stay dynamic (Jackson, 2015). The results suggest that high-specialized areas need some diversification to create sustainable development. This data underlines a characteristic of the economies of agglomerations. The overflow of the economies of agglomerations can spill over the city border and be absorbed by cities with a similar industrial structure (Pinch & Henry, 2003). The combination of diversity and proximity is the main promoter of urban competitiveness. Cognitive and organizational proximities allow different sectors to communicate. On the other hand, diversity of knowledge and technologies, specific of different sectors, allows for changing the way products are seen, made, and produced. The right distance between stakeholders, and not the two extremes, is the promoter of innovation and urban competitiveness.

For what concerns the attraction of FDI, it is clear how central districts attract significantly fewer investments than the comparison group. In this case, the geographical structure of the districts does not change the previous results. In IDs, the mentality strongly pushes people in the city to find their sources inside the community and international investments are seen as something negative (Bronzini, 2001). Also, the presence of other industrial districts increases this atmosphere of self-sufficiency of the region. However, the table suggests a relationship between the internal performance of the districts and international ones. The ability of the small central district to boost the economy has ousted the city not to participate in the international market and reduce the investment necessary in the creation of the condition necessary for the attraction.

4.3 Q3: To what extent does the performance of the district affect urban competitiveness?

4.3.1 Descriptive Statistic

4.3.1.1 Performance:

With this variable, the performance of the district wants to be inserted in the regression. In order to do so also in this case, for each indicator a different dummy variable has been created. This category describes a characteristic of IDs. For this reason, an additional variable called 'no industrial districts' is created as a control. This allows using the cities that do not have industrial districts as a control to compare the different performance of the districts with cities that do not have a district.

Table 10: Status distribution

Persistent and suffering	46
Persistent and reactive	20
Winning	26
In crisis	19
Expanding	17
No industrial districts	289

The first point to notice is that the performances of the district are well distributed for each characteristic. In fact, all the categories are almost equal. However, if the categories are agglomerated within the similar ones, the huge crisis of the industrial districts emerges. 82/120 can be considered in crisis or not performing well. The distribution gives a first signal of the crisis of the industrial district in their border. When this crisis is studied in the map, Figure 14, it emerges that the crisis is not focused in a specific region but is widespread. Their geographical distribution does not follow any particular geographical characteristic that facilitates good performances. In fact, all categories are well spread in all the regions. This variable does not follow any specific geographical distribution. However, one interesting pattern emerging from the picture is that most of the district can be found in proximity to others with similar performances, signaling how the districts have a strong influence on each other.

Figure 14, Distribution of the number district performances in the cities of the analysis.

4.3.2 Inferential statistic

4.3.2.1 Characteristic of the regression:

The third table displays the relation between the performance of the district and the one of the city. Until now, the districts were considered as fixed variables. Industrial districts were seen only as a dummy variable, yes or no. However, IDs are closer to a mix between companies and cities, and their strength and performances are vital to understanding how they influence urban areas. Here, the main goal is to understand if districts that do not perform have an impact on the city performance. As seen in the previous ones, the influence of the industrial districts depends on their location in the region, which promotes competitive advantages for a certain typology. However, it is not clear of the origin of this advantage and if to a better performance of the city corresponds to the better performance of the district. The control variable also utilized in this case is the normal city, without the industrial district.

4.3.2.2 Results of the Regression

The first variable taken into consideration in Table 11 is poverty. In this case, there are three different performances of the district that affect the competitiveness of the city: persistent and suffering, persistent and reactive, and winning. In the case of the persistent districts, the relation is of 99%, in both cases, while for the winning districts it is 95%. When the coefficient of the relations is studied, it emerges that well-performing districts positively affect the wealth of the city. The second important point is that also the districts that are suffering but have a strong tradition, those that were able to survive since 2001, can boost the economy and guarantee a minimum income to citizens. For what concerns employment, the situation is different. In this case, the only category able to create jobs is the winning category. The relationship of this variable is strong with an accuracy of 99% and in this case, the other variables are not significantly correlated, but also, in this case, they have positive coefficients. These results underline how the Winning districts are then only ones able to boost internal economy compared to cities without industrial districts. The last point is the number of FDI. In this case, the bad performance of IDs and the incapacity of them to attract investment is different from the previous ones and gives a more detailed understanding of it. In fact, the table underlines how the good performing districts do not significantly affect the attraction of FDI. In fact, both reactive and winning are not significant. However, the negative coefficient underlines their inclination to reduce the number of investments and confirm the bad performance of all the typologies of districts partially. Only the district expanding and suffering reduces drastically the log of the variable with a high probability.

Table 11: Inferential analysis of the district's status on urban competitiveness.

VARIABLES	Poverty	Employment	Inflow of FDI
Persistent and suffering	-0.126*** (0.0435)	0.671 (0.420)	-0.479** (0.227)
Persistent and reactive	-0.237*** (0.0592)	0.121 (0.559)	-1.181 (1.016)
Winning	-0.141** (0.0645)	1.291*** (0.432)	-0.357 (0.473)
In crisis	-0.0669 (0.0626)	0.448 (0.381)	0.126 (0.470)
Expanding	-0.0275 (0.0699)	-0.0360 (0.603)	-0.609*** (0.225)
Large enterprises areas	-0.168*** (0.0520)	0.794** (0.340)	0.383* (0.207)
Demography	-0.00281*** (0.000459)	-0.0485*** (0.00539)	-0.00135 (0.00256)
Mobility	0.00115* (0.000638)	-0.0193*** (0.00643)	-0.0198*** (0.00470)
Education	-0.00946*** (0.00255)	0.120*** (0.0252)	0.0755*** (0.0121)
Population	0.0513* (0.0285)	-0.616** (0.280)	1.047*** (0.119)
Region dummies	YES*** (0.0258)	YES*** (0.267)	YES** (0.118)
Constant	0.135 (0.201)	53.24*** (2.047)	-19.63*** (1.172)
Observations	420	420	420
R-squared	0.801	0.825	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 13, Author 2016

4.3.3 Lesson Learned From Question 3

The totality of the results demonstrates that there is a relation between the ability of the district to create wealth and income for their workers and the whole city. The first category that has to be taken into consideration is the winning districts. This category is the only one able to reduce poverty and increase employment. This underlines the ability of this type of district to create the virtuous circle that connects the performance of the companies and one of cities (Delgado et al., 2012). Table 11 underlines that to guarantee high performances, companies and the district, as a whole, have to be a priority for the local authorities. Especially, it can be seen that a district that has an increasing number of employees in the district has a positive affect also on the level of employment of the city. If the coefficient is taken into consideration, it can be seen that this category increases the number of employees of more than one percentage point compared to the comparison group. This leads to the idea that there is a multiplication of employees. For each new employee of the district, others are created outside the district in parallel services.

The last analysis also underlines important relations within FDI and districts. The attraction of FDI might not be essential for the development and the performance of the district and consequently of the city (World Bank, 2015). The creation of an internal economic circle might compensate for lack of investment. Cities with performing districts over perform the control group even without a higher attraction of investments. However, the insertion of investments from overseas can support and develop the creation of agglomeration economies, and vice versa. A connection between IDs and FDI can be created, and it should be supported by the local authorities. The results support this relation between the performance of Italian IDs and FDI. The negative performance of the districts affects the attraction of FDI negatively. Expanding and suffering districts are not attractive to international companies. This makes international investors tend to not have reason to explore a market that does not guarantee high profits. On the other hand, the opposite is not true. The well-performing district does not have higher results, compared to the comparison group, suggesting that even the profitable sectors do not attract a large number of investments, underlining a block to the inflow of FDI.

The third aspect that has to be analyzed is the ability of old districts to reduce poverty even if they have suffering performances. This underlines again the power of the atmosphere of a community and the power of the tradition to make everyone part of the district and the growth. Districts that are suffering do not have to be left to their own. In fact, even if they are not performing properly, their existence is an important element of the community and a good tool for poverty reduction.

4.4 Last remarks

As a last remark, it is important to create the connection between the last two regressions. In fact, it is important to understand if there is a relation between the two characteristics “winning” and “central” district. These two categories are the ones that influence most the competitiveness of the city and, in order to write the conclusion on the impact of industrial districts on urban competitiveness, the sources have to have been understood deeply. The first step is to analyse the correlations of the independent variables. In fact, different relations, in addition to the previous one, may emerge.

Table 14, Independent variables collinearity

Variable	VIF	SQRT VIF	Tolerance	R- Squared
IsolatedID	6.36	2.52	0.1573	0.8427
CentralID	25.12	5.01	0.0398	0.9602
IsolmainID	2.80	1.67	0.3569	0.6431
centramaID	5.39	2.32	0.1855	0.8145
suffering	14.69	3.83	0.0681	0.9319
reactive	7.31	2.70	0.1369	0.8631
winning	9.12	3.02	0.1096	0.8904
crisis	7.13	2.67	0.1403	0.8597
expanding	6.59	2.57	0.1518	0.8482
Mean VIF	9.39			

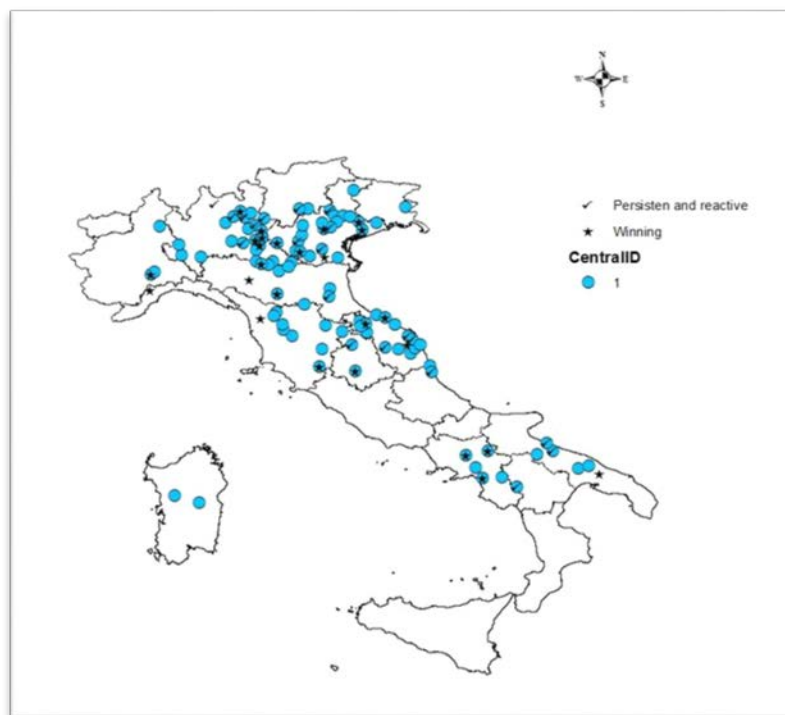
Author 2016

There is collinearity between the structures created to answer to question 3 and 4, as it can be seen from the table 14. The results suggest that the category central small ID has the highest correlation with the others independent variables, while a more controlled result is shown in

the case of the Winning districts. This analysis gives the first hint on the possible relation between the two, and that except for the Central IDs, the other categories do not present high level of collinearity.

To understand better their relation, a graphic analysis has been added to a statistical one, and a map with both categories has been created, Figure 15. It is immediately clear that there is a relation between the two variables. In particular, the large majority of the “winning” districts are also small central ones. However, there is a large number of central districts that are not winning. The situation became more balanced and clear when the persistent and reactive districts are added to the regression. It emerges that almost the totality of the district that was able to impact on urban competitiveness are central ones. Understanding the cause and effect of the variables is not possible in this analysis. However, the relationship between the two supports the idea that there are certain characteristics that the industrial district requires to boost the city competitiveness and that Winning districts are a particular case of the central districts. Being a central district becomes the necessary condition to make a one perform better than the average and to boost regional and urban economy.

Figure 15, Distribution of number districts performances in relation with central districts.



Author 2016

Chapter 5: Conclusions and Recommendations

The analysis has been focused on the relationship between the industrial district and cities' competitiveness. The main idea was to create a bridge in the ever-increasing pursuit of competitiveness of cities to the creation of values of agglomeration economies. The agglomeration of productivity factors leads companies to perform better compared to similar ones that do not present this typology of agglomeration. This company's competitive advantage can create a virtuous circle for the creation of employment and prosperity, which would create prosperity for the city as a whole. The Italian case of the industrial district was a literature example of how local entrepreneurship could create regional development. However, this typology of the cluster is dying. The increase of competition from developing countries and the creation of new technologies and innovation are putting at risk the traditional way of doing business of the small and medium firms that characterize the districts. This situation is leading to a lack of investment and large companies entering the market and becoming the only center of the districts. This new evolution is often seen as the end of the industrial district, which changes from being the center of innovation and entrepreneurship to the mere productive center. The crisis of the district is putting at risk the community on which the industrial district is based, and with it, the creation of disparity between companies, creating a gap between the economy of companies and the one of the city. The evolution and the crisis of the industrial district need to be understood and studied. Industrial districts are the predecessor of most of the new ideas on competitive cities. Smart cities and smart specialization are just the evolution of a single concept; cities have to find their special features and make them become a competitive advantage. Understanding the impact and the causes of industrial districts would help to understand how to replicate and reproduce other typologies of clusters. The main goal of the research is to understand first if industrial districts can impact urban competitiveness. The real impact of the district on the region is well spread on the literature but very rare cases prove it with a scientific analysis and, in particular, the relation with cities has not been tested. In a second moment, the analysis wants to understand the factors that contribute to the spillovers of the economies of agglomeration and in the understanding of the sources that lead to a competitive advantage, not only inside the district but also in the city. In particular, the importance of two factors, the geographical location, the proximity to main cities and other industrial districts, and the performance of the districts are deeply analyzed.

5.1 Answer To Research Questions:

5.1.1 Industrial districts and urban competitiveness

The results of the analysis are in line with the literature and previous studies. Industrial districts can boost the competitiveness of the cities. They are still able to reduce poverty and increase employment. However, one of the main problems of the industrial district is confirmed. Their structure creates a wall between the national and international economy. More, the city performs better the more the city seems close to international investments. This relation might indicate that it is not necessary for cities to attract investments for overseas in the short term. However, the lack of inflow of investment might compromise the future sustainability of the districts. With the increase of competition globally, being able to attract investment is necessary. Without FDI the districts can be isolated, and lose their ability to communicate, develop, and innovate.

Thanks to the deeper analysis of the impact of industrial districts, it has been revealed that industrial districts are not a sufficient condition to create urban competitiveness. When the industrial districts are divided by categories, the different performances and locations impact significantly on the level of employment and poverty. The first consequence is that not every

district can impact positively on the internal economy of the region. This underlines the negative evolution of the Italian industrial districts. To an increasing number of districts in crisis are related an increasing number of cities that need to renovate the source of competitive advantage. The analysis underlines how the performance of the districts is one of the factor that most contributes to the creation of prosperity of the city. It is essential that the district as a whole performs well, with companies able to grow, to influence positively cities' competitiveness. Starting the positive circle of the creation of competitiveness is difficult and the process is complicated. This result underlines the necessity of local authorities to focus on the performance of companies of the district.

Also the results show that there is a relationship between well-performing districts and central ones. The necessary condition to make the IDs perform better is that they have in their proximity other IDs. Communication between different sectors and abilities might be necessary to create the condition to boost the economy. These results underline the necessity of the cohesion of two important theories on innovation. On one side, there are Smith's and Marshallian theories that underline how specialization is the only way to produce innovation and on the other, there are theories made by Jacobs, which see as the main drive of innovation the diversification. Diversification and specialization are opposite concepts that, however, can and need to coexist. The union of specialized cities and diversified regions create on one side the economies of agglomeration and specialization that are seen by Marshallian theories as promoters of economic growth and innovation. On the other side, a diversified structure makes possible the share of ideas, information, and knowledge between different industries. From the diversity of sectors can be born cooperation and inter-sector initiatives that might lead to radical innovation and modern solutions.

5.1.2 Comparison between industrial districts and large enterprise areas:

The other important result is the competitiveness of districts with large enterprises. Contrary to what was expected, their impact is positive on the competitiveness of the city. In the literature large companies were presented as predators of the secrets of the industrial district, contributing to their fall. In particular, the presence of large companies was expected to decrease the initiatives of the local population. However, the results of the analysis show opposite results. In fact, large enterprises areas can boost the internal economy and, at the same time, attract investments from abroad. This clarifies that their structures, a mix of the large enterprise and SMEs, is adequate and create the condition for urban development. The plurality of structures, dimension, and of different stakeholders is the main source of competitiveness of this category. Large companies introduce the necessary cognitive, organizational, and social diversity. As Boschma underlines, the creation of small differences contributes in the innovation-making process. The presence of a different way to do business of large companies increases the distance between agents that lead to avoiding the risk of lock-in, inertia, and lack of new ideas.

5.2 Limitations

5.2.1 Limitations of the research strategy

The goal of the research was to amplify the vision of the district. However, the large number of districts does not allow fully understanding of the complexities of the single case. The research, by the use objective and horizontal analysis, could only touch the surface of the problem. The tools allow only to discovering and studying superficially the trends. It is necessary for a deep understanding of the process of the creation of competitiveness the analysis of a singular study, which would allow one to hear and verify the single stories. Only

thanks to the analysis of cases, especially the ones that led the pursuit of competitiveness, would it be possible to understand better the necessary relationship between clusters. It is necessary to comprehend the culture of the area; the way people communicate and move in it. The focus on the totality of Italian cities, allow generalizing on the entire population; however, it is possible to push this generalization outside the national borders and out of the analysis definitions. The generalization of the results from an industrial district to cluster policies and other regions is difficult. In fact, only Italian cities and industrial districts were taken into consideration. To understand if the model would be exportable to other situations and countries, it would be necessary to expand the research to other nations and regions. A larger horizontal study would allow understanding if the other typologies of cluster need the same proliferation, or if they do not necessarily need this diversification of factors.

5.3.1 Limitation of definitions

Another problem of the pure quantitative analysis is the operationalization of the variables. The pillars of the analysis, the dependent and independent variables, are difficult to define. The simple definition of competitiveness, cluster and proximities in which the analysis is based can be put under discussion.

5.3.2 Limitation of the definition of proximity

The definition of proximity is one of the main limitations of the analysis. In fact, the scope of the definition of the analysis was to reduce as much as possible the arbitrariness of the researcher, and, for this reason, a definition based on the political division has been adopted. With the evolution of the transportation and the communications systems defined, what is far and what is not, became every day more difficult to be defined. Walking distance or car distance are just two examples of how the concept of proximity might be addressed in different ways. Especially in light of the importance of the proximities in influencing the results, this concept needs deeper investigation. Further analysis might adopt more tools to understand which are the effective relations between clusters, and if combinations of sectors, related specialization, the number of districts, or infrastructures connections are the necessary characteristics able to boost clusters' economies.

5.2.3 Limitation of the definition of competitiveness

In addition, the definition of competitiveness strongly influences the results of the analysis. In this study, it has been preferred to divide into three variables with one indicator for each of them. However, the indicators chosen are just one of the many indicators that the resources might have taken into consideration. This is strongly influenced by the decision to take into consideration all the population of industrial districts. This factor has led taking in consideration also small cities that have led to less availability of data. The main consequence of this decision is limitless of the factors measuring urban competitiveness; for example, variables such as GDP could not be inserted as measurements of prosperity. The definition of competitiveness also influenced the nature of the indicator chosen. This decision reflects the interest to focus on the economic impact of company structures on urban competitiveness. Other aspects, equally important, have been left out. Social, technological, and environmental indicators were not taken into consideration.

5.2.4 Limitation of the time frame

The huge sample also reduces the timeframe of the analysis, making it fixed to the year 2011. In fact, because of the lack of data, it has not been possible to launch a panel analysis. The cross section analysis takes into consideration one year only. This has made it impossible to analyze the evolution of the districts over different years, incrementing the possibility of

external influences. In particular, the fact that the year selected is in the proximity of the financial crisis of 2008 might influence the results. The industrial districts were strongly impacted by the collapse of the financial system and still have to recover from the external shock. With a panel analysis, it would have been possible to understand better the trends during that time and isolate the influence of external shock.

5.2 Validity and Importance of Findings

The analysis has been focused on the creation of a model that could be easily replicated and with a high external value. The scope was to understand scientifically one of the main interesting phenomena of Italian culture and economic history. The analysis has followed a scientific framework that has made the results high validity and the conclusions of the analysis realistic. The understanding would be the first step to find the way to develop the competitiveness of companies and to find the way to develop the high potential of Italian cities. The analysis underlines the interconnectivity of the stakeholders on different scales as an essential element for urban competitiveness. In fact, even if the analysis emphasizes that proximity is a fundamental element for human beings, it suggests that there can be different scales of proximity and that some distances are necessary. The idea is to view the industrial districts with a higher view. Clusters policies have to be inserted in a larger context in which diversity and heterogeneity can be found. This idea is supported by two phenomena. First, there is a fractal of the agglomeration economies. What is true to one level can be applied to different scales. The synergies that lead companies to increase their productivity are the same that lead clusters in proximity to perform better. Suggesting not to oversimplify the reality and the importance of the connections between agents. Second, the diversity of agents and ideas produce better results than the complete homologation. The results show how it is necessary to find the right balance and that different scales might allow the development of both innovation strategies at the same time.

5.4 Recommendations

5.4.1 Recommendations for policy

5.4.1.1 Industrial district and smart specialization

The analysis gives a different vision for the clusters' creation policies. It underlines how the creation of a cluster is not sufficient to increase the competitiveness of the city. There are two ways in which the creation of industrial districts may be favorable. The creation of a regional plan, with a various number of districts, or its insertion in an already well-diversified one. One example could be seen in the plans of the metropolis which, thanks to their dimension, can host different clusters at the same time. The dimension of cities permits recreating a situation that is not far from highly-specialized areas, such as the Third Italy. The Italian territory has already the specialization necessary to create regions of a specialized diversification. It has been a lack of regional and urban management in recognizing the possible competitive advantage in the process of creating clusters in proximity. It is necessary for local and regional governments to create the infrastructures, soft and hard, to make the districts communicate and develop. The necessity of a diversified specialization emerges also from the other great cities around the world, or regions. London, New York and all the other global cities have based their success on a plurality of sectors, mostly related. This is also the plan being implemented by the European Union, called smart specialization (McCann & Ortega-Argilés, 2015). Modern cities should look forward to specialization, and develop not only one sector but looking in the complementary ones for the best way to develop the city. In this situation, the local authorities of the Third Italy should still believe that industrial districts are a solution and source of

competitive advantages, but should focus on researching and developing complementary plans which can promote the cultures of innovation thanks to different cultures and sectors.

5.4.1.2 Different scale cities

The results also suggest that growth is possible also in small cities. In this particular analysis, which took into consideration all the most important cities of Italy, the main cities face difficulties in promoting urban competitiveness. This underlines two different aspects: the crisis on main cities and the power of small ones. Main cities do not outperform small cities. The most surprising result is that not even the number of FDI is significantly higher. This underlines how in Italy there has not been an economic decentralization, but only political. Main cities were not able to present themselves as leaders of the urban regions. Each case has a different story that should be deeply studied, but the overall results are clear. None of them, except Milan, was able to create a prosperous economy able to guarantee opportunities for their inhabitants and attract investments, nationally and internationally. Large cities have luck in the pursuit of their competitive advantage. Especially cities such as Verona, Treviso, and Venezia have missed the occasion to be the leader of industrial district regions and use the highly-specialized clusters to create a strong economy. This is mainly dependent on the incapacity to plan and have a long-term vision of local development. The Italian territory is strongly characterized by cities with a strong culture and community. However, most of them are economically isolated. The promotion of connectivity, the creation of infrastructure, and the support of people's cooperation can contribute to making cities the center of the world, and in particular market niches.

5.4.2 Recommendations for future research

5.4.2.1 Exploration of proximity

Also, the concept of proximity is surely one of the most interesting. Thanks to new geographical tools, it is possible to understand the physical relations between clusters and their connectivity through physical infrastructure. Understanding the effective distance necessary to consider two clusters in relations might be an interesting starting point to comprehend the effect on the distance of the flow of information between clusters. However, not only the concrete distance of districts might be subjects of studies. Clusters can be far or close from different points of view. It can be analyzed how factors such as culture, language, and specialization might affect the process of flow of information. In fact, also the definition of proximity cannot be limited to the physical one, all the soft connections have to be analyzed as well.

5.4.2.2 Exploration of the relation between performances and proximity

Understating deeper the relationship between the central industrial districts and the winning district is necessary. From the analysis, it emerged that these two factors are essential. However, their relation could be studied only graphically. It has not been possible to investigate which is the contribution of another district in the creation of the winning environment. Especially, the causality of the factors is not clear. Do the winning districts attract other districts? Does the multiplicity of a district contribute in making a district winning? The creation of performing districts is linked with different factors, which are mostly competence of firms' management. In order to isolate the different influences, a deep knowledge of the cases and further analysis are required.

5.4.2.3 Exploration of the relation between companies dimensions

Another important aspect that the analysis reveals but has not had the possibility to study in depth is that the small and medium firms do not necessarily have a higher impact on the

competitiveness of the city and stronger connections with the community. Especially, in the Italian territory and the literature, the possibility of the big companies to destroy the national tradition and break the connection with the territory was considered as one of the main threats of the IDs. However, it is necessary to understand how companies can enter the market and act as leaders of the district and not as a predator on it. The research did not have the possibility to explore the different combinations and the relation between small and big firms and the distribution of the employees in them. For this reason, further considerations are necessary to support the fair competition and the cooperation between different stakeholders promoted.

5.5 Conclusions

In conclusion, the industrial district might be a resource for the territory and a factor that may lead to urban competitiveness. However, they are a possible condition of urban competitiveness but not a sufficient one. The agglomeration leads the companies to perform better. People need to be in proximity with each other, be fed by the same share of information and knowledge, be in simple contact with other people, and find certainty in the shake of hands. The creation of the specialized environment contributes to the increase of people's productivity and their ability to innovate. However, to have an impact on urban competitiveness, the district as a whole has to perform better. In the Italian situation, the districts that were able to outperform and impact the competitive advantages of cities were districts in small cities near other districts. The proximity between clusters increases the economies of agglomeration, allowing the human contact of the agglomeration and, at the same time, increasing the possibility for people and companies to be in contact with similar but different realities. The creation of an agglomeration of industrial districts might be the most efficient way to create, on one side, the possibility of every city to evolve differently and, on the other, gain advantages of this diversity.

Bibliography

- Alberti, F. (2007). The concept of industrial district: main contributions. *INSME International Network for SMEs*.
- Andersson, T., Hansson, E., Serger, S. S., & Sörvick, J. (2004). *The Cluster Policies Whitebook*.
- Arikan, A. T., & Schilling, M. A. (2011). Structure and governance in Industrial Districts: implications for competitive advantage. *Journal of Management Studies*, 48(4), 772–803. <http://doi.org/10.1111/j.1467-6486.2010.00951.x>
- Arup. (1999). Smart cities, 16(1), 13–18. [http://doi.org/10.1016/S0264-2751\(98\)00050-X](http://doi.org/10.1016/S0264-2751(98)00050-X)
- Asheim, B., Boschma, R., & Cooke, P. (2011). Constructing regional advantage: Platform policies based on related variety and differentiated knowledge bases.
- Bailey, N., Docherty, I., & Turok, I. (2001). 7. Dimensions of City Competitiveness: Edinburgh and Glasgow in a UK context.
- Bathelt, H. (2005). Cluster Relations in the Media Industry: Exploring the “Distanced Neighbour” Paradox in Leipzig. *Regional Studies*, 39(1), 105–127. <http://doi.org/10.1080/0034340052000320860>
- Beaudry, C., & Schiffrerova, A. (2009). Who’s right, Marshall or Jacobs? The localization versus urbanization debate.
- Becattini, G. (2003). *From industrial districts to local development : an itinerary of research*. Edward Elgar.
- Begg, I. (n.d.). Cities and Competitiveness.
- Begg, I. (1999). Cities and Competitiveness. *Urban Studies*, 36(6), 795–809.
- Best, M. (1991). The new competition- institution of industrial restructuring. *Organization Studies Walter de Gruyter GmbH Co KG*, 20(5), 314. <http://doi.org/10.1177/0002716293530001025>
- Best, M., Paquin, A., & Xie, H. (2004). Discovering Regional Competitive Advantage: Massachusetts High-Tech. Retrieved from <http://www.thebhc.org/publications/BEHonline/2004/BestPaquinXie.pdf>
- Birkinshaw, J. (2000). Upgrading of industry clusters and foreign investment.
- Boschma, R. (2005). Proximity and innovation.
- Brunello, G., & Langella, M. (2014). Local Agglomeration, Entrepreneurship and the Great Recession: Evidence from Italian Industrial Districts.
- Cainelli, G., & Zoboli, R. (2004). *The evolution of industrial districts : changing governance, innovation and internationalisation of local capitalism in Italy. Contributions to economics*.
- Camagni, R. (1991). *Innovation Networks Spatial Perspectives. Innovation Networks Spatial Perspectives*.
- Camuffo, A. (2003). Transforming Industrial Districts: Large Firms and Small Business

- Networks in the Italian Eyewear Industry. *Industry & Innovation*, 10(4), 377–401. <http://doi.org/10.1080/1366271032000163630>
- Chatterji, C., Glaeser, E., & Kerr, W. (2013). Clusters of Entrepreneurship and Innovation. *NBER Working Paper Series*, 13–90.
- Checchi, D., & Faini, R. (2007). Skilled Migration , FDI and Human Capital Investment. *World Development*, (2795). Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=987857
- Choe, K., & Roberts, B. (2011). Competitive Cities in the 21st Century Cluster-Based Local Economic Development.
- Corò, G., & Grandinetti, R. (2001). Industrial district responses to the network economy: vertical integration versus pluralist global exploration.
- Cortinovis, N., & van Oort, F. (2015). Variety, economic growth and knowledge intensity of European regions: a spatial panel analysis. *Annals of Regional Science*, 55(1), 7–32. <http://doi.org/10.1007/s00168-015-0680-2>
- Cuadrado-Roura, J. R., & Rubalcaba-Bermejo, L. (1998). Specialization and competition amongst European cities: A new approach through fair and exhibition activities. *Regional Studies*, 32(2), 133–147. <http://doi.org/10.1080/00343409850123026>
- De Hoyos-Ruperto, M., & Romaguera, J. M. (2013). Networking: A Critical Success Factor for Entrepreneurship.
- De Propriis, L., & Driffield, N. (2005). The importance of clusters for spillovers from foreign direct investment and technology sourcing. <http://doi.org/10.1093/cje/bei059>
- Delgado, M., Porter, M. E., & Stern, S. (2010). Clusters and entrepreneurship. *Journal of Economic Geography*, 10(4), 495–518. <http://doi.org/10.1093/jeg/lbq010>
- Delgado, M., Porter, M. E., & Stern, S. (2012). Clusters, Convergence, and Economic Performance.
- Duranton, G. (1999). Distance, Land, and Proximity, Economic analysis and the evolution of cities Distance, Land and Proximity, Economic analysis and the evolution of cities.
- Florida, R. (2002). The Rise of the Creative Class. *Washington Monthly*, (May), 15–25. <http://doi.org/10.1111/j.1467-8691.2006.00398.x>
- Fu, S., & Hong, J. (2008). Testing urbanization economies in manufacturing industries: urban diversity or urban size? Retrieved from <http://mpra.ub.uni-muenchen.de/10078/>
- Fujita, M., & Thisse, J.-F. (1996). Economics of Agglomeration. *Journal of the Japanese and International Economies*, 10(4), 339–378. <http://doi.org/10.1006/jjie.1996.0021>
- Gächter, S., Herrmann, B., & Thöni, C. (2004). Trust, voluntary cooperation, and socio-economic background: survey and experimental evidence. *Journal of Economic Behavior & Organization*, 55, 505–531. <http://doi.org/10.1016/j.jebo.2003.11.006>
- Glaeser, E. L., Kerr, W. R., & Ponzetto, G. A. M. (2009). Clusters of Entrepreneurship.
- Godfrey, N. (2008). Why is competition important for growth and poverty reduction? Retrieved from www.oecd.org/investment/gfi-7
- Gordon, I. R., & Mccann, P. (2000). Industrial Clusters : Complexes , Agglomeration and / or

- Social Networks ? *Urban Studies*, 37(3), 513–532.
<http://doi.org/10.1080/0042098002096>
- Graff, D. (1990). Graff: Hotspots: North America's 10 Best Cities... - Google Scholar. Retrieved from
https://scholar.google.it/scholar?cluster=3673824607463782766&hl=it&as_sdt=2005&sciodt=0,5
- Graham, D. J., Gibbons, S., & Martin, R. (2009). Transport Investment and the Distance Decay of Agglomeration Benefits, (January), 1–44.
- Gray, M., Golob, E., & Markusen, A. (1996). Big Firms, Long Arms, Wide Shoulders: The “Hub-and-Spoke” Industrial District in the Seattle Region. *Regional Studies*, 30(7), 651–666.
<http://doi.org/10.1080/00343409612331349948>
- Guelpa, F., & Micelli, S. (2007). I distretti industriali del terzo millennio.
- Guiso, L., & Schivardi, F. (2011). What determines entrepreneurial clusters?
<http://doi.org/10.1111/j.1365-2966.2010.01006.x>
- Hadjimichalis, C. (2006). The End of Third Italy As We Knew It?
- Hull, K. (2009). Understanding the Relationship between Economic Growth, Employment and Poverty Reduction.
- Humphrey, J., & Schmitz, H. (1996). The Triple C Approach to Local Industrial Policy. *World Development*, 24(12), 1859–1877.
- Iannuzzi, E. (2008). Italian industrial districts: crisis or evolution.
- Illiam, W., & Lever, F. (1999). Competitive Cities in Europe. *Urban Studies*, 36(6).
- Istat. (2011). I distretti industriali.
- Jackson, R. W. (2015). Are Industry Clusters and Diversity Strange Bedfellows? *The Review of Regional Studies*, 45(2), 113–129.
- Jacobs, J. (1969). The economy of cities.
- Kabeer, N. (2012). Women's economic empowerment and inclusive growth: labour markets and enterprise development.
- Kaldor, N. (1970). THE CASE FOR REGIONAL POLICIES*. *Scottish Journal of Political Economy*, 17(3), 337–348. <http://doi.org/10.1111/j.1467-9485.1970.tb00712.x>
- Kemeny, T., & Stopper, M. (2012). Specialization and Regional Economic Development. *Regional Studies*, (October), 40.
- Ketels, C. (2009). Clusters, Cluster Policy, and Swedish Competitiveness in the Global Economy.
- Krugman, P. (1998). What ' S New About the New Economic Geography ? *Oxford Review of Economic Policy*, 14(2), 7–17. <http://doi.org/10.1093/oxrep/14.2.7>
- Kumar, K., Boesso, G., Favotto, F., & Menini, A. (2012). Strategic orientation, innovation patterns and performances of SMEs and large companies.
<http://doi.org/10.1108/14626001211196442>
- Majocchi, A., & Presutti, M. (2009). Industrial clusters, entrepreneurial culture and the social

- environment: The effects on FDI distribution.
<http://doi.org/10.1016/j.ibusrev.2008.12.001>
- Malmberg, A., & Maskell, P. (1997). Towards an Explanation of Regional Specialization and Industry Agglomeration. *European Planning Studies*, 5(1).
- Markusen, A. (1996). Interaction between Regional and Industrial Policies: Evidence from four countries, 77, 49–77.
- Martin, R., Florida, R., Pogue, M., & Mellander, C. (2015). Creativity, clusters and the competitive advantage of cities. *Competitiveness Review*, 25(5), 482–496.
<http://doi.org/10.1108/CR-07-2015-0069>
- Mccann, P., & Ortega-Argilés, R. (2015). Smart Specialization, Regional Growth and Applications to European Union Cohesion Policy. *Regional Studies*, 49(8), 1291–1302.
<http://doi.org/10.1080/00343404.2013.799769>
- Menghinello, S., de Propriis, L., & Driffield, N. (2010). Industrial districts, inward foreign investment and regional development. *Journal of Economic Geography*, 10(4), 539–558.
<http://doi.org/10.1093/jeg/lbq012>
- Metaxas, T. (2010). CITIES COMPETITION , PLACE MARKETING AND ECONOMIC DEVELOPMENT IN SOUTH EUROPE : THE BARCELONA CASE AS FDI DESTINATION.
- Myrdal, G. (1957). economic theory and underdeveloped regions.
- Newlands, D. (2003). Competition and Cooperation in Industrial Clusters: The Implications for Public Policy. *European Planning Studies*, 11(5).
<http://doi.org/10.1080/0965431032000088489>
- OECD. (2014). Effective local strategies to boost quality job creation, employment, and participation.
- Oinas, P. (1999). Activity-specificity in organizational learning: Implications for analysing the role of proximity. *GeoJournal*, 49(4), 363–372.
<http://doi.org/10.1023/A:1007184012189>
- Perianez-Forte, I., & Cervantes, M. (2013). Innovation-driven Growth in Regions : The Role of Smart Specialisation (PRELIMINARY VERSION), 202.
- Perrini, F., Russo, A., & Tencati, A. (2007). CSR Strategies of SMEs and Large Firms. Evidence from Italy. <http://doi.org/10.1007/s10551-006-9235-x>
- Pietrobelli, C., Guerrieri, P., Iammarino, S., Ernst, D., Kuo, W.-J., Wang, J.-C., ... Asheim, B. (2000). Industrial Districts' Evolution and Technological Regimes: Italy and Taiwan *, 1–97. Retrieved from http://www.cid.harvard.edu/cidbiotech/intconf_sti/description.htm
- Pinch, S., & Henry, N. (2003). From “industrial districts” to “knowledge clusters”: a model of knowledge dissemination and competitive advantage in industrial agglomerations. *Journal of Economic ...*, 3(4), 373–388. <http://doi.org/10.1093/jeg/lbg019>
- Porter, M. E. (1990). The Competitive Advantage of Nations.
- Porter, M. E. (1998). Clusters and the New Economics of Competition. *Harvard Business Review*.
- Pyke, F., & Sengenberger, W. (1990). Industrial districts and inter-firm co-operation in Italy.

- Quigley, J. M., Henderson, V., & Malpezzi, S. (2008). Urbanization, Agglomeration, and Economic Development.
- Rabellotti, R. (2001). The effect of globalisation on industrial districts in Italy: the case of Brenta.
- Rabellotti, R., Carabelli, A., & Hirsch, G. (2008). Italian Industrial Districts on the Move: Where Are They Going? <http://doi.org/10.1080/09654310802513914>
- Rondinelli, D. A., Johnson, J. H., & Kasarda, J. D. (1998). The Changing Forces of Urban Economic Development: Globalization and City Competitiveness in the 21st Century. *Cityscape: A Journal of Policy Development and Research @BULLET*, 3(3).
- Sala-I-Martin, X., Bilbao-Osorio, B., Di Battista, A., Hanouz, M. D., Galvan, C., & Geiger, T. (2015). The Global Competitiveness Index 2014–2015: Accelerating a Robust Recovery to Create Productive Jobs and Support Inclusive Growth.
- Sassen, S. (1991). *The global city*. New York. <http://doi.org/10.1002/9780470693681.ch11>
- So, M.-S., & Shen, J. (2004). MEASURING URBAN COMPETITIVENESS IN CHINA. *So & Shen Asian Geographer*, 23(12), 71–91.
- Stevenson, H. H., & Jarillo, J. C. (1990). A Paradigm of Entrepreneurship: Entrepreneurial Management, 11, 17–27. Retrieved from <http://www.jstor.org/stable/2486667>
- Turok, I. (2004). Cities, Regions and Competitiveness. *Regional Studies*, 389, 1069–1083. <http://doi.org/10.1080/0034340042000292647>
- Union, E., Combes, P.-P., Overman, H. G., Duranton, G., Henderson, V., Mayer, T., ... Schmitt, B. (2003). The spatial distribution of economic activities in the. Retrieved from <http://www.enpc.fr/>
- United Nations. (2003). United Nations Conference on Trade and Development investment and technology policies for competitiveness. *United Nations New York and Geneva*.
- Whitford, J. (2001). The decline of a model? Challenge and response in the Italian industrial districts. <http://doi.org/10.1080/03085140020019089>
- Wolfe, D. A., & Gertler, M. S. (2004). Clusters from the Inside and Out: Local Dynamics and Global Linkages. *Urban Studies*, 416(5), 1071–1093. <http://doi.org/10.1080/00420980410001675832>
- World Bank. (2009). Scale Economies and Agglomeration.
- World Bank. (2015). Competitive Cities for jobs and growth what, who, and how.
- Zamparini, A. (2010). Identity in industrial districts, 1–35.

Annex 1:

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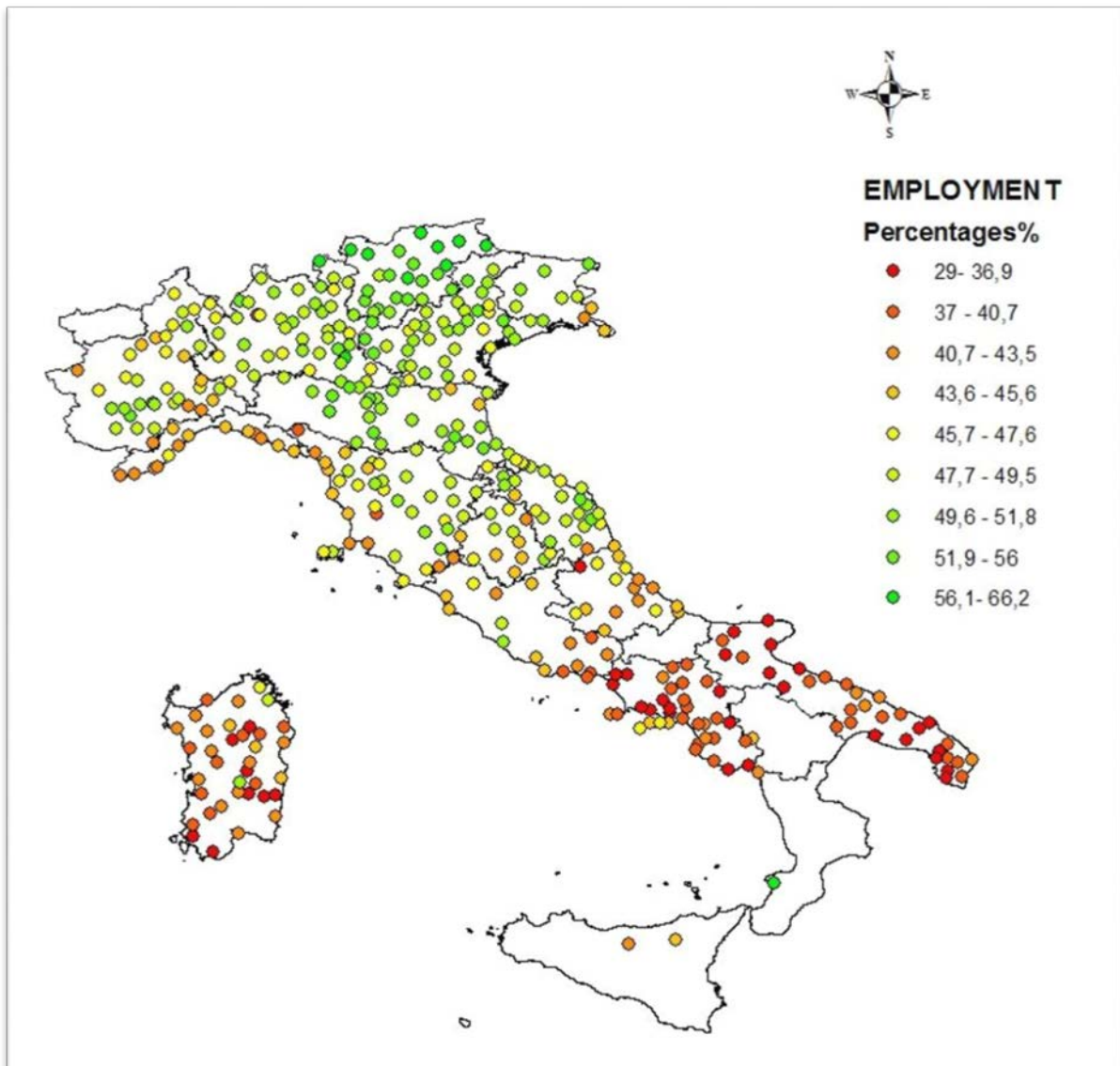
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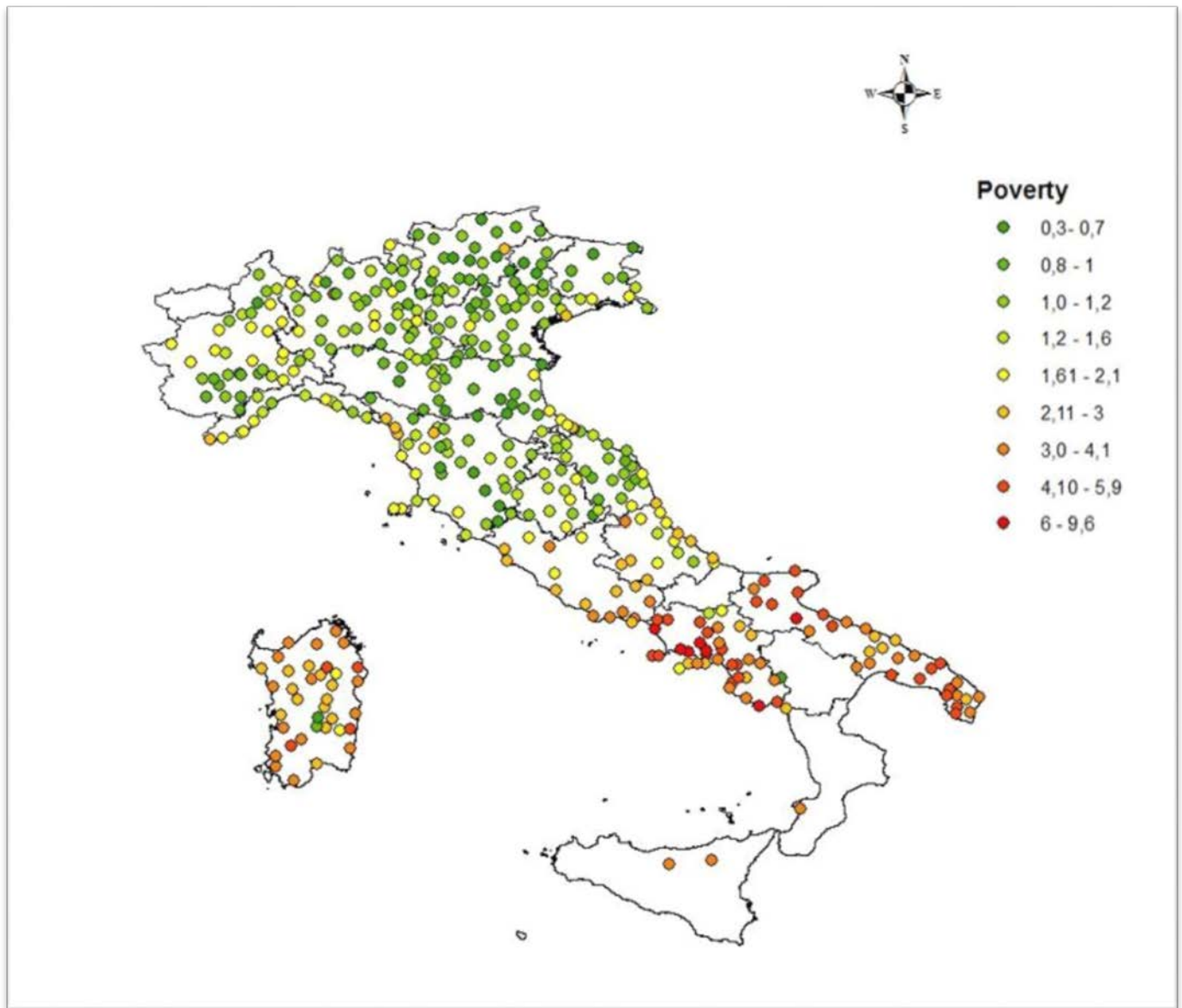
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Figure 11, Distribution of employment in the cities of the analysis



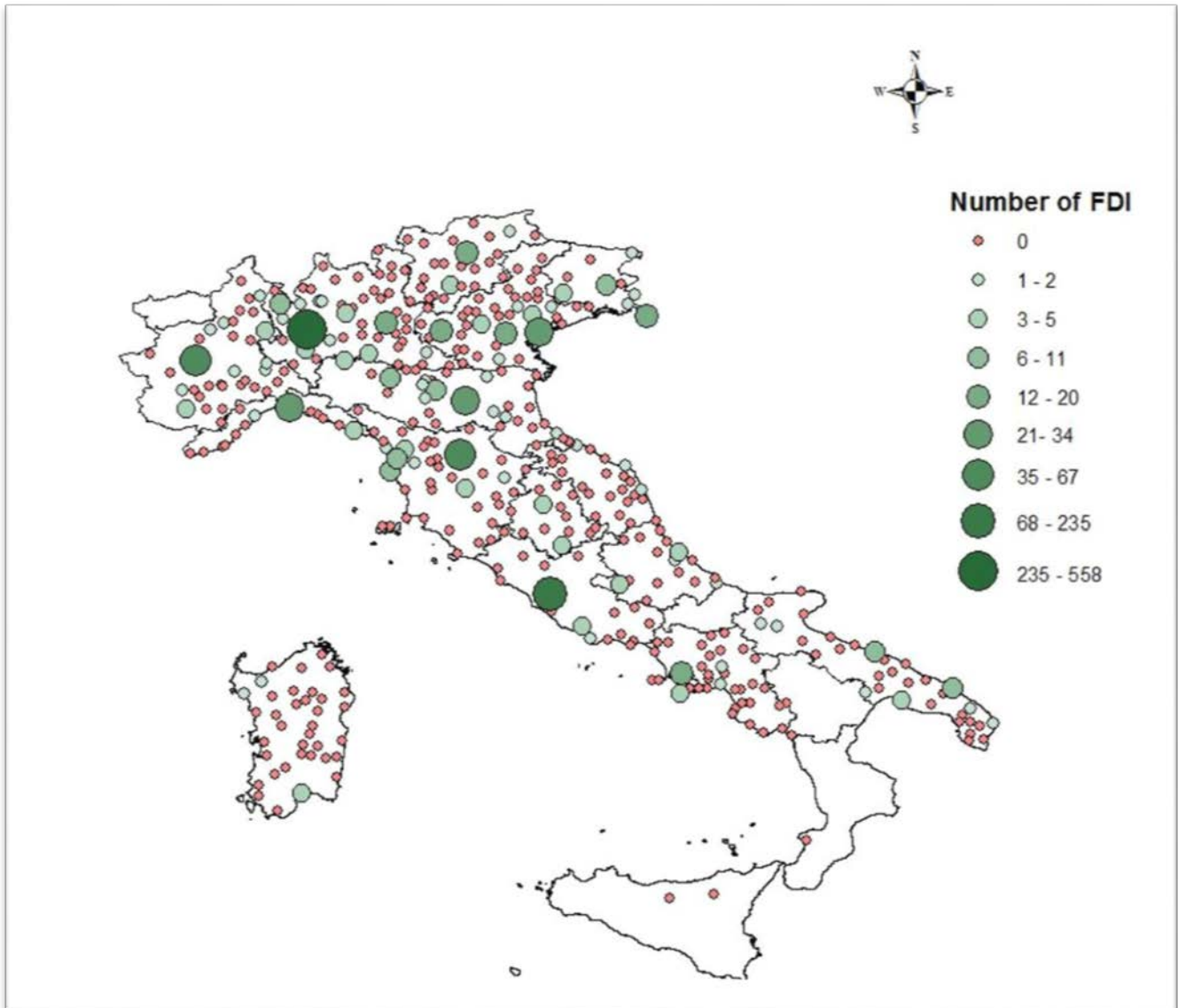
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Figure 12, Distribution of poverty in the cities of the analysis



Author 2016

Figure 13, Distribution of number of FDI in the cities of the analysis



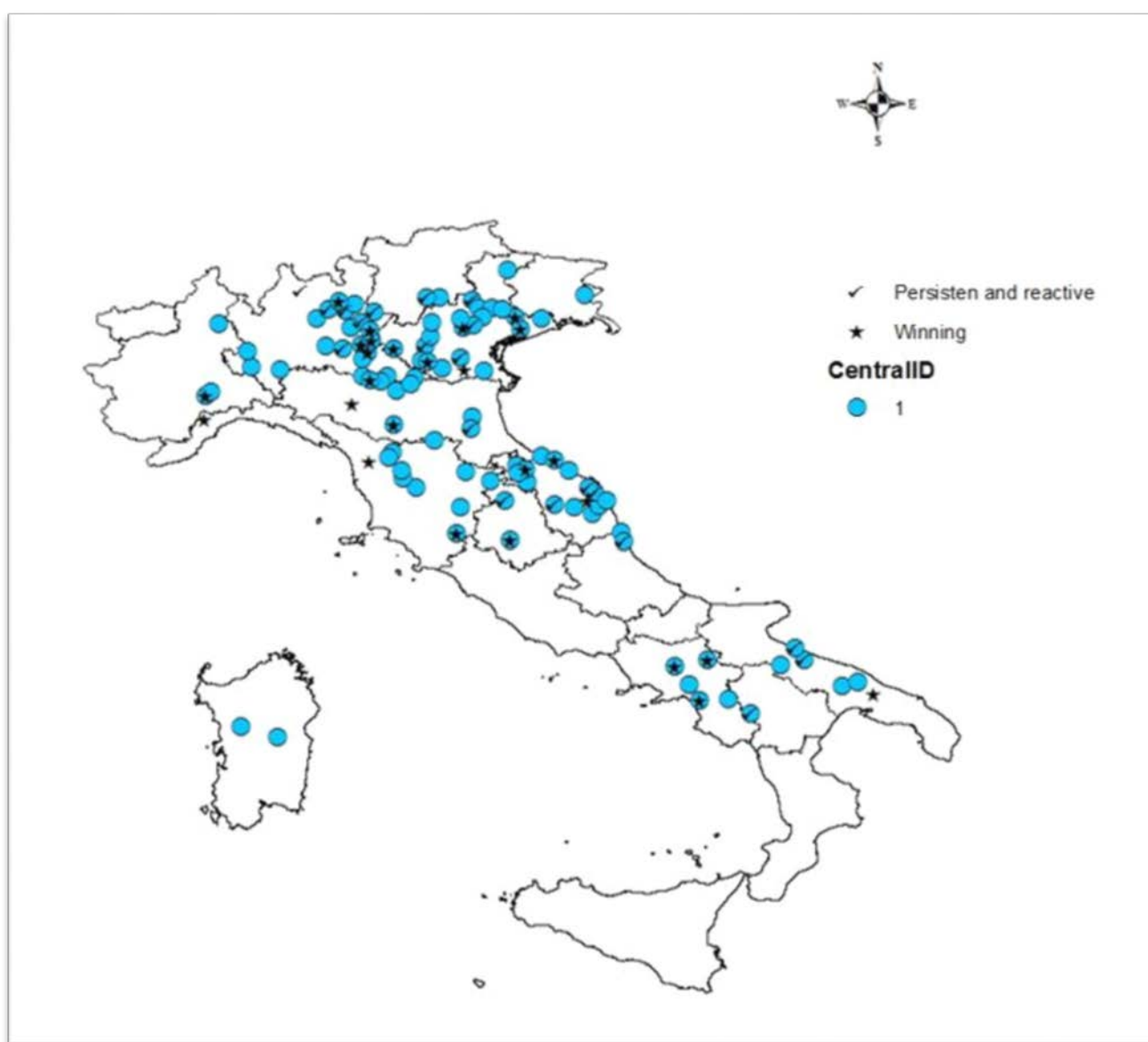
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Figure 14, Distribution of the number district performances in the cities of the analysis.



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Figure 15, Distribution of number districts performances in relation with central districts.



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