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Social Capital and Local Development:
An application of the Social Network Analysis to the XI and XVI boroughs of Rome

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A mamma, papà e Valerio

*"Society is not merely an aggregate of
individuals; it is the sum of the relations in
which these individuals
stand to one another" (Marx, 1857)*

*"It is hardly possible to overrate the value...of placing human beings in contact with
persons dissimilar to themselves, and with modes of thought and action unlike those
with which they are familiar... Such communication has always been, and is
peculiarly in the present age, one of the primary sources of progress"
(John Stuart Mill, 1848)*

Sommario

INTRODUCTION

This work, "*Social Capital and Local Development: an application of the Social Network Analysis to the XI and XVI boroughs of Rome*", focuses on a network-based approach to social capital based on the relationships between the actors of a network. This theoretical point of view is translated in an operational way with the use of the social network analysis as a suitable and powerful methodology in the assessment of social capital in the field of economics at a *meso* level of analysis.

The choice of the topic has be driven by the fact that despite the immense interest and research about the social capital theory[1], it is still affected by a great ambiguity which is undermining both its theoretical consistency and operative application, especially in economics. In spite of the exponent growth of the last few decades, social capital literature reveals an imbalance between the volume of publications and the relative lack of progress in measuring the concept. Given the quantitative tradition of Economics, this contrast is even more striking, as economists have not so far made any significant methodological contribution to the measurement of social capital.

In fact, although social capital has been considered a valid concept and instruments in many disciplines since a long time, in political science, sociology, medicine and so on. The entrance in the economic debate can be traced in the beginning of the 90s thanks to the great influence that the monumental Italian work of Putnam, which contributed a lot in promoting social capital as a valid concept also in economic sciences. Despite there is by now agreement that social capital has a good impact in growth and

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[1] Winter (2000) enumerates more than a thousand articles on the subject between 1996 and 1999.

development, the problem of its measurement is still in its infancy (Fukuyama 1998). This work aims to fill this gap, with particular reference to the Italian case.

The contribution of this work is both theoretical and methodological. From a theoretical point of view, it aims in promoting in economics a network-based definition of social capital which allows to overcome the traditional dichotomy between the individual and collective social capital. From a methodological point of view, this research experiences a relatively new methodology, the social network analysis, in the field of the assessment of social capital, with the purpose of overcoming the traditional dichotomy of the micro and the macro level of analysis.

The expected contribution of this research is to underline the advantages of a network approach to social capital especially in small communities just as the municipalities of Rome. The empirical part of the work is a methodological contribution in experimenting a relatively new methodology for social capital in economics to test the power of this instrument compared to the traditional ones.

In *chapter one* we will do a literary review of the most important contributions to social capital definition, with particular regard to the Italian case. In fact, it will be highlighted the Italian debate on social capital with the contributions of many authors who give an innovative approach to social capital.

Chapter two will be focused on the social capital theoretical consistency as a real capital and the controversial role of associations in the debate between Putnam and Olson. The most important problems about social capital measurement will be analyzed in dept; stating that there are many different

measures of social capital, we will try to summarize all the different techniques used, their advantages and weaknesses and to point out which can be the more suitable social capital analysis in the case of the boroughs of Rome.

Chapter Three introduces the methodological framework and the set of methods used for the empirical part of the thesis. The framework and methods proposed are those of the social network analysis, a paradigm in line with the theoretical approach to social capital that this thesis has carried out. There will be highlighted the general meaning, the basic principles and the indicators on which the methodology is based on. A particular attention will be given to the social capital point of view and the possibility of using this technique in social capital evaluation.

Chapter four will present the innovative aspect of this work that is the application of the social network analysis to the social capital assessment in Rome. The case-study will be presented: the context, the sample, the questionnaires and the elaboration of data in the form of social network indicators. A comparison with the traditional measurement of social capital will help to underline the advantages of using this innovative methodology.

In the *conclusions* it will emphasize the opportunities of using a network-based approach to social capital within a coherent framework both at theoretical and methodological point of view. The case-study represents a pilot study suitable to be exported in the rest of the boroughs of Rome and in the other cities of Italy. Problems and limitations met in this research will be assumed as a possible starting point for future steps to spread the use of the social capital

analysis as the most suitable methodology for the evaluation of social capital in the Italian cities.

Chapter 1: Social capital in literature: a critical review of the main contributions and the network-based approach

1.1 The notion of Social Capital in literature.

Nobody can neglect the considerable and increasing interest in the social capital theory of the last few years, evidenced by the ample empirical research on its importance to wide-ranging of socio-economical phenomena. Adam and Roncevic (2003, p.177) stated that "despite problems with its definition as well as its operationalization, and despite its (almost) metaphorical character, social capital has facilitated a series of very important empirical investigations and theoretical debates which have stimulated reconsideration of the significance of human relations, of networks, of organizational forms for the quality of life and of developmental performance".

Most international organizations, such as OECD and the World Bank, provide strong evidence that social capital is a pervasive ingredient and determinant of progress in many types of development projects, and an important tool to achieve economic political objectives. The World Bank's Social Capital Initiative, for instance, encourage social capital increase in stock and measurement, promoting it as a major strategy for poverty reduction. Political scientists in particular have constructed a new paradigm around social capital. NGOs seem to be delighted that their investment in community work and participatory approaches can now be legitimated through the strategy of social capital formation. At the same time, donors are looking at social capital

formation as yet another unsuccessful attempt – among many – to reduce poverty.

Generally, social capital can be defined as "…the norms and values people hold that result in, and are the result of, collective and socially negotiated ties and relationships. It is integrally related to other forms of capital, such as human (skills and qualifications), economic (wealth), cultural (modes of thinking) and symbolic (prestige and personal qualities). For example, economic capital augments social capital, and cultural capital can be readily translated into human and social capitals" (Edwards R. 2002). Social Capital refers to "the norms and networks that enable collective action. It encompasses institutions, relationships, and customs that shape the quality and quantity of a society's social interactions (World Bank)". "Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure" (Coleman 1990, p. 302).

For substantial and ideological reasons (Dolfsma and Dannreuther 2003; Foley and Edwards 1997), there is no set and commonly agreed upon the definition of social capital and the particular definition adopted by a study will depend on the discipline, context specific nature and level of investigation (Robison et al. 2002).

Despite the problematic nature of the concept, which has determined a great amount of criticism about its theoretical consistency and its use as a conceptual tool, this thesis considers social capital a key element for growth and development of societies and communities and particularly for the understanding of local socio-economic structure.

With no doubts there is not a single unified or generally accepted theory and definition of social capital. The most important reason are social capital's interdisciplinary, complexity and multidimensionality. From the first point of view, the field of social capital ranges across the whole social sciences, from economics, organisational sociology to political science. As a consequence, researchers from different disciplines use social capital for what at first sight seem to be entirely different objects of study, making the concept "fuzzy". As Fine states, 'social capital provides a technological umbrella for grouping together an extraordinarily diverse range of casually constructed illustrations' (Fine, 2001, p. 78). For instance, organisation scholars think of social capital in terms of the network a firm is embedded in and the resources and limitations this network may provide (e.g. Burt, 1992; Coleman, 1988; Gulati, 1999); macro-economists and political scientists think of it in terms of networks of associational activity, different from the previous type of networks (e.g. Putnam, 1993, 2000; Knack and Keefer, 1997).

Social capital's complexity and multidimensionality stem from the fact that social capital has a complex and composite nature; each dimension contributes to the meaning of social capital although each alone is not able to fully capture the concept in its entirety (Hean et al. 2003). We can summarize the main dimensions which are commonly seen in literature in the following:

- Trust (Coleman 1988; Collier 1998; Cox 1997; Kawachi et al. 1999a; Kilpatrick 2000; Lemmel 2001; Putnam 1995; Putnam et al. 1993; Snijders 1999; Welsh and Pringle 2001);

- Rules and norms governing social action (Coleman 1988; Collier 1998; Fukuyama 2001; Portes and Sensenbrenner 1993);

- Types of social interaction (Collier 1998; Snijders 1999);

- Network resources (Australian Boureau of Statistics 2002; Kilpatrick 2000; Snijders 1999);

- Other network characteristics (Burt 1997; Hawe and Shielle 2000; Kilpatrick 2000; Hean et al. 2003).

Uslaner and Dekker (2001) summed this discussion up by underlining the fact clear that, considering all its components, social capital needs to be treated as multi-dimensional rather than one-dimensional. This multidimensionality implies that it must be conceptualized as such to have any explanatory value (Eastis 1998).

Before introducing the *meso* level of social capital, on which this work is based on, we propose the classical dichotomy between the two levels in which social capital can be distinguished: the micro level and the macro level. Most of the controversy surrounding social capital has to do with its application to problems at different levels of analysis.

The *micro* approach to social capital has been carried out by two of the most important researchers on social capital, P. Bordieu and J. Coleman, who focused on individuals or small groups as units of analysis. In this view, social capital refers to the network an individual belongs to and the benefits derived from knowing others within the network (instrumental sources of social capital). For the most part the subsequent literature followed these guidelines, focusing on the types of resources that individuals receive through their social ties, especially in sociology. The network enhances access to and exchange of information, enforcement of contracts, and focusing on a shared vision and collective goals. (Nahapiet and Goshal, 1998).

At the macro level, it is argued that nations or regions can have different stock of social capital which affects, for instance, the level of democracy, crime rates, corruption or economic growth (Fukuyama, 1995; Putnam, 1993, 2000;

Beugelsdijk and Van Schaik, 2001; Zak and Knack, 2001; Francois, 2002). In this approach social capital is not an individual asset but becomes an attribute of the community itself; it refers to the social structure that enhances the effectiveness of local governments through traditions of civic engagement and the structure of civic networks. The conceptual stretch from an individual to a community trait, led by R. Putnam, has determined a divergence between the two literary strands and has also produced the present state of confusion about the meaning of the term, giving rise to the risk of losing the heuristic value of social capital. In fact, despite in some ways the two definitions are similar, in others they are at odds. Here we concentrated on two problems: competition and causes and effect. Sometimes individual social capital can undermine collective social capital: this happens when the right connections allow one person to gain access to public contracts, bypassing regulations binding others and compromising the impartial application of the laws. This is what happens in the case of the strong bonds in Mafia families, which confer benefits on their individual members but not on the public order or peace. The second point regards the fact that, while social capital as an individual asset is clearly associated with a person's networks and resources, different from the outcomes they can generate, in a communitarian view causes and effects are not so well distinguished. The stock of social capital held by a society leads to some good economic and social consequences, which are very difficult to theoretically separate from the concept in itself. This causes most of the circular reasoning about social capital.

Despite all that, social capital can show some dark sides at both levels (what is called *negative* social capital). At the micro level, dense networks may provide useful resources such as improved quality of information, a means for control, influence and power, encourage compliance with local values, rules and customs and reduce the cost of transactions. However, the danger of closed

social networks (bonding social capital) lies in the fact that they may lead to a tendency to stick to existing linkages and networks start to suffocate (Nooteboom, 2002). This may result in a loss of flexibility and lock-in. Also at the aggregate level, the effects of social capital are even more controversial although they are empirically harder to prove. Most research have acknowledged the dark side of social capital (Putnam, 2000; Knack and Keefer, 1997). Putnam (2000) talks about the dark side of social capital as it particularly relates to bonding ties (social ties which cement only homogeneous groups). Welsh (1979) has signaled the relevance of local corporatism while Christopoulos (1998) has explored local clientelism as a disease common to local elites with systems of strong social ties.

The literature on social capital has mainly focused on what constitutes social capital, on the differences in its structure, and the consequences, rather than on explaining the origin of social capital (cf. Glaeser et. al., 2002). Since social capital is formed through network participation and social interaction in groups, it may well arise from the connections between interacting units; in this case social capital can be considered neither as an individual property nor as a communitarian asset, but at a *meso* level of analysis. One of the most relevant references to this approach comes from Nan Lin, who defined social capital as something allocated neither in individuals nor in communities or countries, but inheres in relationships between interacting units. The *meso* conception of social capital, on which this work is based on, will be discussed in the last paragraph of this chapter.

1.2 Main contributions in social capital definition: review of the literature about on the umbrella concept.

Woolcock and Narayan (2000) noted that while the study of the importance of social relations has a long intellectual history, the first use of the term "social capital," as it is used currently, can be traced back to a West Virginian school superintendent, Lyda J. Hanifan's writing in 1916. The term subsequently disappeared for several decades, and then was independently reinvented several times in the 1950s, '60s, and '70s, as in the works of Jane Jacobs (1961) and Glenn Loury (1977). However, there is growing consensus that the truly original contributions to the definition and conceptualization of social capital have emerged since the 1980s in the work of three figures: Pierre Bourdieu, James Coleman, and Robert Putnam (Field, 2003). Each of these scholars has brought a distinct approach to the concept, and each approach has its strengths and weaknesses.

1.2.1 Pierre Bordieu: different kind of Capital and social capital.

Bourdieu was the first of these leading figures to produce a systematic analysis of social capital. The first appearance of the term social capital can be traced in his work of 1970, *Reproduction*, where it has been linked to the other forms of capital, economic, linguistic, scholastic and cultural; only the latter has been well developed and defined to explain how the cultural judgement of the dominant group is presented as universal, allowing it to legitimize its domination. Despite the marginal appearance of social capital in this work, *Reproduction* represented the framework within which the author developed , the concept, especially with the intention of both addressing different

resources of power and of linking an analysis of cultural capital to those regarding economic capital.

In *Distinction*, the forms of capital are presented as real entities and social capital is conceived as being under cultural and economic capital: "the overall volume of capital, understood as the set of actually useable resources and powers- economic capital, cultural capital and also social capital" (Bourdieu 1984: 114). Moreover, in *Language and Symbolic Power*, some essays written between 1977 and 1982, social capital is considered, together with cultural, economic and symbolic capital, as one of the most important fields which determine people's social position, although the interrelations between them were not explored.

In his 1983 article, *The Forms of Capital*, Bourdieu argues that every kind of capital can be derived from the economic capital and even if they are different from economic capital, all the other forms have it at their roots. Later, social capital was defined as "the aggregate of the actual or potential resources which are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition...which provides each of its members with the backing of collectively-owned" (Bourdieu 1997: 51). In his conceptualization, social capital consists of both the social relationships an individual may use to claim access to the resources of those he is connected to, and of the amount and quality of those resources. He contends that a network of social connections is not a natural or even a social given, but rather, as with physical or human capital, it is the product of deliberate, instrumental strategies of investment - the production and reproduction of social capital requires an unceasing effort (or investment) of sociability. Drawing on a neo-Marxist tradition, Bourdieu is concerned with how social capital interacts with other forms of capital to produce social inequalities. He noted, for example, that building useful networks of social

capital comes much more easily to individuals possessing high levels of other forms of capital. In his words (1986, p. 249): "the volume of social capital possessed by a given agent… depends on the size of network connections he can effectively mobilize and on the volume of the capital (economic, cultural or symbolic) possessed in his own right by each of those to whom he is connected". In 1989 Bourdieu, together with Coleman, organized a conference on "Social Theory for a Changing Society" and, despite the fact that both had already published works on social capital, th subject was not addressed. Probably the reason was in the difference of their conceptions.

1.2.2 James Coleman: Social Capital and the Theory of Rational Choice

As an exponent of the rational choice theory, Coleman's contribution to the debate on social capital derives from his attempt to draw together the insights of sociology and economics.

His attention to social capital was primarily due to a desire to understand the relationship between educational achievement and social inequality. In his early writings (1988) Coleman addressed social capital within a general critique of the dominance of human capital theory over contemporary policy thinking, arguing that social capital had a great positive effect on the acquisition of educational skills. So, it was in the educational context that he placed his theory of social capital.

Coleman, in *Foundations of Social Theory,* defined social capital as "a variety of entities having two characteristics in common: they all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure…. Unlike other forms of capital, social capital inheres in the structure of the relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production" (1990, p.

302). The forms of capital he identified include obligations and expectations, information potential, norms and effective sanctions, authority relations, appropriable social organization, and intentional organization. Later, he refined the definition: "social capital is a set of resources that inhere in family relations and in community social organization and that are useful for the cognitive or social development of a child or young person"(Coleman 1994:300). Coleman went beyond earlier conceptions, locating the concept within a neo-functionalist theoretical framework: social capital consists of important resources that are social relations, which allow actors to achieve personal goals. He believes that social capital, like physical and human capital, is not completely fungible, but only with respect to specific activities. Moreover, "social capital and human capital are often complementary"(Coleman 1994: 304).

Although in some points Coleman's analysis is similar to Bourdieu's (e.g social capital importance for educational achievement), the two theories differ very much one from another.

First of all, Coleman was able to demonstrate tangible ways in which social capital appears to interact with other aspects of stratification, while Bourdieu uses the concept only to show the ways in which elite groups used their contacts to reproduce and maintain their privileges. Moreover, he argued that social capital is not a product of deliberate investment, but a by-product of other activities, in contrast to Bourdieu who considered social capital to be produced by intentional processes. Coleman (1988) also added that like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence.

Despite the influence that Coleman's contribution had on contemporary debate, the author was widely criticized. Portes, in particular, accused him of using a "rather vague definition which opened the way for re-labelling a

number of different and even contradictory processes of social capital"(Portes 1998: 5). Portes also underlined Coleman's limits in overemphasizing close and dense ties and in not distinguishing between membership in social structures (which can be defined social capital) and the resources acquired through such membership.

Certainly, Coleman's contribution has been both influential and significant. Coleman's work represents an important shift from Bourdieu's individual outcomes (as well as in network-based approaches) to outcomes for groups, organizations, institutions or societies which represent a tentative shift from an egocentric to a socio-centric point of view. Also Putnam, in his study of civic engagement in Italy, cited Coleman's Foundations of Social Theory as a central source (Putnam 1993: 241).

1.2.3 Robert Putnam and the Communitarian Approach.

1.2.3.1 *Robert Putnam: Making Democracy Work and the Communitarian view.*

If Coleman's contribution has been influential in the field of social theory, Robert Putnam's impact on the development of the social capital literature has been truly monumental. While Bourdieu and Coleman focused their approaches on social capital at the level of individuals and families, Putnam sought to explore the concept as a property of large aggregates. Putnam's most famous claim in *Making Democracy Work* (1993) is that high levels of social capital are a prerequisite for pluralist democracy. This is a claim originally based on comparing Northern and Southern Italy. In this work Putnam gave the following definition of social capital: "Social capital here refers to features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions"

(1993, p. 167). In his work Putnam equates social capital to "civic community" or "civic trust": it consists of social networks and associated norms that have an effect on the productivity of the community. Two empirical presumptions underlie this concept: networks and norms are empirically associated, and these have important economic consequences. Putnam draws explicitly on de Toqueville for two of his key measures, that are vibrancy of associational life and newspaper readership; the other two are electoral turnover and preference voting. However, it is worth pointing out that it is only very late in the book that the notion of social capital is explicitedly brought in.

Later, Putnam focused on the decline of civic engagement in the United States. In his short piece, *Bowling Alone* (1995), the author identified a general secular decline in the levels of social capital in Usa, in spite of the contemporary rise in educational levels, which are generally positively associated with civic participation. Thus, in a piece of *Prospect* (1996), titled "Who killed civic America", Putnam refined the definition of social capital: "by social capital I mean features of social life- networks, norms and trust-that enable participants to act together more effectively to pursue shared objectives" (Putnam 1996:56).

Putnam's work has met with a great amount of criticism. His early work in particular was criticized for being ethnocentric and gender blind (in its depiction of the 1950s as the golden age of social capital), and for his failure to acknowledge the dark side of social capital that can lead to negative outcomes. The book he wrote in 2000 does go some way to address these concerns, however, devoting an entire chapter to the potential negative outcomes of social capital (although overall the book continues to stress its positive potential). Perhaps more important, however, is the criticism of the link he draws between associational life and general social trust.

As it has been said before, Putnam's work made a shift from the individualistic and instrumental view of Bourdieu and Coleman's vision, to a collective and communitarian view, where social capital is considered as an attribute of the community in itself and the benefits which derive from it accrue to the collectively.

Unlike Coleman, Putnam is explicitly concerned both with how trust is generated within network relations and rather with how this in turn spills over into general social trust that facilitates the effectiveness of a collective action through institutions of governance. Putnam has been criticized for unduly narrowing the understanding of social networks through his emphasis on associational life, and for failing to demonstrate empirically that associational life does in fact create higher levels of general social trust that in turn create better government. Similarly, some charge him with losing rigour and precision in his conceptualization of social capital as a macro-phenomena of large aggregates divorced from the specific micro-level context of individuals and their networks (Foley and Edwards, 1999; Edwards and Foley, 1998; Portes; 1998).

Considering the three approaches explained above, three main differences can be underlined. The first one is that the concept of social capital was developed by Bourdieu as a part of a theoretical framework and has meaning only within this framework, while social capital in Coleman or Putnam's definition appeared as a universal notion, able to function in various contexts. A second difference is that Bourdieu, as said before, refers to social capital only as an individual attribute; social capital is social just because individuals are embedded in a social world and it is merely a tool actors used to confirm their position in a socially structured space. The third difference follows the previous one: if in Coleman and Putnam's vision social capital can be seen as a public good, in Bourdieu's theory social capital is a private resource used by

actors for self-interest motives. This implies a consensual relationship with society in the first two approaches, that cannot be in the third one, where individual interests conflict with social ones. There is nevertheless something in common between Bourdieu and Coleman, who did not mean to implement social capital in a quantitative way: even if social capital has quantitative aspects (e.g. the size of network), it is considered as an explanatory concept. In Putnam's work, instead, there is a clear intention to quantify the concept, as measurement of the social capital as a composite index demonstrates.

The three theorists we cited before (Bourdieu, Coleman and Putnam), although considering different levels of analysis, shared the view that social networks are important for social groups and society. In Bourdieu's view, the relevant networks are those connected to the membership of a particular class, family, school, or other institutions and they are constantly reinforced through a complex set of interactions that shape and maintain social capital; even if he speaks of social capital as providing a collectively-owned capital, his vision remains individualistic in considering the benefits a given actor can achieve with the possession of a personal network of connection. Coleman's vision is also centred on these types of social networks, even though it neither specifies the nature of the relevant social structure, nor contextualizes relationships and connections within a larger socio-economic history. Coleman focused on dense networks, considering them more effective in creating knowledge of information and increasing the quality and reliability of monitoring. In Putnam's social capital definition, he refers to some features of society that help and facilitate action, which include social networks, measured (as with civic behavior) through respondents' membership in voluntary associations (1993;2000). Even if Putnam integrated the individualistic vision with the sense of civic community, he has been severely criticized for ignoring the fact

that social capital can be used for non-social ends (negative social capital) and the role of gender and ethnicity.

More important to this thesis is the argument that Putnam divorces concepts of trust and reciprocity from the local context that both Bourdieu and Coleman emphasise (Edwards and Foley, 2001; Foley and Edwards, 1999; Portes, 1998). More specifically, through using national survey items and aggregating these into descriptive means to compare across regions, Putnam (and others that follow in this tradition, e.g. Warde and Tampubolon, 2002) reduces social capital down to attitudes and behaviours of individuals, thus ignoring how the relations in which an individual is embedded influence those norms, behaviours, and beliefs. Putnam's great methodological error is, then, assuming that aggregations can operate as stand-ins for emergent qualities.

1.2.3.2 Putnam and the criticism about the Italian work.

The above critical review of literature shows how fundamental was the influence of the work of Putnam, Leonardi and Nanetti (1993) for subsequent studies on social capital; just as an example, this research has been mentioned by the editor of the mainstream Quarterly Journal of Economics as being the most quoted contribution in the field of social sciences in the 1990s (Fine, 2001).

Despite that, Fine himself, stated that "It has been subject to a number of what can only be described as devastating critiques, not least from scholars of Italian history" (Fine, 2001, p. 86). In reality, the monumental influence has been associated with a great deal of criticism, which concerned the social science debate of 90s. In the last paragraph, we have already cited some criticisms addressed to Putnam's work as, for example, in the Italian debate

will be analysed in depth. Generally, we can say that the most aggressive criticism regards the explanation Putnam gave to the difference in social capital's regional endowments; the author considers social capital as a stock created and accumulated over centuries, which is highly persistent and self-reinforcing. In fact the difference in social capital endowments of Northen and Southern Regions determined by the difference in their historical socio-political background. For the South, the authors stressed the role the Kingdom of Sicily had in the destruction of trust and cooperation. On the contrary, the social structure of the city-states of the North, more democratic and flexible, promoted trust and cooperation among peasants.

From a review of the most common criticisms, we can sum up the shortcomings of Making Democracy Work in the three following points:

1.   The work concentrates on indirect indicators of *civicness*, which is a good proxy of what he meant by social capital. The number of newspaper readers, voter turnout at referenda and preferential voting are not directly related to what Putnam identified as social capital's key components (networks, norms and trust). Obviously, this inaccuracy has lead to great confusion about what social capital is and what its possible outcomes could be. All research focused on outcomes of social capital (rather than measure its existence) will find social capital to be related to that outcome. In this case, even if social capital has been defined differently from the measures used for it, it becomes tautologically present whenever an outcome (e.g. readers of newspapers) is observed. Moreover, this relationship is not proved in the work. Moreover, considering social capital history and path dependent does not allow politics and policies to do anything to improve its stocks (see next paragraph).

2. The second drawback concerns the other indicator used for social capital index, the density of voluntary organizations. The controversial effect of voluntary associations on development and growth will be analyzed in chapter two. Briefly, we can say that theoretical and empirical studies do not agree on the positive effects of associations of voluntary on growth and development. Moreover, as recent studies carried out on the Italian case (Piselli, 2002; Nuzo e Micucci, 2003; Degli Antoni 2005; Sabatini 2005) show, social networks and also voluntary associations are characterized by different aspects and must be described by a composite set of indicators.

3. According to the Italian work, the Regions with better institutional performances are those with left-wing local governments. Considering that, variables of political orientation should be included in the index, providing good explanations of the local performances (problem of omitted variables). Sabatini (2005) suggested the use of structural equations models (SEMs) to carry out reliable empirical investigations accounting also for omitted variables. The SEMs allows also a better evaluation of the form and direction of the causal relationships between social capital and its outcomes (Corbetta, 1992).

1.2.4 Afterwards steps

Building on works by Bourdieu, Loury and Coleman among others, Alejandro Portes (1996, 1998, 2000) defines social capital through a social networks point of view. In particular he defined social capital as "… the ability of actors to secure benefits through membership in networks and other social structures"(1998, p. 6). Moreover the author, together with Landolt (1996), identified the dark sides of social capital and illustrated that previous authors had focused only on the beneficial effects of social interaction without taking

into account the less attractive features. They also made contributions to the understanding of the role of social capital in development (Portes and Landolt 2000).

Another important contribution is that given by Ronald Burt with his theory of structural holes (1992). His approach, based on Bourdieu's and Coleman's work, concentrated on variables indicating the position of the individual inside social network. The author focused on accessibility to embedded resources by measuring social capital in terms of network constraint. The presence of many constraints implies less structural holes and, considering structural holes as the source of social capital, fewer structural holes result in poorer social capital (Burt 1998). This approach is one of the most important within the network approach, as it looks at network variables. Nan Lin, often working with Burt, is another important exponent of the network-based approach to social capital. His work has contributed to the development of network measurements of social capital, in particular the position generator and name generator (Lin, 2001). Burt and Lin's research will be deepened in the next paragraph committed to the network approach.

Michael Foley and Bob Edwards (1997, 1999) produced some revealing findings about social capital, including a context-dependent conceptualization of social capital in the meaning of access plus resources and the irrelevance of working only with the generalized trust.

Another monumental contribution is that given by Francis Fukuyama. In his main work (1995), the author defined social capital as an instantiated informal norm that promotes cooperation between individuals; social capital is practically equated to trust. Social capital is considered as a key element for the efficient functioning of modern economies and stable liberal democracy; in the economic sphere it reduces transaction costs and in the political sphere it promotes associational life. In his approach, social capital has a cultural

component which brings him near Putnam's view: social capital is a history-dependent variable, a by-product of religion, traditions and norms, which can not be easily created or shaped by public policy.

Pamela Paxton (1999) conceptualized social capital differently from previous authors stating that social capital is a combination of an individual's trust in associations with fellow community members and public agencies. It consists of two measurable components: objective associations between individuals and a subjective type of tie, which must be reciprocal, trusting, and involving positive emotions, such as trust in individuals and trust in institutions.

It is necessary to mention the contribution of Woolcock and Narayan (2000) who defined social capital as norms and networks that enable people to act collectively. In particular Woolcock, in an attempt to alleviate the problems of source/form distinctions, developed a comprehensive, multilevel model of social capital while taking into account the well-known distinction between bridging and bonding social capital (Woolcock, 1998; 2001).

Grootaert and Van Bastelaer's worked out a specific definition (2001) for social capital within the Social Capital Initiative promoted by the World Bank. They defined social capital broadly as the "institutions, relationships, attitudes, and values that govern interactions among people and contribute to economic and social development". This definition has many advantages, among which that of considering simultaneously both the structural[2] element (referring to relatively objective and externally observable social structures, such as networks, associations, and institutions, and the rule they embody) and the cognitive element (referring to subjective and intangible elements such as shared norms, values, reciprocity and trust). Another important distinction has to be made on different social capital elements taken as the unit of

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[2] Uphoff, N. *Understanding social capital: learning from the analysis and the experience of participation*, 2000.

observation. In this case, the distinction is between micro, *meso* and macro level of analysis. In the first social capital is considered at the level of individuals, concentrating on horizontal networks of individuals and households and the related norms and values (the most famous example can be traced in Putnam works). The second captures the space between individuals and society as a whole, concentrating on the horizontal and vertical relations among groups (Bebbington and Carroll, 2000). The third observes social capital at a broader level, in the forms of institutional, political and environmental capital which are the framework for economic and social life. The main academic references for the meso level are Olson (1982) and North (1990). Grootaert and Van Bastelaer's definition presents the certain advantage of including all the three levels of social capital, which can complement and promote each other. From the other point of view, the breath of the concept may be too wide to draw specific conclusions in research or development program about the role of attitudes, behaviours and structures.

By the late 1990's the number of contributing authors had grown significantly based on the work of the contemporary authors discussed above. It could be generalized that much of this work lacked rigor and did not take into account the multi-dimensional nature of social capital. Much of the work was piece-meal in nature, simply applying an approach to a discipline or area of interest. The role of Putnam's research in this process was significant. While popularizing the concept, it led to a significant weakening of the conceptualization and operationalization of the concept. Coleman's earlier work provided a more thorough path towards conceptualization and operationalization. Putnam however, applied a single proxy analysis of social capital and applied it to good governance. Seen as the foremost expert on social capital at the time, many authors followed in his footsteps, and Putnam's lack of rigor was replicated in piece-meal works across a variety of disciplines.

Putnam is not solely to blame for this situation, which is due mostly to the complexity and attractiveness of the concept of social capital. The result was a plethora of definitions and an operationalization of the concept that led to the theory itself being questioned. From this work many recent authors have synthesized a more rigorous framework for the conceptualization and operationalization of the concept, but much work still needs to be done in order for the social capital theory to provide a meaningful contribution in all its facets.

1.3. Limits of the social capital positive theory and normative aspects: the Italian debate

The analysis carried out by Putnam on the productivity of democratic institutions brings the political scientists to two conclusions; the first is that history profoundly influences the functioning of institutions, in the sense that the efficiency of the regional institutions depends on civic tradition, historically affirmed: the author has with this confirmed the theory of Tocqueville (1992), democratic governments strengthen when they are confronted with a vigorous civic community. Where the land is poor, the future is worrying, marked by the tendency to dissert, typical of communities where social capital is limited or absent. Social Capital, in fact, for political stability and economic progress, can result even more important than the economic and human one.

The second conclusion reached by the author is that changing the formal institutions brings to an actual change in the political process: he has

demonstrated that decentralization has brought about, in both South and North, effective and measurable consequences in informal rules and in political efficiency. Clearly such improvements are more visible in the North, where the socio-cultural fabric was readier to adopt them, with respect to the South which, though encountering inefficiencies of various nature, has nonetheless achieved a better position than would have been the case without regional reform.

To the question if the decentralization was able to interrupt the vicious cycles that brought the South to the backwardness that afflicts it, the historic responds that the history of institutions moves very slowly, and even more when dealing with trust and civic traditions: the cultural and social consequences of the reform will not be visible until a few decades from now.

Putnam, therefore, considers social capitalism, as a property of the entire social system that favors democracy and economical development. Identifying a very tight connection between social capital and institutional productivity, it is deemed that social capital is the determinant variable for the efficiency of institutions. The context and history determine thereafter its endowment: the bigger the stock of social capital, the better will be the functioning of the institutions, and therefore, of the economic system. This explains the different course taken by the North, which was able to avail itself of a high rate of good citizenship and ample endowment of social capital reaching like this a better economical-political service, and by the south, where client ties and illegality hav e produced backwardness and impeded economic growth. Putnam identifies then in the concept of familism coined by Banfield in the 50s, the principal cause of economic backwardness, institutional inefficiency and the lack of civic sense, through the creation of a vicious circle:

lack of social capital = economical and political underdevelopment.

Putnam's work has raised vivacious discussions and numerous criticisms, from authors like Mutti (1994), Triglia (1999), Pizzorno (1999), Piselli (1999) and Bagnasco (1999), which can be synthesized in two fundamental and interconnected points. The first limit underlined by these authors in his conception of social capital resides in a partial explanation of its persistence, that is based on the phenomena of dependence on the course of history and social systems, which brings to auto reproduction of a certain cultural heredity. F. Piselli underlines how his view of culture is static and resolute, and of how it does not take into consideration the active role of actors who operate and of the autonomous contribution of the political variables: the history has been overestimated.

The second limit examined descends from the restrictive and sometimes inadequate view of social capital. Inside its rigid interpretative layout, he neglects the multiple forms that it can assume, by privileging one dimension only: the networks of civic commitment, like associations. He flattens out the concept of SC and does not consider the possibility that the interaction between elements of the social and economic structure, as well as, political action, can modify social culture.

From these considerations, emerges a view of social capital deterministic in the effects and insensible to the influence of multiple factors, local and extra-local, belonging to the context.

In the article "social capital"[1] (Piselli, 1999), F. Piselli tries to counter the arguments of Putnam in two directions. Primarily he wants to demonstrate the presence of social capital in the South, and how this had produced coherent results with the goals that the subjects aimed at. It's by now proved that southern society in the twentieth century featured a thick weave of social relations, that went well beyond the *familism* theorized by Banfield (1958) and revealed to be extremely flexible and able to recompose around the deep

transformations lived, starting from post World War II. In particular the social networks present in the South were utilized in function of interpenetration with the political institutions, as well as, in the urban revolts that aimed at the redistribution of financial resources of the state, and finally to obtain better work conditions and better earning opportunities. The southerners were not passive instruments subjected to the logic of distrust and resignation, like they had been described by Putnam, but rather active subjects that oriented the social relations in which they were inserted to obtain improvements in life condition, in the south and in the north: the strategies put in action have increased their income pro-capita and have contributed to creating wealth (meant as the control of the residents of a territory on economic resources).

Secondly, continues Piselli, such SC should not be seen as an obstacle to development, but as a resource to exploit. If we intend development as the ability to generate income in an autonomous manner, then it can be concluded that the strategies put in action revealed effective in holding that position. Some experiences of local development have shown that specific social situations and political client ties present in the south are not necessarily an obstacle to modernization, but can favor the creation of collective goods and effective politics, in other words are able to evolve in a modern sense and give impulse to a development that can sustain itself.

This reasoning brings Piselli to conclude that the main limitation to Putnam's theory consists in the flattening out of the concept of social capital and the failed consideration, inside its determinism, of variables of the local and extra-local context that influence the conditions of choices and strategies. The author concludes, in fact, the article by invoking a more global view of the concept that holds in account different situations simultaneously, together with resources and constraints that influence behavior and determine evolutions and changes even in directions diverging from those predicted.

Similar criticism was moved against the work of F. Fukuyama, who, analogously to Putnam, identifies social capital in trust, in other words, in the ability of the individual actors to undertake cooperative relations. This ability depends on the norms and values present in the context, that also in this case are products of the course of history started centuries ago.

In reference to the incident of the political variable, Fukuyama has an extremely pessimistic view because he believes politics often destroy social capital and reduces the abilities of individual and collective actors. He allows a political intervention when it serves to create social capital, but the outcome will be different according to the cultural context in which it was carried out: so we find again a view analogous to the determinism of Putnam who claims that culture, inherited ethic habit, is the crucial factor for reaching goals of economic politics.

With both authors the attention is shifted from politics to culture: both, in fact, bring social capital back to a shared culture. For Putnam, civic culture describes the economic productivity and economic development, while for Fukuyama it's the culture, intended as "inherited ethic habit", that is the source of trust and determines social capital. Both analyses' focus on modifications brought about by historic evolution to the original model, but it's as if the final outcome is already predetermined from the start. Fukuyama, like Putnam, is therefore reluctant to provide operational indications for politics directed at enhancing the stock of social capital of a certain community, because even his explanatory model sends back to long times in history.

To understand the limits of these theories and gather the importance of politics and its binomial with economy, Bagnasco suggests going back to the original formulation of J. Coleman. For Coleman social capital is a network of relations based on trust, authority and norms in which individuals are inserted

and they use it for their own personal goals. So, it is represented, on the one hand as a component of social structure, in the form of informal and intentional relations, between two or more people, and on the other hand like a source of resources to draw on in order to pursue one's own as individual strategies. Social capital is made up of relational resources that the individuals in part inherit and in part build themselves, inside the social relations in which they are inserted.

The conception of Coleman therefore is of a dynamic and open type: social capital can assume different forms depending on the context in which it is inserted (degree of loyalty of the structure; flow of communication; the norms that define the form, the contents and the boundaries of the exchange, and the respective sanctions of internal and external type; the actual organizations with specific aims; volunteer associations) (Coleman, 1988), and from here can result as a resource, as well as a limit.

F. Piselli underlines how the author then presents social capital as an intentionally created answer to practical problems that can be diminished just as intentionally or by external factors. The author recalls the formulation of social capital adopted by Coleman to underline the rather obvious characteristic of the concept, but too often forgotten especially by those who study its role with reference to economic and political development: social capital is a situational and dynamic concept, that cannot be given a definition from prior knowledge, but needs to be interpreted in the light of the context in which the actors behave. Structural and subjective dimensions intertwine: adopting an egocentric approach means to focus on the potential of the network of which the individuals have use of; adopting a socio-centric approach implies examining the total relations in a system to determine the endowment of social capital.

Coleman underlines how the fundamental difference between social capital and private capital, is its nature to be a public good: "As an attribute of the social structure in which a person is embedded, social capital is not the private property of any of the persons who benefit from it"[2]. Social capital is an intangible and indivisible resource, where the benefits are usable not only by those that have contributed to creating it, but also by others who are part of a certain social structure or organization.

Social capital is, in Coleman's arguments, a situational concept: it is not functional only in regards to specific activities but assumes different forms in different situations. Coleman has in fact defined social capital through its function, that is, according to the value of those aspects of the structure that the actors can use to achieve their personal interests.

Social capital is, in addition, a dynamic concept: it is very often a byproduct of other activities and can be used for reasons other than those it was created for.

Social capital is therefore the fruit of a dynamic interaction: it can be created, intentionally or by chance, and it can be demolished by the turn of events and appearance of external factors. To be preserved, social capital necessitates continuous investments.

Recalling the arguments of Coleman, F. Piselli underlines how social capital cannot be considered a specific object or be defined once and for all, but being a general concept (dynamic and situational) has to be treated as such; Coleman in fact, says "social capital is created when the relations among persons change in ways that facilitate action"[3], that is, when the actors' actions change the picture of international entanglements and create new social capital.

The author concludes that in this way the indetermination and the contradiction of which at times are accused Coleman's arguments, are actually the fruit of the dynamic and situational characteristics that he assigns to the concept, and that Piselli agrees with completely.

The fundamental difference between the two approaches, that of Fukuyama and Putnam on one side and Coleman on the other is of methodological nature: the latter adopts the logic of action, while the former a causal and deterministic logic; such difference has profound implications from the analytical point of view.

For the first authors history determines SC and so the course of development, according to a deterministic setting in which the actors exit the scene: the individual subjects present inside these theories can be defined using an expression coined by Granovetter, that is, "super-connectors", passive agents subdued to the historic process. Coleman, instead, shifts the attention from culture to a network of relations, leaving space to strategic actors, which actively and intentionally utilize the social resources available to them. His definition, more open compared to its origins, but especially to the possible consequences of the phenomena, appears more appropriate to the analysis of development problems.

Alessandro Pizzorno, in one of his articles, "Note for a Theory on Social Capital"[4], draws on Coleman's definition, to analyze the social structures inside which the individual moves, not as an objective, but as a medium. Most important, he tries to comprehend the nature of the relations that can build social capital, because he deems it extremely simplistic to hold that they necessarily consist of social relations.

The author begins by excluding those relations that for certain cannot build social capital: exchange relations of mere meeting, hostility and exploitation,

all being characteristics of either the absence of need to recognize the identity of the other actor, or of the attempt to detract it. Consequently, he affirms how certainly social capital relations will need to request the recognition of the identity of the participants and hypothesize forms of collaboration and continuous reciprocities.

Using the example of why we pay the gas station attendant, in this case a form of exchange relation in which the identity is not requested and where, in spite of the simplicity with which we could obtain the fuel and flee without having paid, this behavior happens rarely. Even in relations of exchange, in fact, the identity of those who participate is important in the sense that it facilitates it and makes it more agile. The notable example above shows how the driver could be induced to misbehave, but either because he/she fears to be recognized from the license plate, and so susceptible to a charge, or because he/she might need to refuel at the pump again ,this behavior would be not convenient in the course of his/her life he/she has internalized rules of honesty that he/she considers constitutive of his/her. This is therefore a case in which a relation of exchange requires and presupposes some kind of form of social capital so that it can be carried out. These kinds of phenomena have also been analyzed by the economist G. Akerlof with reference to the used car market: if it lacked any form of social capital, it would operate the law of Gresham that would leave on the market only cars of inferior quality, so it would chase away honest buyers and ultimately extinguish the entire market.

At times, social capital is established thanks to the intervention of a third agent, like a group or an institution, which guarantees that the exchange happens without prejudice for both participants. This first time is denominated social capital of solidarity, which is supported to cohesive groups that assure the workability of the social relations towards certain goals through mechanisms of penalty or reward, symbolic or material. The

exchange between two subjects A and B happens in the certainty that both will comply with their obligations or thanks to internal trust, because both are part of the same group, or thanks to external trust, which derives from the fact that A knows that B belongs to an integrated group able to orient behavior in a positive sense.

In the second case, social capital is built on the basis of mutual support between two subjects, without the intervention from a group. This type is defined by Pizzorno as social capital of reciprocity, and it is different from the first because it is based on weak ties instead of strong ones. The relation between town subjects is guaranteed by reciprocal cooperation or because it's tied by common goals (in the sense of production of public assets by a small group), or because it is expected that in the future the corresponding compensation of what is currently given will be obtained, on the basis of either relation of gratitude, or because the subject intends in this way to increase the prestige of a certain group, or in the last analysis on the basis of universal principals, in which the individual acts according to conscience.

At this point, the author tries to investigate the conditions that favor the formation of social capital in a situation where relations of exchange prevail.

The social capital of solidarity is favored in settings where there is a deficit of sociability and so a push to try and establish it. At a local level an example can be offered by the communities of immigrants, who attempt to reconstruct social capital to favor additional currents of immigrants and facilitate the settlement of newcomers. At a global level, it is possible to affirm that new forms of social capital are favored by the periods of dissolution of the societies' social relations, like for example periods of elevated social or geographic mobility.

In regards to the social capital of reciprocity, a necessary condition for it to form is the possibility that individuals can from strong ties outside the group they belong to; in the example of Granovetter the different reactions of two communities to the significant damage in the urban fabric is explained under the light of the diverse structure of social capital, the one which is characterized by intergroup ties that facilitate social mobility.

Another author, Carlo Trigilia, in his article "social capital and local development"[5], studying conditions that favor employment of social capital in more favorable directions for local development (intended as autonomous development, able to be self sufficient), makes reference to a definition of social capital in terms of networks of social relations spread out between individual subjects and a comprehensive group of subjects. From the premises proposed by Pizzorno, it can be inferred that he is interested in the social capital of solidarity, and in its ability to influence the course of development.

The author highlights the risks, already underlined by Mutti and by the same Pizzorno, of a culturalist explanation of SC and of an excessive emphasis on its path-dependent character. In this way, in fact, it incurs in the danger of giving a generic explanation that sinks the roots in a previous historic past and that reproduces throughout the socialization process. Putnam, for example, in his explanation of institutional productivity, looks back, for the delay of the south, to the dark centuries and the foundation of the Norman kingdom, without mentioning in any way the role that the political variables could have played in favor of the reproduction of social capital and its orientation toward development. The risk, says Triglia, is that failing to consider the interdependence between social-cultural and political-economical variables.

Secondly, the failed consideration of the political variables, determines the impossibility to distinguish when the SC has positive effects for the local development and when, instead, it generates clientelism, political dependence

or even corruption. Triglia suggests therefore to look at Coleman's definition, "resources that can be used by the actors to realize their interests"[6], and to always remember the specific potentials present in networks; this way it is possible to distinguish the case in which SC generates trust and information that help the economic development, from those in which the networks function at the expenses of some subjects and give birth to a phenomena of collusion.

To avoid the risks cited above, the author suggests focusing, but still taking in consideration the varieties of origins it could have, on the conditions of employment of SC aimed at local development. The question one should ask, rather overshadowed by the lighted debate on SC, is in what way politics can favor the transformation of networks in positive resources for development. This does not mean denying the importance of history and culture previously inherited, but evaluating SC in a dynamic prospective. Cultural identity is a factor that should not be overlooked, but needs political action that creates the adequate conditions so that it doesn't waste away or becomes an obstacle to development. In addition, where there exists networks of dense and limited social relations, with specific connotations, politics can intervene orienting towards forms more appropriate for local development. It is necessary to modernize politics, have them function in a more universal sense, that pushes individuals towards the market, which provides information and trust, as well as collective goods, and therefore configures itself as a resource for local development.

Another determinant variable for the valorization of social networks for local development is the market, which through competition discourages the particular pressures, sanctioning inefficient behavior and sending signals that push to a redefinition of SC.

In light of what was said, continues Triglia, the affect of SC on development is not simply the positive effect of a culture that stimulates cooperation, but mostly interaction between networks of traditional social relations and market, mediated by modernized and autonomous politics of civil society. The author agrees with Pizzorno, Piselli, and Mutti in claiming that the backwardness of the South is not a consequence of the absence of SC like Putnam believes, as much as the inability of politics to modernize and emancipate from civil society.

At the end of the article, Trigilia focuses on the possibilities that the view, of SC as networks of relation, offers to political action for it to have a favorable production towards development.

The author distinguishes between two types of actions, closely connected to one another: the first aspect concerns politics, intended as an attempt for it to emancipate from civil society, through mechanisms of consensus recruitment and selection of public administrators, to acquire a more universalistic undercurrent. The modernization of politics is therefore an essential requisite for development, in the measure in which it places barriers to the appropriation of public resources in an inefficient and ineffective way for development.

The second aspect is that of policies, interventions aimed to the promotion of SC as an instrument for local development. Compared to a few years ago, when interventions were conceived as individual incentives and flattened costs, it has made its way in the idea that local development is tied to the ability to learn and the development of knowledge that increase the productivity and that results depend also on integration between subjects, individual and collective, involved at a local level.

SC is thus a strategic resource to favor competition in a determinate territory, and for this goal, policies aimed at favoring cooperation between local subjects and the intervention of external companies, become extremely relevant. For such interventions to reveal themselves useful for such a goal, it is first necessary to have the intervention of extra-local actors that stimulate cooperation between local subjects present in a certain territory; it is not possible to let the market alone surpass those institutional limits, which concern production of collective goods, from which depends the success of the market itself.

Secondly, it is indispensable that the participation of public extra-local institutions help local actors organize the plan of development, assuring transparency and competition between territories.

Considering SC as a strategic resource for local development does not mean devaluating the role of the state and exalting of the role of the market, but rather redefining the politics aimed to stimulate development in those backlogged areas, that intervene from the top to favor mobilization from the bottom of the local actors. In order for these actions to be efficient in the era of globalization, it is necessary though that they are of "embedded autonomy", or rather, autonomous of particular interests and socially implanted in the territory.

The considerations of Triglia underline the critical importance social capital has on development due to some organizational transformations and in the same process of globalization. Moreover this approach offers a new possibility to actors of a historical setting lacking social capital: if Putnam at the completion of his analysis had postponed the solution further back in time of history and to the tight limits of the path-dependent, not allowing the local actors the possibility to leave the scene, Triglia, on the other hand, urges the subjects to actively get involved and politics to an action able to stimulate

cooperation, "Today more than ever development is not an issue of expenses, and has a social dimension that cannot be neglected" (Trigilia, 1999).

1.4 A network-based approach to social capital

Considering the whole social capital literature, trust and networks are the two key component terms of the concept.

It is in the work of Fukuyama that *trust* is considered the greatest element for understanding economic and social order. In his main work, The End of History and the Last Man (1995), the author explained the success of national economics in terms of culture. He defined trust as "the expectation that arises within a community of regular, honest and co-operative behaviour, based on commonly shared norms, on the part of the other members of the community...these communities do not require extensive contractual and legal regulations of their relations because prior moral consensus gives members of the group a basis for mutual trust" (1995:26). In his approach, Fukuyama considered nation's well-being and capability to compete mostly due to the level of trust inherent the society, that is social capital. Social capital is considered as the general level of trust of a nation, which is the consequence of ethical habits and reciprocal moral obligations internalized by community members. He distinguished between high and low trust nations; in the former are primarily considered Japan, Germany and United States, in the latter, Italy, China and France.

Across most of social capital literature, there is widespread agreement on the importance of *networks* for social capital's existence and functioning.

The above discussion, even with the problems and inconsistencies of any particular approach, highlights that the strength of social capital lies in the notion that relations make a difference in individuals and groups' achievement of resources and well-being. There is a quite general agreement with social capital definition as *investments in social relations with expected returns in the marketplace.* Differently from the individualistic approach, the network view emphasizes the relational aspect of social capital and returns the focus back to the relational-based context that sees trust and resources embedded in social relations. This emphasis on social capital being a relational and embedded resource has led several scholars to adopt social network analysis as a method for studying the social capital of individuals and groups. Just with this vision this thesis is in line with, thus the choice of the methodology. See chapter 3 for the analysis of the Social network analysis.

Concentrating on the network-approach to social capital, there must be identified two perspectives, in accordance with the level at which return or profit is conceived.

In one perspective, social capital is considered as an individual's asset; the focus is on how individuals access and use resources embedded in social networks to gain return in instrumental actions. In this conception, social capital is similar to human capital, as both are investments made by and with return for individuals. The aggregation of individuals benefits can have returns to the collectively. Lin (1982) made a distinction between two kinds of resources individuals have access to: personal resources (those, symbolic or material, possessed by individuals) and social resources (those accessed by individuals' social connections). In this approach, people have different level of social capital, depending on the extensity and diversity of their social connections. Later, Lin (2001) stressed the connection of social capital to social networks saying that "social capital may be defined operationally as

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resources that are embedded in social networks and accessed and used by actors for actions. Thus, the concept has two important components; it represents resources embedded in social relations rather than individuals, and access and use of such resources reside with actors " (p. 24-25).

For Flap (1988,1991, 1994) social capital includes mobilized social resources, from alters to ego; in his opinion, social capital is the product of, not only ownership, but also availability of resources. Burt's work also reflects this perspective. Robert Burt is the most prominent scholar who made the an explicit bridge between networks and social capital with his conception of structural holes (1997): "The structural hole argument defines social capital in terms of the information and control advantages of being the broker in relations between people otherwise disconnected in the social structure" (Burt 1997: 340). The author emphasized the importance of structural holes for individuals in networks: an agent who connects two otherwise disconnected networks spans a structural hole. In his conception, social capital is considered as "friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital" (Burt 1992: 9) and "the brokerage opportunities in a network" (Burt, 1997:355). One of the merit of Burt's work is the intuition of the advantages people can get by exploiting informational gaps in the formal organizational structures and the definition of social capital as a valuable resource which allows to mobilize the information contained within informal networks. Another important contribution is that offered by Mark Granovetter with his theory of strength of weak ties (1974). He observed that people often find jobs through weak or distant contacts. This insight superficially conflicts with Coleman's idea of network closure; one way to reduce the tension between the two authors is to realize that they apply to different problems. As Chwe (1999) observes, widely scattered weak links are better for obtaining

information, while strong and dense links are better for collective action. People apply the notion of social capital to both types of situation. Knowing what types of network are best for generating social capital requires that one be specific about what the social capital is going to be used to do.

The second perspective is focused at group level: social capital is considered a collective asset created and maintained by some groups, who benefit from it. Bourdieu, Coleman and Putnam had extensively contributed to this perspective. Bourdieu (1983, 1986) considered social capital as a particular kind of capital possessed by members of a social network or group; social capital depends on the size of one's connections and on the amount of capital (economic, cultural, or symbolic) in these connections' possession. Across social connections, people can use the capital as credits. In this meaning social capital is considered as a collective asset which gives credits to people involved in the network and reinforced by their interaction. Also Coleman's approach addressed social capital in the same perspective. In his famous work, the author considers social capital as a resource, real or potential, derived from relationships. Even if individuals can gain benefits from the use of those resources, social capital inheres social structure and thus, it is not fungible across individuals or activities. Both Bourdieu and Coleman considered dense or closed networks the means of maintaining social capital. Putnam's empirical works (1993;1995) is exemplary for this approach. He considers participation in voluntary associations the extent of a society's social capital. These kind of associations, in fact, promote trust and share values, which give a strong contribution to general well-being. The three authors differ for one important point. Bourdieu's vision can be considered a social capital privileged-good vision, as he considers social capital a way of maintaining and reproducing the dominant class. On the contrary, Coleman and Putnam's vision is a social capital public good view, considering social

features or resources a collective asset available to every members of the group, independently from their social positions.

An important contribution to overcome this dichotomy is that given by the sociologist A. Mutti, who defined social capital as " a network of cooperative relations (ascribed and achieved, formal and informal, inclusive and exclusive), supported by trust and rules of reciprocity and characterized by a relative stability over time" (2000, p.1). This approach, based on cooperative relations, considers social capital both as a resource and a constraint for the actor; at the individual level, social capital produces advantages for the actors within the network, at the aggregate level the interconnections between the different networks create a big network with public good features. In this way, there is no opposition between the micro and macro approach to social capital. Besides, Mutti's definition includes the possibility that social capital has some negative effects at the aggregate level, while cooperative actions certainly produce some positive effects for the individual. This is a theoretically consistent and operationally useful definition, which has a unit of analysis the individual associations but admits their existence also at the aggregate level.

The two perspectives just mentioned share the opinion of the importance of group members interaction for maintenance and reproduction of social capital. Most of the authors we mentioned before (Bourdieu, Coleman, Lin, Flap, Burt, Mutti) agree on the definition of social capital as resources embedded in social relations and social structure, and this thesis just works on this assumption.

Chapter 2: Social capital, Development and Measurement.

2.1 Social Capital and criticism: ambiguity of a fuzzy concept.

2.1.1 Is social capital a real capital?

As a starting point for our discussion, we will use what would appear to be a basic formulation: "Social capital is a form of capital that exists within relationships among individuals." (Karner, 2001, p. 2637) So, is 'social capital' a form of 'capital', in the economic meaning? The answer is not so obvious as it may appear at first sight. This discussion is still open. Nevertheless the recognition of the importance of social capital in economic and social science gave rise to a broad debate about the consistency of the concept and its efficient application to quantitative and qualitative analysis about growth and well-being.

Starting from the introduction of the concept of sustainable development, social capital has become to be considered as an important factor which contribute to people's well-being. Traditionally, natural capital, physical capital, and human capital are the only factors on which economic development and growth are based on. It is now recognized that these three types of capital determine only partially the process of economic growth because they overlook the way in which the economic actors interact and organize themselves to generate growth and development. The missing link is social capital (Grootaert, 1997). Olson (1996) in *Why some nations are rich and others poor*, concludes "Though the low-income societies obtain most of the gains from self-enforcing trades . . . they do not have the institutions that enforce contracts impartially, and so they lose most of the largest gains . . .

They do not have institutions that make property rights secure in the long run, so they lose most of the gains from capital-intensive production . . . The intricate social cooperation that emerges when there is a sophisticated array of markets requires far better institutions and economic policies than most countries have. The effective correction of market failures is even more difficult "(1996, p. 22). In short, low-income societies lack social capital, and standard economic theories based on rational individual action are of no help. Olson argued that there is no answer in economic theory to the question he posed in the title of his article. Borrowed ideas about capital may not be useful, and we may have to cut directly to the chase and consider social structures.

At this level of conceptualization there is no disagreement about the relevance of social capital. There is, however, neither a consensus about the definition of social capital (which elements are to be included) nor if this particular kind of capital can be considered as a real capital.

In his seminal book on the theory of social capital, Lin observed that "the notion of capital can be traced to Marx" (2001, p. 4). The famous Marxian "surplus value", representing the price of the product that was extracted by exploitation, minus the cost necessary to keep labour alive, has two components: the current revenue that can be used to repeat the current production process as well as to sustain the consumption style of the capitalists, and a second component that is saved for future investment into production processes, thereby incrementing the valued resources. This second component is called capital. But there are endless debates about how this "surplus value" might be calculated, what are its sources, who should get it, how it relates to labour and consumption, and who really are the entrepreneurs.

Paldam (2000) and others consider capital as a stock of assets which can be used, accumulated and which may be employed to generate future wealth.

Surely we can say that social capital differs from other forms of capital in several ways. First of all, as Grootaert and van Bastelaer (2002) noted, this is the only form of capital that cannot exist in a Robinson Crusoe economy, at least until Friday arrives on the island. That is to say, unlike other forms of capital, social capital is not located with a particular actor, but rather within the actor's relations with other actors. In other words, social capital has public good characteristics that have direct implications for the optimality of its production level.

Secondly, as Adler and Kwon (2002) suggested, the investments in social capital, unlike other forms of capital assets, are not readily quantifiable, even in principle (Johnson 2003).

Moreover, Bowles and Gintis (2002) sustain that the term "community" would be more appropriate than "capital", because it 'better captures the aspects of good governance that explain social capital's popularity, as it focuses attention on what groups *do* rather than what people *own*' (Bowles and Gintis, 2002, 422). By "community" the authors mean a group who interact directly, frequently and in multi-faceted ways. This point is stressed by Arrow (1999), who sustains that "capital" is something "alienable", that is, its ownership can be transferred to one person to another. According to Arrow, it is difficult – as with human capital – to change the ownership of social capital.

However, social capital shares several attributes with other forms of capital. First, social capital, like the others, is not costless to produce: social capital production requires an investment, at least in terms of time and effort, that can be significant. Indeed, Putnam's analysis of Italian regions showed that

social capital can take generations to build and to become fully effective. Besides, social capital, unlike physical capital, but like human capital, can accumulate as a result of its use. To the extent that social interactions are drawn on to produce a mutually beneficial output, the quantity or quality of these interactions is likely to increase.

While there are no doubts about social capital use and accumulation, the matter of its production is still controversial. North (1990) and Putnam (1993) considered the process of social capital production as the result of the interaction between institutions and civil society, which takes a long time, even centuries. In a short time, the stock of social capital must be considered as an external and history dependent variable, on which neither politics not policies can affect. However, most of the recent literature on social capital consider it an endogenous variable, on which individual and collective actors can work; in this conception, social capital is a frequency-dependent and path-dependent variable of the economic system (see chapter 1 for some deepening).

Instead , Adler and Kwon (2002) noted several reasons for considering social capital as capital. Foremost, it is said to be a form of capital because, like physical or human capital, it is a (potentially) long-lived asset that is not costless to produce or acquire (requiring at least time and effort if not money), but rather may be invested with the expectation of a future flow of benefits. As Putnam shows in his analysis of civic associations in Italy, embodied social capital can take generations to build and become fully effective. Besides, social capital has a unique feature in that it also enhances the efficiency of the combination process itself. In Putnam's (1993, p. 2) words: "Social capital enhances the benefits of investment in physical and human capital". It is not just an input into the production function, but it is also a shift factor of the entire production function.

As Uphoff (1999) argued, the challenge of understanding social capital is avoiding taking the analogy to other forms of capital too literally, while at the same time being open to exploring the similarities for any insights they may offer. It is doubtless an input and an output into the development process.

Lots of experiences have demonstrated that social capital is an input into the development process together with other forms of capital. Collier (1998) suggests that social capital is economically beneficial because social interactions generate at least one of three externalities. It facilitates the transmission of knowledge about the behavior of others, which reduces the problem of opportunism. It facilitates the transmission of knowledge about technology and markets , which reduces market failure in information. Finally, it reduces the problem of free riding and so facilitates collective action.

Regarding the use of the word *social*, nobody could neglect that social capital is a property of relationships; no other adjective could be more suitable for one of the most interesting multidimensional concept of the last decades.

2.2.2 Criticism and debate about social capital.

We have already noted that social capital owes most of its popularity to the great debate it has stimulated.

In addition to concerns about its definition ambiguity (explored in the first chapter), a number of other questions have been raised, among which some are legitimate and some are unfounded.

In this paragraph, we sum up the main issues about social capital employing the classification made up by Woolcock (2001). The author identified six main issues raised by critics:

1. "good marketing" instead of substance: this flak concerns social capital's undisputed feature of multidimensionality. Nobody could neglect that social capital has been defined in many different ways and used in various fields, but this claim does not necessarily imply a flaw. Considering that the concept has been at the centre of literary debates for years, its theoretical foundation is not questioned. On the contrary, social capital must be considered as a valid and intuitive concept, through which many sociological themes have been a voice they would not otherwise have.

2. Merely a fuzzy word of sociologists: this claims emerges in return to the "good marketing" social capital quality. In fact many research declare to address social capital themes even if they just mention the concept; as a consequence, the quantity of works about social capital increases in the same way the conceptual ambiguity does. This problem may be overcome considering that finally a consensus about social capital definition and theoretical underpinnings has been reached so discover the pretenders is easier than before. Moreover, forasmuch as social capital has filled an important gap in both mainstream economic and social theories of development about how to consider social dimensions, social capital should be respected just for it.

3. It encourages economic "imperialism": this assertion pertains to the imperialism of economics has always had in political science. Considering social relations as a real capital and introduce them in economic models, does not imply the supremacy of economics over sociology, but only an interesting way of integrating different fields through a concept which is intrinsically on the borderline.

4. It encourages "orthodox" development policies: this issue concerns the new way of theorise and practicing of International organizations on development policies. For instance, the Word Bank, as we have already

said, launched the Social Capital Initiative, considering social capital an important mean for the fight against poverty and for promoting development. Probably, the failure of Washington Consensus agenda is shaped by a number of different forces, among which the role social networks play for communities growth and development. In this way, social capital has given to sociology the opportunity to enter in high-level policy discussions, from which it has been excluded until now.

5. It neglects considerations of power: this claim emerges from the remark that social capital perspective has been often used just in itself, without any kind of causal explanations. The analysis of social capital theory shows that social capital is an important factor not only to explain the presence and persistence of power relations but also to provide theoretical basis for doing something to change the different situations. In the social capital perspective, marginalized groups possess some peculiar social resources that can be used to overcome their exclusion; in this process a big role is played by intermediaries such as ONGs.

6. It is a Western concept relevant only in Western research: the term social capital has emerged on Western countries so the flak pertains its little relevance elsewhere. Even if the concept has a Western origin of the word, but the intuition of the idea is better able to travel across countries and time. In fact, research from African countries, for instance, uses the word social capital without translating it, in order not to change the real meaning of the concept.

2.2 Social capital and its relevance to economics.

2.2.1 Introduction

Until the 199os, the majors theories of development consider the social features of developing countries mostly in terms of their capital and labour endowment; even the most influential theories of 80s and 90s, the neo-classical and public choice ones, gave a little attention to the beneficial effects of social relations. While the major development theories did not recognize importance to social relations, the failure of capitalism questioned the value of the traditional factors of production and the major policy recommendations.

The social capital theory represents one of the possible explanations given to the different paths and level of development and growth of developing countries. One of social capital benefit is its feature of multidimensionality which allows scholars, policy makers and practitioners from different disciplines to enjoy an unprecedented level of cooperation and dialogue (Brown 1998; Brown and Ashman 1996). Another innovative contribution is the way of looking at poverty; concentrating on the poor, it represents the most important asset they can possess; as Dordick (1997) astutely notes, the very poor have "something left to lose," namely each other.

The main problem in social capital perspective is that it is intrinsically sociological so the value of social capital is not so easily understood in economics and especially for the growth and development of OECD countries.

Four important answers have been given to these important questions (Woolcock, 2000). The first is that social capital should concentrate on its natural field, that is community life and not on macro-economic concerns. A second answer is to consider it just in terms of network size and structure, and simply consider them among the traditional factor in growth model. A third solution is to elaborate a new methodology to assess social capital by the integration of qualitative and quantitative techniques. A fourth strategy is to concentrate on the core idea of social capital and apply it to political economy 's models.

All the perspectives on social capital cited in the previous paragraphs, even if different, they all agree on the ability of certain aspects of the social structure to generate positive externalities for members of a group, helping them to pursue goals otherwise unachievable. From a rational choice theory perspective, it is possible to describe social capital as an input of agents' utility and production functions. Becker (1974, 1996) describes social capital as a particular kind of intermediate good for the production of assets (the so-called "commodities", corresponding to people's basic needs) entering as arguments in agents' utility functions. According to Becker, social capital is thus an individual resource, used within the context of utility maximization problems by perfectly rational and informed agents. The role of social capital as a collective resource serving the achievement of macro outcomes is instead well explained by the new economic sociology perspective (Granovetter, 1973, 1985). Granovetter identifies social capital mainly with social networks of weak bridging ties, considered as a important mean to foster the diffusion of information and knowledge and to low uncertainty and transaction costs. Authors from the field of new economic sociology argue that the ability of social networks to enhance economic development is closely related to the problem of trust. In particular, Granovetter (1985), stressed the role of social

networks in generating trust and discouraging opportunistic behaviours therefore fostering transactions and the economic performance. Information get to personal relations is better for four reasons: (1) it is cheap; (2) one trusts one's own information best – it is richer, more detailed and known to be accurate; (3) individuals with whom one has a continuing relation have an economic motivation to be trustworthy, so as not to discourage future transactions; and (4) departing from pure economic motives, continuing economic relations often become overlaid with social content that carries strong expectations on trust and abstention from opportunism' (Granovetter, 1985, 490). Paul Collier (1998) has investigated the concept of social capital from an economic perspective. He suggests that social capital is economically beneficial because social interaction generates at least one of three externalities. It facilitates the transmission of knowledge about the behaviour of others and this reduces the problem of opportunism. It facilitates the transmission of knowledge about technology and markets and this reduces market failures in information. Finally, it reduces the problem of free riding and so facilitates collective action. Collier distinguishes between whether the social interaction is reciprocal or unidirectional; and whether it is organized or informal. At the aggregate level, this mechanism may influence the economic performance and the process of development, providing a credible explanation for growth differentials among regions with similar endowments in terms of the other forms of capital (Cole, Mailath and Postlewaite, 1992, Temple and Johnson, 1998, Temple, 2001, Guiso, Sapienza and Zingales, 2004). The social capital argument has thus been widely used to explain the growth delay of post-communist countries in transition to a market economy (Raiser, 1997, Raiser, Haerpfer, Nowotny and Wallace, 2001, Rose, 1999, Marsh, 2000, Paldam and Svendsen, 2002, Evans and Letki, 2003), and to analyze the underdevelopment of third world's rural and urban areas. Many

international organizations consider social capital as an important tool of economic policies and invest on its production and measurement. The International Financial Institutions grounds its development strategies in developing countries on strengthening civil society and social participation, considering social capital as a toll to alleviate poverty and inequality. The World Bank explicitly considers social capital as a policy tool. The Social Capital Initiative, launched in 1996, operationalized the concept of social capital, carrying out many research activities on definition and measurement issues. Besides, local development projects funded by the World Bank are largely based on the strengthening of voluntary organizations, as a mean to promote an effective management of public services and common pool resources.

2.2.2 Empirical literature on social capital and economic development

Starting after the publication of Making Democracy Work by Putnam, Leonardi and Nanetti in 1993, many scholars have produced a great amount of studies investigating the relationship between different aspects of the multidimensional concept of social capital and economic growth, usually represented by per capita income. Within this huge literature, we can distinguish two main categories: studies which have found a positive relationship between social capital and economic development and those which do not find any kind of positive impact of social capital and development. Despite that, most of these studies suffer from problems with the measurement method; this matter will be analyzed in the next paragraph.

2.2.2.1   Putnam and his followers: the positive relationship between social capital and economic development

The seminal study of this voluminous strand of the literature is the already cited work carried out by Putnam, Leonardi and Nanetti (1993). In this research, social capital is defined in the meaning or *civicness* and measured by the simple mean of four main indicators of: 1. the number of voluntary organizations (e.g. sport clubs and cultural circles); 2. The number of local newspapers' readers (people reading newspapers are assumed to be more informed and involved in community's life); 3. Voter turn-out at referenda (considering that referenda do not imply personal aims, it is considered an index of civil participation); 4. The relevance of preference votes expressed by voters within political elections (considered an index of civic engagement). Social capital, in the meaning of *civicness*, is calculated as a simple mean of these four indicators. As a result of their analysis, the authors have found a positive and significant correlation between the indicators and local institutions' performance. The impact of social capital is particularly positive for the collective welfare in the more trusting regions because of people's attitude to carry on public interests. Subsequently, Heliwell and Putnam (1995) show that social capital (measured through the same indicators of the previous work) positively affects also the economic performance and, in the long run, the process of economic growth in the Italian regions.

The work of Putnam, Leonardi and Nanetti (1993) has been fundamental for following literature and most of the next studies present similar assumptions and critical points; in chapter one we have already discussed most of the national and international literary criticisms towards Putnam's work.

Knack and Keefer (1997) and La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) use data from the *World Values Survey* (WVS) to conduct cross-country tests of Putnam's hypotheses. These surveys are based on thereabouts 1000

respondents in each of several dozen countries; trust values for each country are calculated as the percentage of respondents who agree that "most people can be trusted".

Knack and Keefer (1997) concluded that trust and civic norms, even if unrelated to horizontal networks, have a significant impact on economic performance in a sample of 29 market economies; they suggested that at the base of the declining of social capital in United States, which caused negative effects on growth, there is the erosion of trust and civic cooperation and not the decline of the associational life, as Putnam emphasized (1995).

La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) document a strong correlation between the dominant trust in a country and the presence of large organizations, regressing the revenues of the 20 largest firms as a proportion of GDP on per capita income, trust in people, and a measure of trust in family members. These results are coherent with the early thesis of Banfield (1958) and of Fukuyama (1995), who stressed the relationship between social capital and industrial organizations.

Zak and Knack (1998) add 8 countries to the 29-nation sample used by Knack and Keefer (1997), using data on trust reported in Inglehart (1996) from a third wave of *World Values Surveys*. The authors show that trust is higher in nations with less polarized populations and in countries with stronger formal institutions because such structure enforces contracts and reduces corruption.

Beugelsdijk and van Shaik (2001) find, again using WVS data, that, at the regional level, trust and growth are associated with each other and that associational activity, particularly, the unpaid and voluntary work, is positively related to regional economic growth. These results are particularly interesting to the purpose of this thesis, in that they imply an acknowledgement of the importance of voluntary organizations for the development of an area.

All these works have provided important suggestions to social capital research, but they all suffer from their way to measure social trust at the national level. As it will be stressed later, trust measured by the WVS is a "micro" and "cognitive" concept, in that it represents the individuals' perception of their social environment, related to the particular position that interviewed people occupy in the social structure. The aggregation of such data creates a measure of what can be called "macro" or "social" trust which loses its linkage with the social and historical circumstances in which trust and social capital are located.

2.2.2.2 Social capital and economic development: alternative views

Besides not considering measurement problems (which will be analyzed in the next paragraph), some studies do not confirm the positive relation between social capital and growth; some authors note that social capital may be not always invested towards positive ends.

Despite in the first works, Putnam was convinced of the positive effects social capital have on growth and well-being of communities, later he admitted (2000) that associational life and some kind of social capital (bonding social capital) can have perverse effects on growth and development. We have already discussed the great contention about the role of associational activity in development process.

Most of the empirical research (Knack and Keefer 1993, 1997; Helliwel 1996) showed the controversial effects of some aspects of social capital to growth and development. The complexity of this relationship is even more evident at the theoretical level. In particular, it is possible to argue that economic growth could be itself a factor of social capital's erosion; in some situations social capital is a trade-off with the efficiency of the economic system (the case of

high labour turnover, generated by fast growth, which changes the social structure affecting social capital).

Recent studies have identified some negative consequences of social capital, which have been well summarized by A. Portes (1998). The first one can be called "exclusion of outsiders" and refers to the possibility that strong ties, while bringing benefits to group members, can rule out the others from access. One example of this situation is the presence of social capital generated by bounded solidarity within a group. As Waldinger (1995; 557) pointed out, "the same relations that enhance the ease and efficiency of economic exchanges among community members implicitly restrict outsiders". Also Adam Smith, two century ago, accused formally the meeting between merchants, that create economic advantages between them, but excluded all the outsiders.

The second drawback of social capital mentioned by Portes is defined "excess claims on group members" and is the opposite side of the first one. It may happen when the presence of very strong ties put member's initiatives off. This situation has been emphasized by Granovetter referring to what Weber identified as one of the most important problem of classic economic development theory. In fact, tight and close ties can give rise to a big free-riding problem as the less diligent members enforce on the more active members all kind of demands backed by a shared normative structure. This kind of process dissipates social capital of everyone.

The third problem is "restrictions on individual freedoms", considering that the presence of an active participation to community life implies conformity between members. In community with a strong community life and enforcement of local norms, the privacy and autonomy of individuals can be reduced. This is an instance of the trade-off between community-solidarity and individual freedom analyzed by Simmel (1902).

The fourth, "downward levelling norms", happens when solidarity between group members is cemented by a common experience of opposition to mainstream society; in this case, the shortage of successful personal stories undermines cohesion and downwards levelling norms that operate to keep the weak members in place and the more ambitious to escape from it.

All this considerations imply that in social capital assessment it is particularly important to consider in which kind of social capital the focus is; the most important distinction is between bridging and bonding social capital. In our analysis this arguments will be adequately considered.

2.3 Social capital and local development: role of associations and networks.

2.3.1 Literary debate about social capital and associations.

In the first chapter, we have seen that the ambiguous definition of social capital incorporates three elements: trust, norms and networks. They reflect three distinct phenomena whose internal relations should be clarified. One of the main points in common among works about the subject is the idea that trust and internalization of behavioural norms lead to cooperative and pro-social behaviours and this constitutes one of the essential pillars in the working of the economy and society in general. Also the role of associations in social capital formation has been widely recognized.

Different research on the topic has an important point in common: the idea that trust and internalization of norms of cooperative and pro-social behaviours become essential pillars of the economy and society. The role played by trust on economic development is not under debate (Zack and Knack, 2001); in fact, evidence shows that in an integrated community,

transaction costs (costs of information, monitoring contracts, conflicts…) are considerably reduced due to the extension of trust networks. Moreover, societies with high levels of trust are able to overcome agency problems more easily. In particular, as North writes: "the incapacity of societies to develop an effective reinforcement of contracts is the most important source of stagnation and underdevelopment of the Third World" (North, 1990: p.54). However, the role played by social networks on the generation of trust is not evident. In spite of the apparent recognition of the importance of associations in social capital's formation, that most studies on social capital adopt as a departure point, the role played by the associative activity remains ambiguous: associations can create or destroy trust.

Considering the existing theoretical positions, we analyse the two most important interpretations.

On the one hand, Putnam (1993) attributes the greatest success of regions and countries in terms of economic growth and good governance to the existence of a strong associative frame; these networks develop habits of cooperation, solidarity and collective interest, which improve collective and agency problems' resolution. The author identifies social capital with trust, norms and networks (Putnam, 2001), without putting to the test the internal causality of these links (Bjornskov, 2006).

On the other hand, Olson (1965, 1982) provides an opposite interpretation, arguing that the social organizations, acting as specialized groups of interest (lobbies), can limit the growth of society. In fact, the economy and society in general can be penalized by the conflicts of interests between different social groups.

Considering the importance this thesis attributes to associations in social capital's formation and maintenance, it is important to analyse in depth this

debate. In fact, in this thesis, we are in line with the idea that social capital is a resource which operates at *meso* level; associations is considered the environment where this kind of resource can be produced or exchanged with benefits for individual and social groups.

2.3.2 Analysis of the role of associations: Putnam *versus* Olson

The preoccupation for the importance of associations for social and political involvement of citizens goes back to the nineteen century. The Toquevillian perspectives sees a strong connection between political and civil associations: "In all countries where political associations are forbidden, civil associations are rare... It is hardly likely that this is due to accident, and it is wiser to conclude that there must be some natural, perhaps inevitable connection between the two type of associations...civil associations pave the way for political ones, but on one hand, the art of political association singularly develops and improves this technique for civil purposes..."(de Toqueville, 1969 [1835]: 520-1;523-4). It is from such an inspirational sources that Putnam recovered this subject, considering associational life as an essential aspect of economic and social development.

The results of his investigation in Italian regions (1993) showed that the cause of the sensitive differential in the economic growth rate between the south and the north of Italy stemmed from what he defined as *civicness*. This word should be understood as a tendency to generate horizontal associations, which constituted a base for economic and social development. As Putnam expressed "the good government in Italy is a by-product of the choral societies and the soccer clubs" (1993) and civil virtue promotes and encourages relations of cooperation and trust among the citizenship. In this approach, associations are expected to create a sense of shared responsibility

and develop habits of cooperation and solidarity, fostering economic growth (1993, 89-90). Nevertheless, the way in which social networks affect economic activity is not evident.

On the contrary, Olson (1968) remarked that the conflicts between groups of interest (lobbies) can limit growth and development because the peculiar interests carried on by these groups that lobby can impose big costs for the rest of society. Taking into account the problems of collective action, small groups organizations can impose their interests t the detriment of those represented by large groups organizations, producing adverse consequences on economic performance; reduction and distortion of the allocation of investment, labor and other resources, droop of rates of innovation, and thus, limiting growth (Keefer and Knack, 1997; Knack, 2003).

In spite of some relevant differences, the two perspectives can be compatible, if we distinguish sets of groups on the basis of their functioning and objectives. With this regard, Putnam reviewed his position (2000) admitting that some social networks facilitating cooperation among their members can have harmful effects on the wider community. Then, as he acknowledges in "Social capital: measurement and consequences" (2001), he acknowledged that there is a dark side of social capital as well. social capital is not guaranteed to produce positive externalities on society. In this respect Putnam (2000) distinguishes between two types of social capital, i.e. bonding and bridging social capital. The latter type can be defined as bonds of connectedness that are formed across diverse social groups, whereas bonding social capital cements only homogenous groups. A similar distinction in types of social capital has been proposed by others (Paxton, 1999; Fedderke et al. 1999; Woolcock, 1998). Bridging social capital is supposed to yield positive outcomes, while the bonding type of social capital may result in negative effects like loss of flexibility and lock-in.

At the same time, Olson took into account that large groups that are sufficiently encompassing with society, as bridging social capital, are not expected to lobby. Thus, he argued that only some kind of groups, closed and vertical, act as non encompassing rent seekers.

The clarifications made by the authors open a choice of integration that should be better investigated, clarifying the causality of social capitalization or the generation of social trust. The general belief is that social capital as social networks has an ambiguous relation with trust: bridging social capital is directly linked with general trust, bonding social capital is inversely related.

Considering this debate a standard approach in the social capital literature had been to distinguish between *Putnamian* groups - those with a horizontal network structure and cooperative spirit, which have a positive social impact (Putnam, 1993, 2000) - and *Olsonian* groups - those with a more or less vertical organisational structure serving special interests at the expense of the common good (Olson, 1971, 1982). Unable to precisely determine the motives for collective action behind the norms and networks of social groups, the researcher tends to rely on observing the positive and negative social effects of a certain group to determine whether it is *Putnamian* or *Olsonian*.

2.3.3 Associations, growth and development: empirical evidence

Despite the conceptual advancement the last decade, there is little systematic quantitative evidence and a lack of formal modelling about the relationships between trust, social capital and growth.

Knack and Keefer, in two seminal empirical papers (1995, 1997), investigated the role of social capital in economic payoff by studying a cross section of

market. For this purpose, they explore the relationship between interpersonal trust, norms of civic cooperation, and economic performance. In their empirical analysis (1997), they primarily focus on the role of trust as they feel it is the most important indicator of social capital. Based on the World Values Survey that contains extensive survey data on respondents in a number of countries, they assess the level of trust in a society by using the question: "Generally speaking, would you say most people can be trusted, or that you cannot be too careful in dealing with people?". Trust is measured as the percentage of respondents in each country that replied "most people can be trusted". Data are a mix of 1981 and 1990 survey results. On the basis of their analysis for 29 countries, Knack and Keefer conclude that trust has a significant impact on aggregate economic activity. They state explicitly that 'the coefficient for Trust [...] indicates that a ten percentage point rise in that variable is associated with an increase in growth of four-fifths of a percentage point' (Knack and Keefer, 1997, p. 1260).

Knack and Keefer (1997) studied, between others, the impact of associations to the spread of trust. In this analysis they used the distinction between *Putnamian* and *Olsian* associations; the first group is composed by associations which do not have any kind of opposition between their members' interests and the externals' ones. The *Olsian* associations, on the contrary, are those which pursue the particular interests of their members. As a result of their analysis, they did not find any significant correlations if the whole kind of associations are indistinctly considered. Otherwise, considering separately the two groups, there is a surprising positive link between the *Olsian* associations and trust but no connections between the *Putnamians* and trust.

Zak and Knack (2001), referring to a larger sample, found some results similar to those carried out by Knack and Keefer in 1997, although they did not analyse the specific link between associations and trust.

The link between associations and trust has been deepened in Knack's work (2003). In fact, the author proposed to clarify the interconnections between economic growth, trust and *Putnamian* and *Olsian* groups. In *Putnamian* groups he included cultural, artistic, musical, sports and local associations which fight against poverty, racism and unemployment. *Olsian* groups, instead, included Unions, political party and category associations. Considering the link between associations and level of trust at country level, there is a significant and positive relation, but only if associations are considered all together. Otherwise, some results similar to Putnam's ones emerged: the *Putnamian* group seemed to be positively correlated with trust, while no significant connections between the *Olsians* and trust emerged.

Putnam's thesis, anyway, has not found any kind of confirmation taking into account the country tendency to associations and its economic performances. In any case, it must be considered that all of the three cited studies focus at national level and work on the same definition of social capital.

Following Putnam's (1993) hints, most studies focus on voluntary organization as a proxy for measuring social capital. The claim is that in areas with stronger, dense, horizontal, and more cross-cutting networks, there is a spillover from membership in organizations to the cooperative values and norms that citizens develop. In areas where networks with such characteristics do not develop, there are fewer opportunities to learn civic virtues and democratic attitudes, resulting in a lack of trust. However, there are several reasons to doubt of the efficacy of social capital measures simply based on the density of voluntary organizations.

Firstly, even though individuals who join groups and who interact with others regularly show attitudinal and behavioural differences compared to non-joiners, the possibility exists that people self-select into association groups, depending on their original levels of generalized trust and reciprocity.

Secondly, the group experiences might be more pronounced in their impact when members are diverse and from different backgrounds. Until now the literature has not provided a micro theory explaining trust's transmission mechanism from groups to the entire society, and the logic underlying the connection between social ties and generalized trust has never been clearly developed (Rosenblum, 1998, Uslaner, 2002). Thus, every finding on the correlation and/or the causal nexus connecting membership in civic associations to supposed social capital's economic outcomes must be handled with extreme caution.

Bovenberg (2003) argues that many (empirical) studies on social capital suffer from a simultaneity bias:"theoretical models should be developed that define precisely the mechanisms through which various endogenous and exogenous variables interact. Subsequently the predictions of these models should be falsified" (Bovenberg, 2003, 417). Similar critique was raised by Durlauf (2002).

One could perhaps speculate that the reason for this finding is that social groups are not purely either *Putnamian* or *Olsonian*: groups might operate on a set of mixed motives, which are more or less socially oriented for different segments of one group or class of groups at different points in time.

2.4 Social capital and Human Development: links and mismatches with the capability approach.

2.4.1 The Human Development paradigm

Human Development is development paradigm in which people are the real "wealth" of nations. It aims at expanding the choices people have to lead lives

that they value, developing their full potential and leading creative life in accord with their needs and interest.

This way of looking at development considers economic growth not as the only ends, but an important means of enlarging people's choices. "The basic purpose of development is to enlarge people's choices. The objective of development is to create an enabling environment for people to enjoy long healthy and creative lives" (Mahbub ul Haq).

The Human Development approach arose in part as a result of growing criticism to the leading development approach of the 1980s, which presumed a close link between national economic growth and the expansion of human choices. Particularly, some factors occurred contributed to this shift of point of view:

- Empirical evidence that not support the belief in the trickle down power of market to spread economic benefits and end poverty;

- The excessive human costs of Structural Adjustment Programs;

- Spreading social ills (crime, HIV/AIDS, pollution, etc) although in cases of strong economic growth;

- Demands for people-centered models after the wave of democratization in the early 90s.

Starting from the first UNDP Report in 1990, human development concept was applied to a systematic study of global themes, such as social progress, economics, efficiency, participation and freedom, etc. Especially the work of Professor A. Sen provided an alternative and broader human development approach defining it as the process of enlarging people's choices and enhancing human capabilities (the range of things people can be or do) and

freedoms. "Human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it" (Sen, 1998) .

In the Capability Approach, Human Development is considered as a process of enlarging people's choices, by expanding human capabilities and functioning. "The capability represents the various combinations of functioning (beings and doings) that a person can achieve. The capability is, therefore, a set of vectors of functioning, which expresses to what extent an individual is able to live a way of life or another" (Sen, 1981, p. 40).

The distinction between functioning and capabilities is between the realized and the effectively possible, in other words, the well-being achievement and the well-being freedom. In this approach well-being is considered as something different and much more important than income or wealth. In fact the relation between our real incomes and the well-being or the freedom we get out of them is mediated by a number of conversion factors, reflecting human, social and environmental diversity.

Within the area of social climate, Sen expressly mentions social capital: aside from the social conditions and public facilities, "the nature of community relationships can be very important…" (1999, p. 71).

Several works have demonstrated the great impact of social capital in many social and economic aspects. But only a few of them seem to consider the great role that social capital can play in the world of Human Development and Capability Approach.

The key question is therefore how to empower a person's capabilities? And, in particular, can social capital be considered as one of the main means to encourage the empowerment?

This point of view is not new. Philosophers, economists and political leaders have long emphasized human well-being as the purpose, the end of development. As Aristotele said "Wealth is evidently not the good we are seeking, for it is merely useful for the sake of something else. In particular, the Capability Approach's roots can be traced back also to classical political economy (Adam Smith, for the analysis of necessities and living conditions) and Marx (for the analysis of human freedom and emancipation, 1844).

For more recent references, it is possible to cite Rawls' Theory of Justice (1971), whom Sen himself made mention, and the Basic Need Approach (BNA) to development pioneered by Paul Streeten et al. (1981) and Frances Stewart (1985).

2.4.2 Human development and social capital: is social capital a means of expanding individuals capabilities?

Social capital has been analyzed from many different point of view, each of them underline a particular aspect of the concept (civil engagement, participation, associational life, networks, values, etc.). Human development and the capability approach is a framework which allows considering different aspects of human life together, just like social capital is concerned with many aspects of development, from economic benefits to people well-being.

 First of all, social capital is correlated with lots of benefits for the economy, particularly in terms of its potential to decrease transaction costs, encourage cooperative behaviour and trust. Collier (1998) suggests that social capital generates at least one of three externalities: it facilitates the transmission of knowledge about the behaviour of others, which reduces the problem of

opportunism; it facilitates the transmission of knowledge about technology and markets, which reduces market failure in information; finally, it reduces the problem of free riding and so facilitates collective action.

Moreover, social capital is connected with a multiplicity of desirable policy outcomes. Putnam (2000) argues that social capital has "forceful, even quantifiable effects on many different aspects of our lives" (p. 23). Communities with a stronger stock of social capital are able to more effectively negotiate the various challenges they may face.

These quantifiable effects include lots of the most important factors that expand our capabilities: lower crime rates, better health, improved longevity, better educational achievement, greater levels of income equality, improved child welfare and lower rates of child abuse, and less corruption, mafia and more effective government. Besides, social capital can play a protective role against the exclusion of poor households from formal credit markets; just like the experience of Grameen Bank demonstrates, social ties facilitate the poor's access to credit and lowers its cost, in a more diverse and complex manner than the mainstream literature on development finance indicates (Van Bastelaer, 2000).

According to an OECD's report *The well-being of Nations: the role of Human and Social capital* (2001) social capital is a key factor to improve the well-being and explain some social and economic differences between OECD countries. Social capital also has non-economic benefits such as higher civic participation, volunteering and charity giving and a reduction in the risk of criminal activity. It also often correlates with improved levels of health and personal happiness.

Besides these benefits, social capital is associated with greater trust, co-operation, reciprocal engagement and social cohesion. It can also leverage

improvements in the performance of institutions and firms, as well as in various other forms of capital. Furthermore, social capital can enhance the rapid diffusion of knowledge between individuals, communities as well as within and between firms. For individuals especially, the use of networks may be crucial in sharing valuable information about the labour market especially knowing where the new opportunities are. Accordingly, social capital can be an effective tool for individuals and societies to adapt effectively and rapidly to economic and social changes.

 As Woolcock (2001, p. 12) says "The well connected are more likely to be housed, healthy, hired and happy".

There are lots of channels through which social capital can improve a person's capabilities:

- Better quality of Education (Coleman, 1998; World Bank, 1992,1999).
- Lower Crime and violence (Cote and Healy, 2001: Green et al 2000; Halpern, 1999; Sampson et al., 1997; Graycar, 1999; Putnam, 2000).
- Better health and longevity (Cooper et al. 1999; Blaxter et al. 2001; Coulthard et al. 2001; Morgan and Swann, 2004; Halpern,1999).
- Enhancement of public goods supplies (Meinzen-Dick and others, 1995; Narayan, 1995; Ostrom, 1995).
- Improvement of Children Welfare (Jack and Jordan, 1999).
- Better Access to wildlife resources (Scoones and Matose 1993).
- Improvement of household well-being (Narayan 1997).
- Easier access to credit (formal and informal) (Narayan and Prittchet1997; Van Bastelaer, 2000).
- Better functioning of Democracy (Putnam, 1993; Verba, 1995; Muller and Saligson, 1994; Paxton, 2002).

These fields cover most of the main capabilities listed by Nussbaum (2000), in particular for the life, bodily health, bodily integrity and control of environment.

There is still lack of empirical studies about the direction of the relationship between social capital and capabilities, but social capital can be considered as an important mean to expand them. It stimulates the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Ibrahim (2006) shows that social capital is a lubricant for collective capabilities for many reasons, which are namely: it nurtures the trust and reciprocity among people; it helps them to have their voices in collective decisions; it allows information sharing and coordination of activities, etc… In the case of a poor village, Ibrahim (2006) argues that social capital is, at first, the needed condition for the participation of the poor in the collective action. In fact, the relationships are not simple as a connection between two individuals, but rather as a network with many levels. You ask a friend for a favour. If he cannot do it, he will ask someone else. This way, the connection may be made not only at one level, but also between different levels. Therefore, for those who want to join a collective action, social capital is useful; and while taking part in a collective action, one's social capital can be improved. As relationships may bring favours without a financial cost, it can be a solution for the poor. As a result of a comparative analysis between the two approaches, we try to point out the mismatches between the two paradigms. Despite it has been argued before that there is a strong connection between social capital and the capability approach, in particular for the feature of multidimensionality that typifies both concepts, the two pertains to different level of analysis. In fact one of the fundamental limitations attributed to the capability approach is to be a liberal-individualistic one, in which the priority is individual liberty and not social solidarity (Hartley

Dean, 2009). Social structure has not been considered for their ontological value but only as a constraints or a means to enable people's capabilities (Deneulin and Stewart, 2000). Even if in Nussbaum's theory there is a reference to affiliation (being able to live with and towards other, 2000), within the list of main capabilities, the very legitimate concern is with the integrity of the individual and not with the interdependency which characterize any kind of social structure.

Conversely, social capital refers to many areas, such as health, community safety and education, of social and not individual concern. Social capital is both a personal resource and a social structural component (social resource). It can be considered as a public goods because its features of non-exclusivity and non competition; it consists of many aspects of social structures which facilitate certain actions of individual within the structure. Social capital influences well-being through its effect on public goods provision (Putnam 2000).

Chapter 3: Social Network Analysis and social capital evaluation

3.1 Social Network Analysis: history and features of a new perspective

3.1.1 Introduction

Social Network Analysis is neither a theory nor a methodology. Rather, it is a paradigm which takes as its starting point the premise that social life is created primarily and most important by relations and the patterns formed by these relations.

Social networks are defined as a set of nodes, individuals or groups, that are tied by one or more types of relations (Wasserman and Faust, 1994). Considering the importance assigned to networks as the core of social word, this paradigm works on a fundamentally different perspective than that adopted by individualist or attribute-based social science.

While traditional individualistic social theory and data analysis considers individual actors making without taking into consideration the social context, social network analysis is focused on *relational data*: the relationships between actors are the first priority, while individual properties are secondary .

Wetherell at al. (1994, p.645) describe social network analysis as "...1) conceptualises social structure as a network with ties connecting members and channelling resources, 2) focuses on the characteristics of ties rather than characteristics of the individual members, and 3) view communities as personal communities, that is, as networks of individual relations that people foster, maintain, and use in the course of their daily lives".

Social Network Analysis is an interdisciplinary field of research with a long history of input from sociology, anthropology, statistics, mathematics,

information science, education and other disciplines. It has been developed by a number of very different strands, some of which have intersected with one another, others have diverged on separate paths. In its history, there are three main traditions (Scott, 1991): the socio-metric analysis (Lewin and Moreno), who worked on small groups and produced many advanced with the method of graph theory; the Harvard researches of 1930s (L.Warner), who explored pattern of interpersonal relations and the formation of cliques; and the Manchester anthropologists (Barnes, Mitchell and Bott), who built on both of these strands to investigate the structure of community relations in tribal village and society. These traditions were eventually brought together in the 1960s and 1970s, again at Harvard, when contemporary social network analysis was forged.

It is still a very active research area, as is evident from the many recent publications on social network analysis. Its development improved a lot in the early 1980s, mostly due to the institutionalization of social network analysis (with the foundation of the International Network for Social Network Analysis (ISNA) in 1978 by Barry Wellman and the availability of basic textbooks (Wellman and Berkowitz, 1988; Scott, 1991; Wasserman and Faust, 1994) and computer software (Ucinet, Gradap, Multinet, Negopy and Pajek).

With mathematical graph theory as its basis, social network analysis is an useful tool for the description and the evaluation of social phenomena especially because it allows both a quantitative and qualitative approach to the problem.

3.1.2 Network data

Social network analysis aims at understanding the network structure by description, visualization, and statistical modelling. It works on social network data: following the definition by Wasserman and Faust (1994, p. 89), social network data can be viewed as a social relational system characterized by a set of actors and their social ties; eventually, additional information such as actor attribute variables or multiple relations can be part of the social relational system. Network data are defined by actors (nodes) and by relations (edges). Network analysis focuses on relations between actors, and not on individual actors and their attributes as traditional analysis does. This big difference implies that, while non-network studies sample nodes independently, network analysis cannot sample nodes in the same way and sometimes does not use samples at all.

3.1.3 Whole network and ego network

There are two main types of networks: the whole network and the ego-network.

The *whole network* takes an interest in the social structure, concentrating on all nodes rather than privileging some of them. Researching using this kind of network frequently analyse more than one relation (multiple relations).

Often, this kind of network approaches tend to study the whole population by means of census. The boundaries of the populations are of two main types. Probably most commonly, social network studies draw the boundaries around a population that is known, a priori, to be a network; all the members of a

classroom, organization, club or community constitute a population. Alternatively, they can use a more ecological or demographic approach: observations are drawn by contacting all the people who are found in a bounded spatial area, or who meet some criterion.

Sometimes, boundaries of the population are drawn by sampling. There are different kind of sampling ties; one is the full network methods, which is based on the collection of information about each actor's ties with all other actors. This approach takes a census of ties in a population of actors rather than a sample. Collecting information about ties between all pair of dyads, full network data gives a complete picture of relations in the population and a powerful analysis of the social structure. Unfortunately, this kind of collection of data is quite expensive and difficult so it has not so often application.

Another method of collecting network data is the *snowball sampling*: it begins with a focal actor or a set of actors and add all the other actors named by the first. The process stops when all the actors are identified or when the analysis decides to stop. Even if this method is very popular, it meets up with two main limitations: the first one is that it does not allow to identify isolate actors (those who are not connected with the others). Moreover, the method is influenced by the starting points, so if they are in the wrong place, it can miss some group of actors who are connected.

Sometimes, it is not possible or necessary to study the whole network. *Ego-centred network* data are usually collected from a sample of actors (egos) reporting on the ties with and between other people (alters). The relational system is then assumed to be composed of the sampled egos and reported alters and their ties, as well as possible additional actor and tie information. This kind of approach is quite effective for collecting relational data from very large populations and gives a good picture of the kinds of networks in which individuals are embedded. Moreover, even less than snowball or census

approaches, this approach gives some important information about the network as a whole: these data are micro-network data set, considering that they are samplings of local areas of larger networks. Like whole networks data, ego network data can also include multiple relations.

These relations can be collapsed into single networks or be treated as creating its own network. Unlike whole network analyses, which commonly focus on one or a small number of networks, ego network analyses typically sample large numbers of egos and networks.

The major difference between conventional and network data is that conventional data focus on actors and attributes; network data focus on actors and relations. So, the main difference between network analysis and other social science is not in the research tools, but in the special purposes and emphasis of the analysis. In fact, social network analysis allows to see, even in a graphical way, how actors are located in the overall network: nodes are compared not for their personal attributes, but for their position within the network. Moreover, network analysis is likely to look at the data structure "holistically", that means seeing how the whole pattern of individual choices gives rise to more holistic pattern.

3.1.4 Collection of data

Social network data can be collected in various ways. The most common approach is by means of questionnaires, but interviews, observations, and secondary sources are also frequently used network data collection methods (see also Marsden, 2005). In research utilizing ego-centred network data, it is important to obtain as complete a picture of the respondents' networks as possible, which requires special tools for helping respondents to delineate their networks.

A commonly used tool for this purpose is the *name generator*, which provides a clear definition of which persons known by ego qualify as a network member (or alter) of ego. Another method is the *position generator*, which measures linkages to specific locations directly: it asks to respondents whether they have relationships with persons in each of a set of social positions (defined by the analyst).

Referring to the specific aim of measuring ego's social capital, Snijders (1999) developed a more suitable instrument: the *resource generator*. It asks about access to a fixed list of resources, each representing a vivid, concrete sub-collection of social capital, together covering several domains of life. It has the same basic questionnaire structure as the position generator: the availability of each of these resources is checked by measuring the tie strength through which the resources are accessed, indicated by the role of these ties (family members, friends, or acquaintances). This instrument can be administered quickly, and can result in valid and easily interpretable representations of social capital, with possibilities for use in goal specificity research of social capital.

3.1.5 Guiding Principles of Network Analysis

The social network analysis deals with the choice of the socially-relevant nodes connected by one or more relations within the network. Any units, either individuals or groups, that can be connected to other units must be considered as nodes. One of the most tricky and interesting task of network analysts is to define which nodes to include in the network. Laumann et al. (1983) identify three approaches to cope with this *boundary specification problem*:

• The position-based approach: it considers as members of the network the belonging to a specific organization or holding particular defined positions.

- The event-based approach: population of the network is defined from the participation in key events, established by the analyst.

- The relation-based approach: it starts from a set of nodes belonging to the network and includes all the other sharing interests or relations with the previous one.

These three approaches are not necessarily alternative, but can be used combined to define network boundaries.

After having determined the nodes of the network, next footstep is to identify the relations between the nodes. Borgatti at al. (2009) have summarized the many kind of possible relations in four broad categories:

➢ Similarities: nodes are connected if they share some kind of attributes on which the variable-based approach are based on, such as demographic characteristics, attitudes, locations or group memberships.

➢ Social relations: these are the most studied by network analysts (Killworth et al 1990; Casciaro et al. 1999) and are based on kinship or other types of role relations, such as affective ties or knowledge.

➢ Interactions: this category refers to behaviour between nodes, that can be for instance speaking with, helping, inviting or meeting. Sometimes, affective-based measures are used as proxies for interaction-based measures.

➢ Flows: these relations are based on exchanges or transfers between nodes; the resources which flows within the network can be information, influence or something that often occurs within other social relations.

The perspective of the Social Network Analysis, giving the greatest importance to social relations, requires to know a set of assumptions about the description

and the explanation of the social phenomena. The most relevant assumptions are the three following:

- Relations (instead of attributes): traditional survey or research tend to sort individuals basing on their attributes and determine the outcomes common to individuals with similar attributes. This kind of approach interprets causation as a phenomenon which comes from within individuals: individuals are considered as independent units and their similar attributes produce similar outcomes. On the contrary, social network analysis considers causation a phenomenon not located in individuals, but in the social structure. In this perspective, individuals are classified not by their structural attributes, but by the position they have in the network: outcomes are caused by opportunities and constraints created by node's network positions. This is a network-based approach, which allows to consider patterns as a large of interacting units that shape one another's actions in ways that create particular outcomes.

- Network (instead of groups): although the social network approach is concerned with the definition of network boundaries, it is not interested in treating network embeddedness as binary and nodes as belonging to fixed groups. Considering that rarely every group member shares the same relation to the group, it is interesting to consider the importance of different levels of group membership or membership in multiple groups: for instance, the network members can be more or less committed, more or less tied to other group members, more or less recognized by others as members of the group. Considering the strength and nature of connections between nodes has three advantages: 1. Nodes as embedded in the network to many different degree and consequently subject to different

opportunities, constraints and influences; 2. Groups within the structure are not defined a priori, but empirically, examining variations in group structure; 3. Focus on not already identified groups but set of nodes and social relations within the structure.

- Relations in a relational context: social network analysis studies something more than relations between pairs. This means that the understanding and the analysis of ties between two nodes implies taking into account the whole pattern of ties within the network (Barnes, 1972). This approach considers the units influenced by the network they are embedded in.

3.1.5 Structural and Relational Indicators

Once nodes and relations are established and network data are collected, social network analysis calculate measures of the properties of network positions and network as a whole.

After having collected network data, social network analysis uses these data to calculate measures of the properties of network positions, dyads (two actors and their ties) and network as a whole. Properties of network positions include things such as the number of relations a node has and the extent to which the node is a bridge between other nodes (Freeman, 1979). Dyads can vary in the strength or reciprocity of their tie, the similarity of the two nodes (*homophily*), their content or the number of relation types they share (*multiplexity*).

In this work, we concentrated on either individual and collectively level of analysis, being interested in both features of single nodes and network as a whole. The social network analysis allows two kind of analysis: relational (which studies the relations within the network) and structural (which studies

features of nodes in particular positions within the structure). Studying properties of networks as a whole, some interesting indicators can be the proportion of dyads connected to one another (*density*), the average path length necessary to connect pairs of nodes, the average tie strength, the extent to which the network is dominated by one central actor (*centralization*), or the extent to which the network is composed by similar nodes (*homogeneity*), or nodes with particular characteristics, such as the proportion of network members who are women (*composition*).

Considering that our focus is whole networks, we sum up the most important network measures; for more on social network analysis methods, measure and statistics, see J. Scott (1991), *Social Network Analysis*. In the interpretation of results of network analysis, there are two different analytical levels, one referring to the interpretation of the whole network and some for the interpretation of individual positions. Eventually, clusters or components within the network can be analysed.

The social network analysis studies the basic properties of the nodes and the network as a whole; "there are good theoretical reasons (and some empirical evidence) to believe that these basic properties of social networks have very important consequences"(Hanneman R). The first set of approaches have to do with the idea of connectedness: for both individuals and for the network as a whole, connections can have important effects on mobilization of resources, influence, circulation of information and resolution of problems.

The indicators which express the level of connectedness among nodes and for the network as a whole are network size, nodes degree and density.

- NETWORK SIZE: this is a quite simple measure defined by counting the number of network members (nodes). The maximum number of nodes is

calculated as $g*(g-1)$, then the maximum number of ties within the network, L, is

$L = g(g-1)/2$ Undirected graph

$L = g(g-1)$ Directed graph

This is a basic property of a network, especially relevant if the focus is information sharing. Moreover, size is critical for the structure of social relations because of the limited resources and capacities that each actor has for building and maintaining ties. This indicator does not allow comparison between networks; considering that networks differ in size, a standardized statistic is necessary for comparing across networks.

- ACTOR DEGREE: the number of actors places an upper limit on the number of connections that each individual can have $(g-1)$. It can be quite useful to examine the distribution of actor degree, which shows how connected individual actors are. Since the data are asymmetric (that is directed ties), we can distinguish between ties been sent (out-degree) and ties being received (in-degree). The out-degree is the sum of connections from an actor to others and it is usually a measure of how influential the actor may be. On the contrary, the in-degree is the sum of the connections from the others to the actor, which means to look at the actor as a sink or receiver of information. Actors that receive information from many sources may be prestigious or powerful. For symmetric data (undirected graph), each node has simply a degree, as we cannot distinguish in-degree from out-degree.

- DENSITY: this is the most common measure for the general connectedness of the graph. The density of a binary network is simply the proportion of all possible ties that are actually present. For a valued network, density is defined as the sum of the ties divided by the number of

possible ties (i.e. the ratio of all tie strength that is actually present to the number of possible ties). Generally, density is calculates as the proportion of the number of the actual ties to the number of possible ties, that is the number of links divided by the number of vertices in a complete graph (every node is directly connected to every other node) with the same number of nodes.

$$\Delta = \quad 2L/\ g(g\text{-}1) \qquad \text{undirected graph}$$

$$\Delta = \quad L/g(g\text{-}1) \qquad \text{directed graph}$$

Generally, a density above the 60% is expression of a thick network. The density of a network may give us insights into such phenomena as the speed at which information diffuses among the nodes, and the extent to which actors have high level of social capital and/or social constraints. In fact, density is generally considered as an expression of the general cohesion of the network.

Because most individuals are not usually connected directly to most other individuals in a population, it can be quite important to go beyond simply examining the immediate connections of actors, and the overall density of direct connections in populations. The second major set of approaches have to do with the idea of the distance between actors, or conversely, how close they are to one another. In fact, some actors may be able to reach most other members of the population with little effort while others may have lot of difficulty; it may depend not only on the direct ties, but especially on the expansion of the individual range of connections which derives from the non-overlapping connections of the friends you are linked to. In this way of thinking, one major difference among social classes is not so much in the number of connections that actors have, but in whether these connections overlap or extent outward and provide opportunity.

From the point of view of the population as a whole, networks can differ in how close actors are to other actors, on the average.

There are many indicators referring to the concept of distance, for instance:

- REACHABILITY: an actor is reachable by another if there exists any set of connections by which we can trace from the source to the target actor, regardless of how many others fall between them.

- CONNECTIVITY: two actors are connected by way of either a direct or indirect pathways3 of any length.

- GEODESIC DISTANCE: it is the number of relations in the shortest possible walk4 from one actor to another.

- AVERAGE DISTANCE: in case of binary matrix, it is the average of the geodesic distance between all pairs of nodes; in this expression, it can be considered as negatively related to density.

- DISTANCE-WEIGHTED FRAGMENTATION: calculated as the proportion of pairs of nodes that are unreachable from each other, it refers to the connectedness of the network in terms of reachability to one node to another.

The most important network measures for the analysis if social structure are the centrality measures. Centrality is a set of structural attributes of nodes; as they are related to nodes' position within the network, they are a measure of nodes' prestige, importance or influence. Freeman (1979)

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3 Path is a walk in which each other actor and each other relation in the graph may be used at most one time. The single exception to this is the closed path, which begins and ends with the same actor (Hanneman, R. Introduction to Social Networks).

4 Walk is the most general form of connection between two actors in a graph.

developed basic measures of the centrality of actors based on their degree, and for the overall centralization of graph.

- DEGREE CENTRALITY: it is defined as the number of ties the node has, or in graph-theoretical terminology, the number of edges adjacent to the node. The degree centrality d(i) of the node i is defined as:

$$d(i) = \sum A_{ij} \qquad\qquad A_{ij} \text{ is the adjacency matrix}$$

In order to know the standardized value, the score has to be divided by g-1. If the network is asymmetric, the direction of ties become important; we distinguish between in-degree centrality, which indicates the others related to this node (sort of prestige or popularity) and out-degree centrality , which indicates a person who relates a lot to others (sort of influence). Nodes with low degree centrality may be peripheral players in the network; nodes with high out-degree centrality are supposed to have high influence on others. Referring to the measurement of graph centralization for the network as a whole, the measure expresses the degree of inequality or variance in the network as a percentage of that of a perfect star network of the same size. Remember that the star network is the most centralized or most unequal possible network for any number of actors. These are important measures of power in a network, but they do not consider that position in the network is important for the control and circulation of resources. In fact, degree centrality measures might be criticized because they only take into account the immediate ties that an actor has rather than indirect ties to all others.

- CLOSENESS CENTRALITY: it is another measure of centrality that calculate how an actor sits between others in the network, showing the

integration or isolation of network members. This approach emphasizes the distance of an actor to all others in the network by focusing on the distance from each actor to all others. It focuses on the distance of a member to all others in the network through means of geodesic distance. It can be calculated also as the reciprocal of this quantity:

$$Closeness_{n_i} = \frac{1}{\sum\limits_{j=1}^{g} dist\,(n_i, n_j)}$$

High closeness centrality indicates the greater autonomy of an actor, since it is able to reach the other members easily (and vice versa). Low closeness centrality indicates higher dependency from the other members.

- BETWEENNES CENTRALITY : it is defined as the number of ties a given node needs to reach another node. Stated in another way, it is a measure of the extent that a network member's position falls on the geodesic paths between other members of a network. As a mathematical expression the betweenness centrality of node is obtained as:

$$Betweennes_{n_k} = \sum_{i<j} \frac{g_{ij}\, n_k}{g_{ij}}$$

Thus, it determines whether an actor plays a (relatively) important role as a broker or gatekeeper of knowledge flows with a high potential of control on the indirect relations of the other members.

- NETWORK CENTRALIZATION is a network-level measure that quantifies how 'dispersed' the centralities of the actors are. This is a an operationalization of single nodes measure for the network as a whole. In its general form, network centralization is defined as

$$C_N = \frac{\sum\limits_{i=1}^{g} (C^*_{n_i} - C_{n_i})}{Max \sum\limits_{i=1}^{g} (C^*_{n_i} - C_{n_i})}$$

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where ci represents the centrality of an actor i, and c max indicates the largest ci observed in the network. Network centralization attains a maximum value of 1 when all actors interact with only one central actor in a star graph and it reaches a minimum value of 0 when all actors have exactly same degree centrality such as in a circle graph. When the measure is large, it means that few actors are highly central and the remaining actors occupy much less central positions in the network. Conversely, if network centralization is low, it means that the network is populated by actors who occupy similarly central positions.

Another importance centrality measure is eigenvector centrality, in the version proposed by Bonacich (1972).

- EIGENVECTOR: it is better understood as a variant of simple degree as it acknowledges that not all connections are equal. The idea comes from many scholars, Katz (1953), Alexander (1963), Hubbell (1965) who considered that having more degree does not necessarily imply being more important. It assigns relative scores to all nodes in the network based on the principle that connections to high-scoring nodes contribute more to the score of the node in question than equal connections to low-scoring nodes.

The most important version is that elaborated by Bonacich (1972) who defined centrality as the principal eigenvector of the adjacency matrix. An eigenvector of a symmetric square matrix A is any vector x which satisfies the equation:

$$x_{i_i} = \tfrac{1}{\lambda} \sum_{j=1}^{n} a_{ij} e_j$$

Where e is a constant (eigenvalue) and x gives the centrality of node i. The formula implies that the centrality of a node is proportional to the sum of

centralities of the nodes it is connected to. Thus, an actor that is connected to many actors who are themselves well-connected is assigned a high score by this measure, but an actor who is connected only to near isolates is not assigned a high score, even if she has high degree (Borgatti, 1995). The eigenvector centrality defined in this way accords each vertex a centrality that depends both on the number and the quality of its connections: having a large number of connections still counts for something, but a vertex with a smaller number of high-quality contacts may outrank one with a larger number of mediocre contacts.

3.2 Social capital and network indicators

This research is a methodological contribution in social capital measurement; the Social Network Analysis is used for mapping the social structure of two boroughs and for social capital description and evaluation.

There are some similar studies in Italy: for instance, Andreotti (2003), Piselli (2003), Barbieri (2003), Amaduro (2003), Chiesi (2003), Mutti (2003). All of those studies, concentrated on the evaluation of social capital in Italy, focus on bigger areas than the boroughs; this research is a contribution to fit this gap.

In social network analysis, the most prominent reference to social capital measurement is that of Borgatti, Everett and Jones (1998) who presented a review of social capital network measures, "Network Measures of social capital". This will be the main reference of our work.

Borgatti, Everett and Jones, starting from a network definition of social capital, review all the indicators for social capital measurement. The starting

point is that the substance of Putnam and Burt's approaches can be separated from the unit of analysis.

The field of application of social capital theory is the group, which is generally conceived as a universe, made of relationships, norms and systems, without any kind of consideration of the outside of the group. For instance, Putnam (1995) studied the decline of participation in volunteer groups within the United States, without considering the relationships with individuals in other countries; sometimes, groups analysed are not universes, but are embedded in their own social environments. If we are considering social capital of an association, we can refer to different social capital approaches. Basing on Putnam's view, the focus of the analysis can be on internal relationships within the association or the structure of ties or the common norms. On the contrary, taking Burt's approach, we can be interested in the relationships that the association (or its members) have with individual or collective actors outside of it.

So, if the unit of analysis is a collective actor within a larger system, we can look at either inside of the community (Putnam's approach) or outside of it (Burt's approach). Combining the individual versus group dimension of social capital with the inside versus outside dimension, Borgatti, Everett and Jones generate a 4-fold classification, as shown in table 3.1.

Table 3. 1. Different forms of social capital (Borgatti, Everett and Jones, 1998)

	Types of focus:		
Types of actor:	Internal	External	
INDIVIDUAL	A)	B) Burt (1992)	
GROUP	C) Putnam (1995)	D) Everett & Borgatti (1999)	

The cell A) refers to an atomistic conception of individual, without any reference to social capital (eventually to human capital). The cell B) refers to an individualist approach to social capital, just as in Burt (1992) and Lin (1986). The cell C) refers to collective-good vision of social capital, found in Putnam (1995), Bourdieu (1986), and most of Coleman (1988, 1990). The cell D) refers to a relatively new conception of social capital, mostly carried out by Everett and Borgatti (1999), who concentrate on relationships between cohesive sub-groups within a larger system.

Referring to external group social capital (cell D), there are two different types we are interested in: the first one refers to the group as a single entity and considers the relationships that the group has with other entities. Considering that the group in this way, this case can be assimilated to the cell B) and the measures are the same. The second one refers to the position of a group of individuals within the network (this does not concerned with our analysis).

In this analysis, we are presenting just the measure relative to box B and box C, because of the aim to study the relationships between the set of associations within the network and the features of associations in particular position within the network.

The first set of measures refers to box B): , closest to the verbal description of social capital, consists of the standard ego-network measures that are well known in the network literature (see Table 3.2). Note that in the table uses "ego" to mean the person whose social capital we are measuring, and "alter" to mean the persons that the ego is directly connected to. In this case- study, we can consider ego the single associations, and alter the associations our ego is connected to.

Table 3.2: Standard Ego-Network Measures for cell B) social capital

Name:	Description:	Relation to social capital:
Size/degree	Numbers of alters that an ego is directly connected to, possibly weighted by strength of tie.	Positive
Density	The proportion of pairs of alters that are connected.	Negative
Heterogeneity	The variety of alters with respect to relevant dimensions.	Positive
Compositional quality	The number of alters with high levels of needed characteristics	Positive

The second group (table 3.3) includes all the standard centrality measures; they differ from the those presented in table 3.2) because they require that the entire network be measured in order to be computed.

Table 3.3: Standard Centrality Measures for cell B) social capital

Name:	Description:	Relation to social capital:
Closeness	The total graph theoretic distance from ego to all others in network . An inverse measure of centrality large values indicate less centrality .	Negative
Betweenness	The number of times that ego falls along the shortest path between two other actors.	Positive
Eigenvector	The extent to which ego is connected to nodes who are themselves high in eigenvector centrality.	Positive

The next table refers to the internal measure for collective actors (table 3.4). It refers to version of social capital implicit in the work of Bourdieu, Putnam and others and contains all standard measure of network cohesion.

Table 3.4: Standard Cohesion Measures for cell C) social capital

Name:	Description:	Relation to social capital:
Density	The proportion of group members who are tied (with a "positive" relation, such as friendship, respect, acquaintance, past collaboration, etc.).	Positive
Average	The average (or maximum) graph-theoretic distance between all pairs of members.	Negative
Centralization	The extent to which the network is NOT divided into cliques that have few connections between groups.	Positive
Homophily	The extent to which members of the group have their closest ties to members who are similar to themselves	Negative

Even if there are not a general agreement on how to measure social capital with network analysis, the choice of nodes, relevant ties and structural features, there are a very large application of this paradigm in Italy.

Moreover, the most copious application of the paradigm is referred to social capital (Salvini, 2005). For instance, we can cite Andreotti (2003), Piselli (2003), Barbieri (2003), Amaturo (2003), Chiesi (2005), Mutti (2005).

In fact, as the great amount of research demonstrated, this paradigm is particularly suitable for a concept, that is social capital, which has its intrinsic nature just in social relations (see chapter 1).

3.3   Advantages and drawbacks for social capital evaluation

This thesis argues the advantages of using the social network analysis paradigm for the measurement of social capital, especially in a local and urban context such as the boroughs of Rome.

The first important aspect in formulating such a model for analysis of social capital is recognizing that the unit of analysis we are interested in is not the isolated individual – like in the approach of Coleman (1990) –, nor the theoretical group (household, community) or real group (group, organization) – like in the approach of Putnam et al (1993) – , but rather the *relationships* between them (Phillipson et al., 2004). By adopting an approach focused on relationships, the issue around the unit of analysis and the level of aggregation is no longer a methodological question (whether or not it is possible to aggregate social capital that *belongs* to individuals to account for social capital that *belongs* to the community), but rather a purely analytical question. In fact, if social capital is inherent in relationships, it does not belong to anyone.

The approach is an *integrated* conceptual framework, both structural and relational; it is *structural* if the conclusions are drawn from the study of network structures; it is *transactional* or *relational* if the focus is on the way in which the network operates. In all cases, however, social network analysis involves an empirical approach to examining the relationships between entities (individuals and groups) rather than their attributes, which is the focus of traditional social surveys.

Another advantage of network analysis is its potential application to address both individual and collective social capital, thereby capturing simultaneously the utilitarian and social integration value of the concept. In fact, in a network, the units that interact (the "nodes") can be individuals, groups, or organizations, and the research can address two levels:
• at the level of individual social capital, we can explore interpersonal relationships, that is, ties between individuals, or social participation, ties between individuals and groups or organizations;
• at the level of collective social capital, we can explore the associative dynamic by focusing on the intra organizational ties as well as ties that exist among groups and organizations, within a community and beyond a community.

One more advantage of network analysis is its potential applications to investigating both the *presence* and the *functioning* of social capital. Two components of networks can be used to estimate the value of social capital: the *structural component,* which gives an idea of the presence of social capital by documenting the possibilities of access to resources depending on the relational structure within a social network; and the *transactional component,* which sheds light on the functioning of social capital and the resources actually produced and made available to social actors (Lévesque, 2004).

Network analysis has advanced a series of indicators (size, density, diversity, centralization, proximity, frequency[*]) used to provide an idea of the quantity and quality of social capital based on the identification of certain structural elements of social networks. Measuring the social capital of an individual or a group does not mean attributing a value to all the resources that the members of a network can access. The emphasis is, rather, on those resources that are useful in a particular situation and that can be mobilized at a given time.

Indirectly, then, the focus is on the *utility of specific resources* and their *potential accessibility.* In certain situations, the fact that several members of the same network possess the same resource does not increase the value of social capital of a member who needs this resource, as a single member is often able to respond to this need.

Social network analysis is a potential tool for social capital monitoring and evaluation as it is able to show the relationships that develop between individuals, groups and organisations over time. As the number of networks increases, there are more resources available to communities, which will hopefully lead to an improvement in the well being of communities.

This is an integrated approach which allows to overcome the distinction between individual and collective social capital and structural and relational approach. Besides, social network analysis is at the same time a qualitative and quantitative methodology, connecting the evaluation of informal resources with statistical indicators.

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[*] For a much more extensive list of social capital indicators based on an in-depth analysis of networks, please consult Borgatti et al. (1998).

We can conclude saying that an operational framework based on social networks is particularly useful, because it offers a concrete entry point to the concept of social ties at both the individual and community levels. Using networks of social relationships as the entry point opens up the possibility of looking at the relational aspects of various spheres of life, including the sphere of participation (relationships among family and friends, wider social relationships, work relationships, community relationships, networks of contacts, business networks, local networks, co-operation networks, partnerships, joint action, etc.), which are very important for the empowerment and well-being of a person. This methodology is compatible with the collective capability approach.

Chapter 4: The case study: a social network analysis in two boroughs of Rome

4.1 Introduction

The wide literary review of social capital carried out in the first chapter has demonstrated that for social capital, because of its feature of complexity and multidimensionality, there is not agreement on a universal definition. In fact, many authors dealt with the subject of social capital in very different ways, depending on their personal background and objectives of the research. This first consideration allows us to deal with the empirical part of this work, the social network analysis in two boroughs of Rome, with an innovative approach. First of all, other similar social capital measurements do not exist; all the measurement existent are based on bigger unit of analysis than the boroughs. Besides, the extant work on the social capital of Rome has been conducted through a different methodology; this is the first social network analysis of Rome aimed at the assessment of social capital. Starting from these two considerations, we are able to base our work on a definition of social capital created ad hoc for the context; the innovative unit of analysis and methodology allow us a certain flexibility at both theoretical and operative levels.

In the second chapter, we discussed the most important problems about social capital measurement, which have led us to these three following conclusions:

The existence of a very wide range of different methodology for social capital measurement comes from a big confusion about social capital definition.

The methodologies adopted for the measurement are generally suitable for the aim of the analysis; as a consequence, these measurements, different one to another, have not a general value that allows comparative analysis.

Most of the quantitative analysis of social capital, like principal component analysis, factorial analysis and linear regression, are based on census or sampled data referring to wider areas than the boroughs. The information got from those studies are not significant for smaller areas, like the boroughs are.

In the analysis of the role of social capital in growth and development, we are convinced that social capital is a key element for the improvement of the well being of communities and people.

Referring to the observations of Portes (1988), most sociologists refer to social capital as an individual attribute, that is the individual capacity to use the personal networks in which the person is embedded in to achieve goals. This is also the general approach of Coleman (1988).

In this work, on the contrary, we are interested in the political scientists' approach, focused on the concept that social capital is a property of the economic system, national or local. In this view, social capital is conceived as a collective good, which gives benefits also to people not embedded in the social network.

Despite the wide range of criticism about Putnam's work, analysed in depth in the first and second chapter, he is the first reference of this thesis. In fact, the American politologist, starting from the theory of Coleman and the rational choice, defined social capital as a feature of the community which determines the efficiency of public policies (Putnam 1993).Having already discussed his thought, it is sufficient here just to underline the point of contacts and distance with our work.

The analysis of social capital through the mapping of social network of collective actors, associations in our case, allows the analysis of both the structural and the relational features of the social system in analysis. As a consequence, the focus is not only on the individual node or its attributes, but also on the general features of the system. In fact, in the social network analysis, there is a close relation between the features of individuals and the structure of the network the actors are embedded in; they influence each others. In this meaning, the definition of social capital on which this work is based on is à la Putnam, in the consideration of social capital by the socio-economic system as a complex.

Taking suggestion by the approach of Nan Lin, our social capital is not located neither in the individual nor in the economic system, but it inheres to the relational structure between interacting actors. This is a collective approach, relational and structural, which considers social capital as embedded in the social networks within a territory.

The unit of analysis taken into consideration are the associations, of the third sector, no profit, resident and active in the area. Also in this kind of choice some references to Putnam can be traced, for the importance given to associations (1993, 1995) for the civicness of the community. Another point of contact with the Italian work is the kind of associations chosen; they are the "putnamian" associations, in the meaning that Knack and Keefer (2003) referred to about the Putnam-Olson debate, which include cultural, artistic, sports and musical associations with social purpose.

About the limitations and the controversial effects of associations we have already discussed in the second chapter. The important point is that this work is based on indicators of associational life which are innovative compared to the traditional ones; instead of the index of membership or number of voluntary associations, we will concentrate on the interactions between

associations of the same area. In this last meaning we want to define social capital, as *a network, more or less stable, of relationships between no-profit associations, which operate within the territory and have an impact on the socio-economic structure of the area.* This definition is quite similar to that given by Mutti in 1998 (look at chapter one).

One of the most relevant criticism toward the collective approach to social capital is that summarized by Portes (1998); considering social capital in this way, there is a great confusion about social capital means and consequences for the economic development. Moreover, looking at the economic system instead the individuals does not allow to distinguish between causes and effects of social capital.

This work aims to overcome these difficulties; fist of all, the choice of the methodology, the social network analysis, does not allow to give causal explanations. *The aim, in fact, is to catch, more than causal explanations, the existence of the concept, in the meaning of social capital we have given to it before.* The evaluation of the social structure, then, can take us to make some hypothesis about the impact of associations to the socio-economic conditions of the area. In doing that, social capital will be evaluate through the structural network measures, like centralization and density, and the role of nodes in particular positions will be taken into account.

The level of analysis is the boroughs of Rome; unfortunately, lack of time impeded us to study the whole of them, but only concentrate on two.

Our case-studies are the XI and XVI boroughs, because of similar socio-economic conditions they share. In fact, we would like to inhibit the effect of income, which would have been one of the most important reasons of the difference in their social structure. As we will explain later, the two boroughs have a similar composition of population, density, income and share of

foreigners. Starting from a similar endowment, the impact of the social structure can be better evaluated.

The research question, in the empirical part, will be focused on the structural and relational evaluation of social capital, at a *meso* level of analysis; the comparison between two different social networks will be a good way of questioning and answering on important socio-economic problems. We consider the social structure of a territory a key element to describe and explain its development.

We are aware of the limitations of this research, but we want to give a methodological contribution to open the way to the social network analysis in Rome. Moreover, we are convinced that such analysis, particularly in the two boroughs which have highly contribute to the history of the city, is a good way to orientate the local policies toward more efficient objectives, especially after the new autonomy given to the local institutions.

4.2 Rome and the process of modernization of the last thirty years.

4.2.1 The socio-economic situation of Rome: a city of lights and shadows

Rome is a huge city, both for expanse and population: in 2007, the population of Rome was 2,718,768 per 1,1290 km/square of territory (Municipality of Rome, 2008). Its number of inhabitants was equal to the half of those of some European countries, just as Denmark or Finland and its area is equal to the sum of eight of the most important Italian cities (Milan, Bologna, Turin, Genoa, Naples, Florence, Catania and Palermo). Rome is the Italian largest and most populated municipality.

Within this large city, there are many different cities: they are the nineteenth boroughs of Rome, which mix and merge together to turn into a big metropolitan city able to produce the 5% of the GDP of Italy. Some of the Roman boroughs are so extensive and different one from another that they deserve a individual treatment. This is one of the reasons of the choice of social capital evaluation for the city of Rome at the borough level.

Over the last thirty years, Rome experienced a very deep change that has involved the economic, the social and the political structure; from the 1990s, a new local governance and sub-regulation model emerged and turned into a new socio-economic economic of the city (De Muro, Monni, Tridico, 2007). This new structure, similar to most of the metropolitan areas in high-income countries, is characterized, on the production side, by the predominance of the advanced tertiary sector, the so called knowledge-based economy, based on information and communication technology, mass tourism, finance, advanced services, culture and R&S, which produce most of the GDP of the city. On the political side, the model is characterized by a more democratic governance: new forms of participation and institutions, also because of the institutional reform which has given more power to the local authority, experiments of participatory budget, socio-economic forums ("Patto per Roma"), decentralization, political rights for immigrants (right to vote for migrants in the local councils), multicultural, social and urban policies and similar practices has made the city more democratically governed.

This change was coupled with a strong economic growth; in 2005, its GDP was €94.376 billion Euros (Rapporto Censis 2006), which is 63% of the regional GDP and 6.7% of the national GDP (more than any other single city in Italy).During the period between 2001-2005, Rome has grown much faster compared with the rest of Italy (its GDP was 4.1% as against 1.4% for Italy) and its unemployment rate, lowered from 11.1% to 6.5% between 2001 and

2005, is now one of the lowest rates of all the European Union capital cities. Rome grows +4,4% annually and continues to grow at a higher rate in comparison to any other city in the rest of the country. According to Censis (2006), economic growth in Rome over the last years was determined by the five main factors, that are: the increase in production, following reduction of the obstacles to entrepreneurs; the improvement of the tertiary sector; the increasing role of utility firms; the reconstruction of industrial sectors (particularly electronics, biotechnologies, construction and financial sectors); the role of the city as the Capital also for cultural events and education.

On the political side, the model is characterized by a more democratic governance: new forms of participation and institutions, experiments of participatory budget, socio-economic forums ("Patto per Roma"), decentralization, political rights for immigrants (right to vote for migrants in the local councils), multicultural, social and urban policies and similar practices has made the city more democratically governed. This process of democratization has been determined from two main factors: the institutional reform in Italy and the local governance of the city. From one point of view, this process in in line with the reform of decentralization adopted by the Italian legislature (in particular, this is the case of the laws enacted between 1997 and 1999). These laws provided for the transfer of administrative competences from the centre to the periphery, effectively prefiguring a comprehensive reform of the organization of ministries and their peripheral offices. From the internal point of view, after the turn of 1993, the centre-left coalition led by Rutelli and then Veltroni carried out a rhetoric idea of Rome as a community, creating new tools and forms of participation.

On the other side, this multi-speed development has gone with some effects of "opulence-related distress" (Regione Lazio, 2002). Although such a mode of production was functional to the economic growth, it has produced uneven

or multi-speed development: forms of social exclusion, a stronger polarization, too much flexible and precarious work; the dark sides of this strong growth is mostly due, more than shortage of resources, to lack of opportunities, social occasions, inclusive social relations and lack of adequate local institutions. In fact, despite the big growth of the city, this progress has involved almost exclusively the intellectual elites and the higher educated, leaving the most vulnerable social bracket at the margins of the process: the poor, precarious workers, migrants and citizens of the turndown areas do not gain benefits from the modernization of the city.

This situation can be better understood through the use of the human development approach which analyse the change not only by the income but also by people's capabilities point of view (De Muro, Monni, Tridico, 2008). In doing that, we can look at some human development indicators for the city of Rome (the traditional dimensions of HDI are not available; there are only few attempts in this direction, e.g. Monni, 2002).

One important dimension to be considered is employment; in fact, most literature agree on the role of employment in enabling people to live a decent standard of living, not only in terms of goods and services provided, but also by the social and human dignity point of view (Sen, 1999). Labour market of Rome performed better than Italy as a whole; during 2000-2006, the employment rate increased by 6,5 % (against the 2,4% of Italy) and the unemployment rate decrease by 4,6% (against the Italian average of 7,5%)- data from Comune of Rome, 2006.

Another important dimension to be taken into account is education. In fact, both UNDP and one of the leading author of the capability approach, A. Sen, consider education as a key element to promote human development and improve opportunity of people; of course, if in low-income countries, it is sufficient to read and to write, for high-income countries it is necessary to

reach a high level of education for the exercise of freedoms. With reference to the Roman case, data about secondary and tertiary education are suitable to capture this dimension of human development. From 1991 to 2001, people with a master degree increased from 8,6% to 13,3 % and the difference of gender attenuated a lot; moreover, in that period, the educational rate increased by 4,7% in Rome against the 2,7% of Italy. Pertaining to the secondary level of education, the results are similar, although the high school rate increased more for the country as a whole (8,3%) than for the city of Rome (7,2%).

For this two component of human development, employment and education, the results in terms of GDP are confirmed by the performance of our analysis of human development. In processes of growth and development, the main thing is distribution; so in our case it is significant to understand if the positive results have involved the entire territory of Rome. To this end, a work of Passacantilli (2003) found that economic growth and especially human development varied a lot within the boroughs of Rome; in particular, education and longevity show a bigger variance between boroughs than income (see table 4.1).

These results are particularly important to show that sometimes, and also in the case of Rome, an analysis in terms of income can hide, or underestimate, important aspects of inequality (De Muro, Monni, Tridico, 2007). Indeed, considering more dimensions than income, the differences between the boroughs increase up to show two different cities in Rome. The first one is that of knowledge-based economy, culture and social involvement. The other one is that of weak side of population, which lives in a marginalized, corrupted, poor, precarious part of Rome.

Table 4.1. The Municipal Human Development Index in Rome

Boroughs	Index of access to resource	Index of Knowledge	Index of longevity	Municipal HDI
1	0,839	0,530	0,968	0,779
2	0,938	0,678	1,000	0,875
3	0,878	0,596	1,000	0,825
4	0,839	0,552	0,823	0,738
5	0,763	0,412	0,664	0,613
6	0,766	0,373	0,821	0,653
7	0,734	0,323	0,784	0,613
8	0,743	0,274	0,651	0,556
9	0,838	0,517	0,871	0,742
10	0,795	0,437	0,754	0,662
11	0,873	0,553	0,838	0,754
12	0,876	0,639	0,708	0,741
13	0,818	0,484	0,671	0,658
15	0,789	0,418	0,768	0,658
16	0,845	0,556	0,868	0,756
17	0,875	0,602	0,937	0,805
18	0,802	0,486	0,840	0,709
19	0,813	0,494	0,840	0,716
20	0,860	0,610	0,771	0,747
Rome	0,815	0,492	0,800	0,702

Source: Passacantilli (2003)

Besides, the results of human development index of Passacantilly are confirmed by the Socio-Economic Awkwardness Indicator (SEAI) created by the Region of Lazio and based on a wide range of socio-economic issues (see table 4.2).

Also these results confirm that the central-western boroughs perform better than those of eastern and peripheral ones, which have not gain from the Roman new economic model. Also some data referring to Gini coefficient (INPS, 2005) confirm that inequality of distribution of Rome is the highest among the Italian provinces and the country as a whole; in fact, the Gini

coefficient for Rome is higher than the average of Italy (0,476 against 0,41)and the median (15,259) is lower than that of other Italian cities, like Milan (18,150), Turin (17,144) and Bologna (16,974).

Besides, with concern to the median value of income per-capita, Rome is not the richest city of Lazio and has growth rate lower than the average of Italy.

Table 4.2 Geography of the Socio-Economic Awkwardness Indicator (SEAI)

Boroughs	SEAI Min 0-Max 100, The lower, The better
1	50,8
2	29,9
3	35,3
4	57,8
5	51,4
6	61,4
7	65,2
8	73,6
9	40,8
10	59,7
11	44,4
12	45,6
13	62,0
15	67,1
16	51,8
17	52,4
18	52,4
19	49,2
20	49,2
Rome	52,6

Source: Regione Lazio (2002)

All this discussion and analysis of data have confirmed that the new socio-economic model of Rome has brought out growth but not development; only a small part of population, concentrated in the central or residential boroughs, have benefit from this process; the major part of population, concentrated in the more peripherical boroughs, suffer even more from social exclusion,

poverty and social problems, even in a different form. Modernization of the last thirty years has produced a process of urban polarization and has pushed the periphery to be even more isolated.

The rhetoric aim to replace a city for a community and the process of democratization, so promoted by politics and media, have just produced an imaginary version of the city, very different from the sad reality (AA.VV, 2007).

4.2.2 Social capital and network in the forms of participatory democracy.

The reform of the public administration, started in 90s, has produced lot of modifications in the political-institutional picture (act 142/'90 and 81/'93) in the organizational-administrative picture (act 59/'97 and 127/'97) of the local institutions; in particular, the reform has tried to overcome the gap between the administration and the citizen, attributing to the local government new competence and favouring a more involvement of the citizenship into the elaboration of the public policies. Starting from the example of Porto Alegre in Brazil, a wide of range of politics of participatory democracy have started to spread with the common purpose to improve the participation of a even more large of population.

There is not a unique definition of participatory democracy; despite that, we can say that it inheres to every kind of politics aimed to increase the basis of the participation to the more possible number of people. The most important examples are Porto Alegre, Argentina, Mexico and Venezuela. In Italy, the only example can be found at Grottamare (AP), Pieve Emanuele (MI) and in the XI borough (RM), from 2003.

The importance of participation is linked to the renew interest toward the concept of social capital and social network in the improving of economic and social development of a territory.

In front of the globalization of goods, services, finance and people, a new need to reply to the spread individualism and social chipping was born, to find a solution where the national governments seem to be unable. Problems like the gap between the individual and society, the new needs expressed by the community and the insertion of people in public life, find their reply in the creation of a point of connection, called social capital, able to coordinate the single actions and promote collective action. The creation of social networks and the promotion of collective participation are two sides of the same coin, a bottom-up process which represents an efficient solution to corruption and dispersion problems.

The linkages between these two phenomena is demonstrated by the fact that they improve each other; in fact, the experience of Porto Alegre has gone with the increase of the number of social and collective organization within the territory (Allegretti 2003).

Taking these reflections into account, this research is based on the belief that the presence of a stable network of associations within a territory is able to increase, promoting cooperation and participation, the economic and social performances, and improve the institutional structure of the territory. It did not happen by chance that the just XI borough, which has the highest number of association of Rome, has been the first case in Italy to experience the participatory balance.

4.3 The boroughs XI and XVI: description of the context

The case-study of this thesis is based on two boroughs of Rome, the sixteenth and the eleventh. After having explained the features of these two areas, we will explain the reason of this choice.
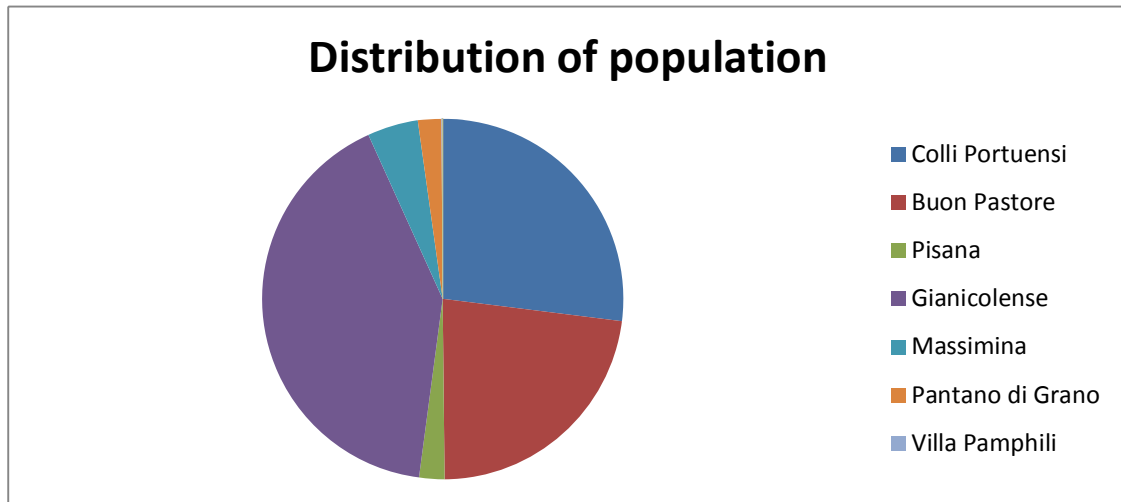
Borough XVI

Area	73,12 Km^2
Population	141,503 (2007)
Density	1,921 Km^2

The XVI borough of Rome is a real city; it is an area of about 73 Km/square which extends in the west of the metropolitan city of Rome.

Not only the whole city, but also the single boroughs are very heterogeneous from one area to another. This borough is a very particular case because within its territory there are very different situations: there are some of the oldest and richest areas of the city, like Old Monteverde and some of the poorest areas of Rome, like Massimina and Bravetta. Just for this situation, a more adequate classification of the borough has been done, dividing the areas in some micro-cities on territorial and sense of belonging criteria. Nine micro-cities have been individuated, that are Portaportese, Monteverde Vecchio,
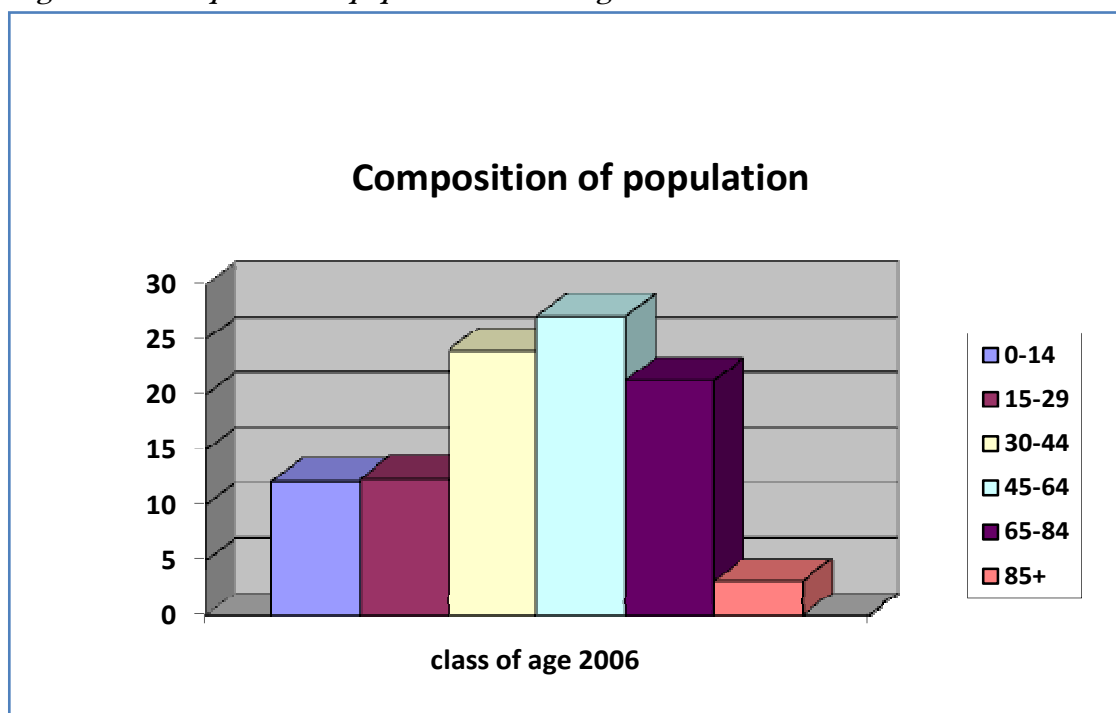
Monteverde Nuovo, Colli Portuensi, Valle dei Casali, Bravetta/Pisana, Aurelia, Consorzio Diamante and Massimina.

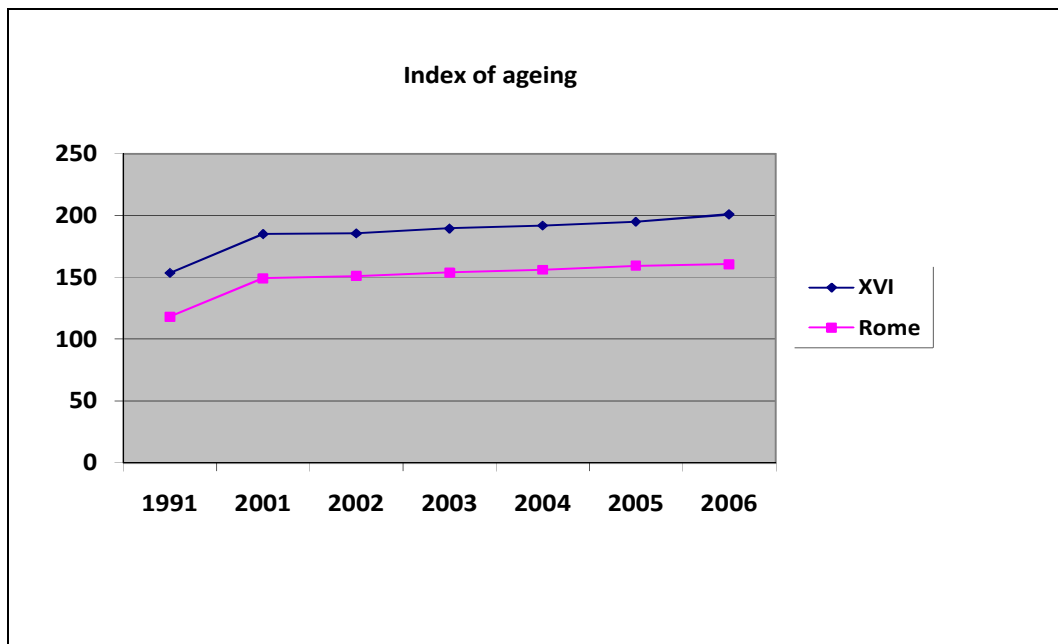*Figure 4.1. Distribution of population of borough XVI*

Source: Municipality of Rome, 2006.

Figure 4.2. Composition of population of borough XVI

Source: Municipality of Rome, 2006.

Figure 4.3 Index of ageing borough XVI

Index of ageing

Source: Municipality of Rome, 2006.

The borough has a population of 141,503 inhabitants (Municipality of Rome, 2007), whereof the 8,3% are foreigners. The incidence of foreigners is under the average of the city. This population has the specificity to be older than the average of the city as a whole (46,2 years against 44,2 for the city): the share of people with more than 65 years old is more than 24% and the index of old age is much higher than the average of Rome, to be more precise is 201,5 against 163,1. The index of economic dependence has highly grown from the 1991 (36,2%) to the 2006 (57,2%). The reason of this composition of population is that the borough extends in very old areas of the city; in these zones, the price of the houses are very high (from 1994 to 2003 the prices of property market has grown of the 16%) so the areas does not attract young population. In fact, elderly people are concentrated in the historical area, like Gianicolense and Villa Pamphili.

Referring to economic development, the situation of the XVI borough is quite complex. Unfortunately, there is a lack of data about the average income and the income pro capita. Without any doubts, the territory is very heterogeneous so no single number could be able to give a realistic overview of the situation in the different area within the borough. As we said before, there are some rich areas, like Monteverde Vecchio and Nuovo, where the houses market prices are very high mostly occupied by senior residents and areas, like Massimina or Bravetta, where there are many social problems, like the garbage dump of Malagrotta and people very poor.

With regard to the human development, the XVI borough ranks at the fifth place in the classification of the nineteen boroughs (Passacantilli, 2003); for the SEAI its score is a bit worse because of the value just under the average of the city as a whole.

The other borough chosen for this case-study is the eleventh boroughs, which is located in the south-east of the city.
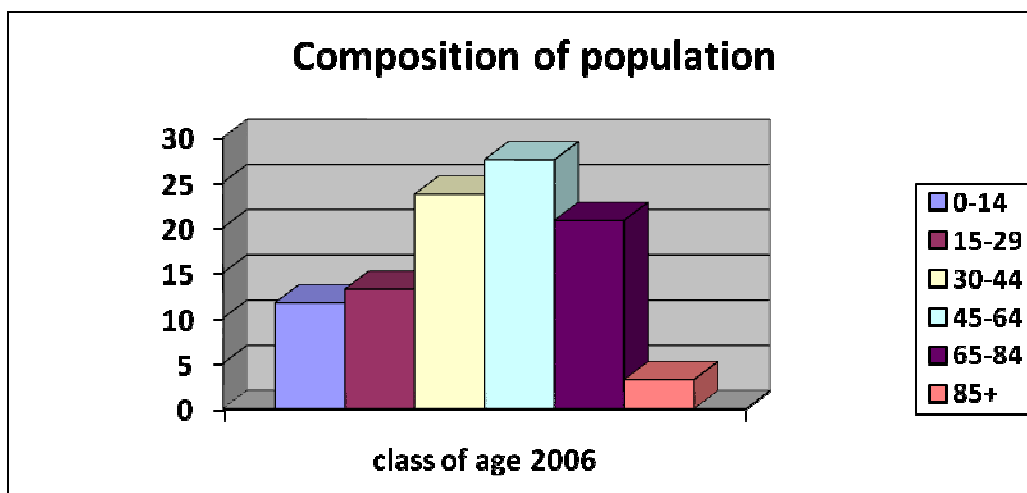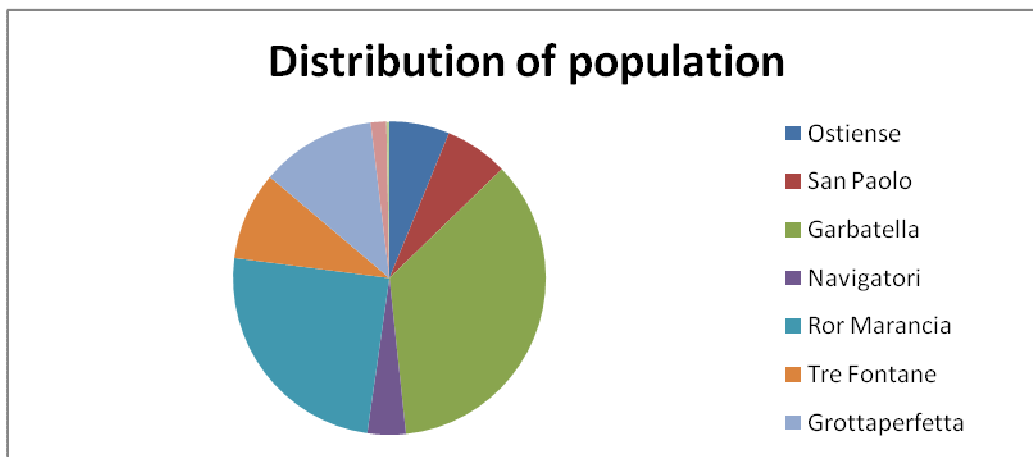
Borough XI

Area	47,89 Km^2
Population	136,588 (2007)
Density	2,815 Km^2

The XI borough is located in the south-east of Rome; it is an area of about 48 Km/square (3,7% of the municipal surface) which includes both historical districts born between the two World Wars, like Garbatella and Tor Marancia, and relative areas, like Roma 70 and Laurentino 38, as well as San Paolo, Grottaperfetta and Ardeatino. Just for the historical reasons, the XI borough includes many different areas within its territory.

**Figure 4.4. and Fig 4.5 Distribution and composition of population of borough XI**

Source: Municipality of Rome, 2006.

The borough has a population of 136,588 inhabitants (Municipality of Rome, 2007), not so densely populated (2,815 Km2). The most densely populated area is Garbatella. The presence of foreigners is the 8,6% (2007); although this

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incidence is under the average of Rome, the trend is un upward trend, considering that the percentage has grown from the 3,9% (1997) to the 8,6% (2007).

The demographic balance is negative considering that from 1971 population has reduced of the 9% and the number of elderly people has been constantly increased. In fact, the composition of the population is quite interesting to study; the average age of people is about 44 years old but the index of oldness is much above the average of Rome (203,6 for the XI against of 163,1 for Rome).

Fig. 4.6 Index of ageing of borough XI
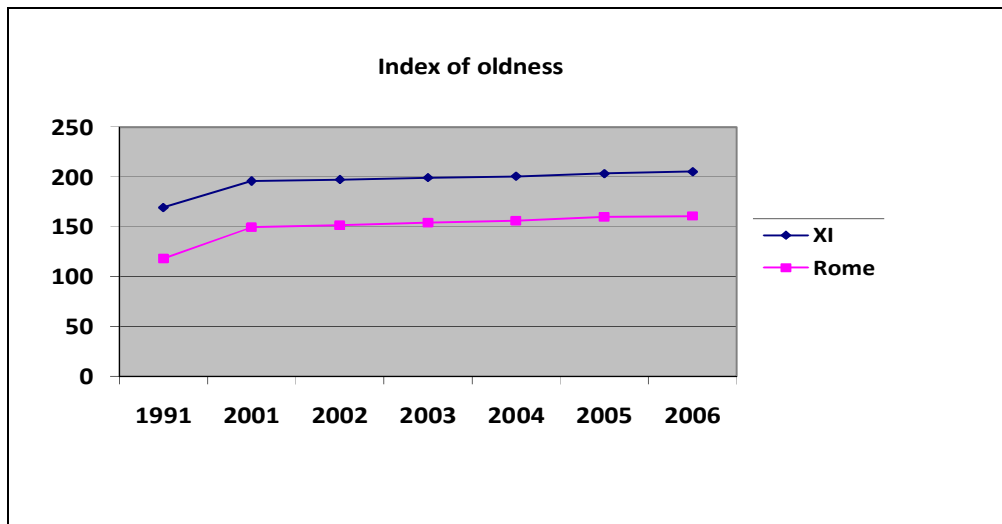
The same result is for the index of dependence of population has increase a lot in the last fifteen years (39% in 1991 to 55,5% in 2007), going over the average of the city (51%).The presence of elderly people is particularly high in the historical neighbourhoods, like San Paolo, Garbatella and Navigatori. This situation, so similar to the previous one, is mostly due to the presence of very old and popular areas of the city, like Garbatella and Ostiense, typical of elder residents.

The economic situation of the borough is not so different from the XVI; popular and rich areas live close to each other in the same territory. Although data about the income do not exist, we can cite use some indicators considered as proxies of the economic situation. One of them is the price of property market; from 1994 to 2003, it has growth of the 9,2% and actually the prices of property market are very similar in the two boroughs. Moreover, if we look at the available income in each areas of the city, we can see that zones 26 and 27 (which belong to the XVI) and 23, 24 (which belong to the XI) are considered in the same brackets, which reflect at average the internal difference within the borough (see table 4).

Figure 4.7: Available income per capita per areas in 2003 (in thousands of €)
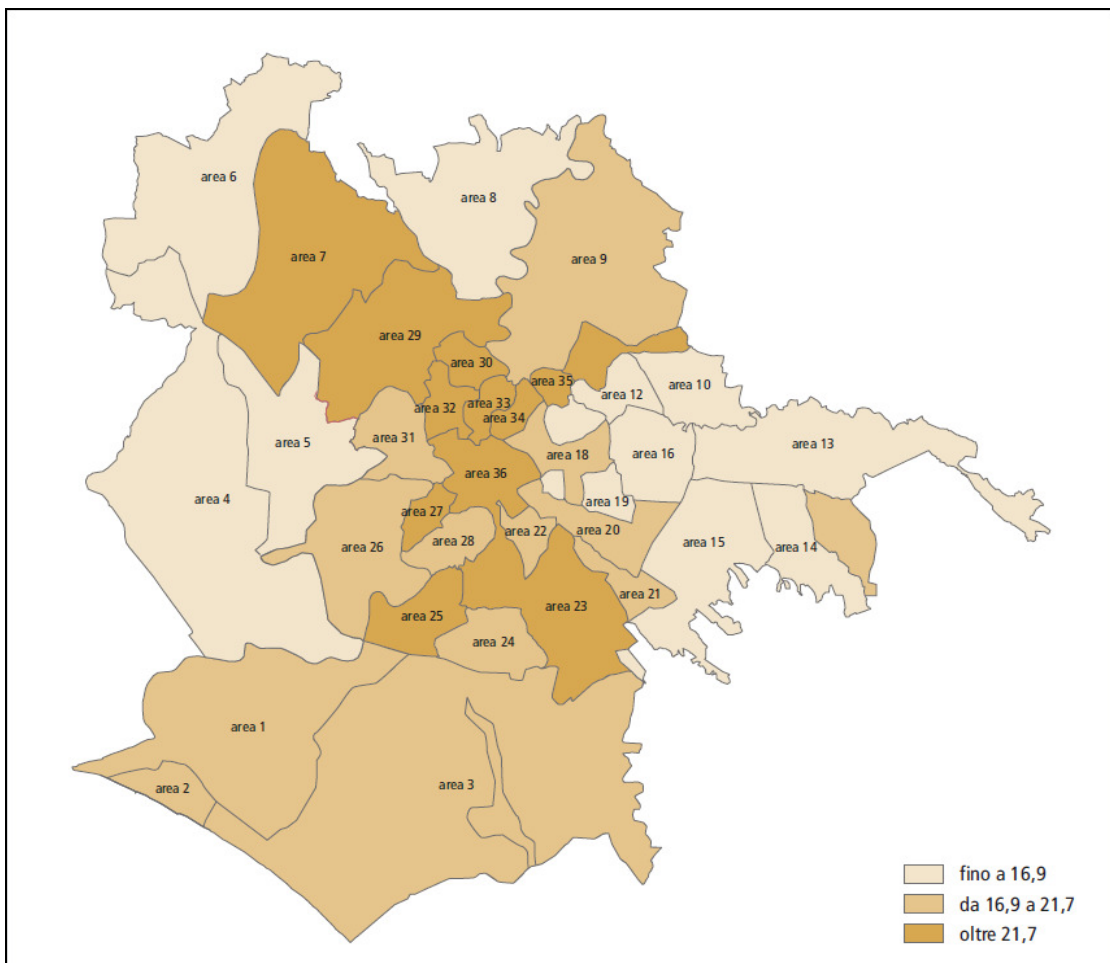
Source: Region of Lazio- Tagliacarte Institute.

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With regard to the human development, the XI borough ranks at the sixth place (just under the XVI) in the classification of the nineteen boroughs (Passacantilli, 2003); for the SEAI the XI shows a good score, it is at the fourth place in the classification, much higher the Roman average (see table 4.1 and 4.2).

This borough distinguish itself for the will, from both bottom and top, the participation and the cooperation within the territory. This will has been expressed from the governance of the Municipality, the left since 1997, which joins the Genoa Social Forum of July, 2001, underwriting the chart of Porto Alegre, participating to the Word Social Forum of 2002. In fact, the municipality has started many politics aimed to the participation of the citizenship: Social Balance, institution of some neighbourhood committee, and, above all, the Participatory Balance.

4.4. The Social Network Analysis in Rome

4.4.1 Methodology, sampling and interviews.

In the beginning of the chapter, we have explained the reasons of the choice of the two boroughs between the nineteen boroughs of Rome. After having explained their features, we can conclude that, in spite of some differences, they are quite similar to each other (see table 4.3)

Table 4.3 Socio-economic structure of boroughs XI and XVI

	XI Borough	**XVI Borough**
Surface	*47,89 Km²*	*73,12 km²*
Population	*136,588*	*141,503*
Density	*2,815*	*1,921*
Index of ageing	*203,6*	*201,5*
Index of economic dependence	*55%*	*57,5%*
Incidence of foreigners	*8,6%*	*8,3%*
Property market prices	*2143*	*2187*
Average available income	*22,005*	*19,861*
HDI index	*0,754*	*0,756*

Looking at these data, we can understand the reasons of the choice of the case study; this is in line with the aims of this research to describe and discuss the role of the social structure for the socio-economic well-being of the community, excluding the impact of income.

The methodology adopted is the social network analysis; the methodological assumptions, the most important network indicators and the relevance for social capital evaluation have been exposed in the third chapter.

This research focuses at a *meso* level of analysis represented by the associations of the third sector, no profit, which live and operate in the boroughs. The choice is justified by a great amount of literature, fist of all by Putnam

contribution (1993;1998), which underline and demonstrate the great importance of association in social capital formation and accumulation. In particular, our point of view is in line with Putnam ones in the debate with Olson (see 2.3.2) considering that associations as musical, sports, cultural ones, contribute in creating and spreading social capital because of their purpose of public interest. For these reasons, we chose the *Putnamian* associations as the nodes of our networks.

This choice reflects also a practical problem, which is the impossibility in term of time and cost for a single person (me !), to interview the whole or part of people living in the two boroughs. Thus, the idea of concentrating on the associations, even in consideration of the great popularity in social capital literature. The objective problem of this kind of analysis is that it is almost impossible to know the exact number of the population of associations of third sector which operate in a boroughs; the list of those registered at the Municipality or Region is not reliable at all because some included do not exist or operate yet while some other very active in the territory are not comprised in the list.

Considering all these limitations, we elaborated a experimental way of action to sample the associations. We adopted a sort of two-stages snowball sampling. At the first stage, thanks to the suggestion of the President of each of the two boroughs, we have singled out some active and significant associations which are located and operating within the territory; we started interviewing this core group of associations identifying other associations to whom the core group has a tie; at the second stage, we asked to the alters identified in the first stage to list the associations to whom they are related. Unfortunately, for time restrictions, we might stop the research.

Even if we did not succeeded in mapping the whole network of associations, we are quite sure to have caught the most important realities of the two

communities combining the knowledge of the local authority with the experience of the associations which live and operate in the community. Despite that, our samples have not any scientific reliability.

From all the associations collected in this way, we submitted a questionnaire, worked out for this research, only to the ones with the following features: resident and operating within the borough, no profit, third sector. In this way, we have been drawn the map of the informal social structure, based on collaborative and social utility purposes.

Of course, as we have already said, this work is a methodological contribution, with the aim to apply the paradigm of network analysis to the assessment of social capital of the boroughs of Rome. There are lot of limitations of the analysis and the important forward footsteps that will be discussed in the conclusions.

The questionnaire submitted to the associations is divided into three parts:

1) Structural data: attributes of the association, like members, age, typology.

2) Relational data: every kind of linkages between the associations of the same borough.

3) Perception data: data referred to the perception of trust (vertical, horizontal and intermediate), safety and collaboration.

All this information has been used to describe the network structure of the two boroughs and explain the difference in the two network's structure and functioning.

4.4.2 Network indicators

Within the five level of network analysis suggested by Wasserman and Faust (1994), this analysis is focused on the individual and the global level.

The individual level examines the relationships within the nodes relative to one another. In doing that, we used the three centrality measures discussed by Freeman (1979), that are:

- Degree Centrality: The number of edges incident upon a node; the nodes with higher degree scores are the associations with a greater importance in terms of the volume of ties activated within the network;

- Betweeness Centrality: the extent to which a node lies between other nodes; this measure captures the extent to which a node is a conduit for information, or to which a node can control the flow of information.

In the case of social capital, it is worth considering not only how many nodes a node is joined to or how many times a node occurs in a path between other nodes but also how important those nodes are, in terms of the quality of their connections. For this reason, we considered the Bonacich centrality measure (1972), which is:

- Eigenvector centrality: it is calculated using the general formula (discussed in chapter 3) by considering the largest eigenvalue and its associated eigenvector[5].

The global level of analysis considers the network as a whole. The second group of our measures operate at this level. The first two global measures are

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[5] Bonacich based his centrality scores on the largest eigenvector/eigenvalue pairto preserve the most variation from the original data in R but, as he noted, any eigenvector/eigenvalue pair can be used as a centrality measure, although other pairs will not preserve as much variation as the largest pair.

those suggested by Monge and Contractor (2003), network density and network centralization:

- Network density: it refers to the extensiveness or completeness of the network of the relations in the network. Measured as the percentage of possible ties that actually exist, it allows comparisons between network of different size.

- Network centralization: it expresses the variation in individuals' centralities within a network; in general, a network is centralized if a few nodes have considerably higher centrality scores than other in the network. In our case, we used the network centralization indexes which express the variability among the individuals' centrality. In the particular case of our network, we considered the degree and the betweeness indexes of centralization.

Another relevant dimension in the case of social network is cohesion, which expresses the general dispersion of nodes within the network. Referring to this concept, we chose two network measures, average distance and distance-weighted fragmentation.

- Average distance: very easy to calculate in the case of binary matrix, it is the average of the geodesic distance between all pairs of nodes; in this expression, it can be considered as negatively related to density.

- Distance-weighted fragmentation: calculated as the proportion of pairs of nodes that are unreachable from each other, it refers to the connectedness of the network in terms of reachability to one node to another.

Both average distance and distance-based fragmentation are calculated out of the maximum possible ties so they can be compared for network of different size.

4.4.3 Results of the analysis

In the end of the long adventure of collection of data in the world of third sector associations, we succeeded in interviewing a total of 66 associations: 33 of the XI borough and 31 of the XVI borough (in the appendix you will find the complete list of associations sampled).

The methodological contribution has been to apply a paradigm, the social network analysis, to the evaluation of social capital. In doing that, we have studied the basic properties of the nodes and the network as a whole; in fact, as R. Hanneman stated "there are good theoretical reasons (and some empirical evidence) to believe that these basic properties of social networks have very important consequences". Social structure and features of networks can have important effects on mobilization of resources, influence, circulation of information and resolution of problems for both individuals and the network as a whole.

An important theoretical specification need to be done: social capital and social networks are theoretically distinct. In fact, social capital is always productive in the meaning of those resources embedded in a network an actor can use to achieve personal goals; network, on the contrary, represent both opportunities and constraints for people embedded in. In this sense, social capital social capital is a feature of the social structure. Despite that, the social capital ambiguity has been said to come from its way of being a dynamic and situational concept (Piselli, 1999); just to overcome this difficulty, some scholars have proposed to substitute the concept of social capital with that of network resources(Kadushin, 2004). This thesis is in line with the increasing consensus around a network-centred definition of social capital, in terms of norms and networks which facilitate collective actions (OECD, 2001).

The final purpose of this application is to draw the social network of the two communities and to give an idea of the amount and structure of their social capital. In fact, this work is based on the following social capital definition: a network, more or less stable, of relationships between no-profit associations, which operate within the territory and have an impact on the socio-economic structure of the area. Relationships are considered in terms of density, cohesion and centralization.

As a result of the analysis we can draw the social network map of the two boroughs (see fig. 4.8 and fig. 4.9).

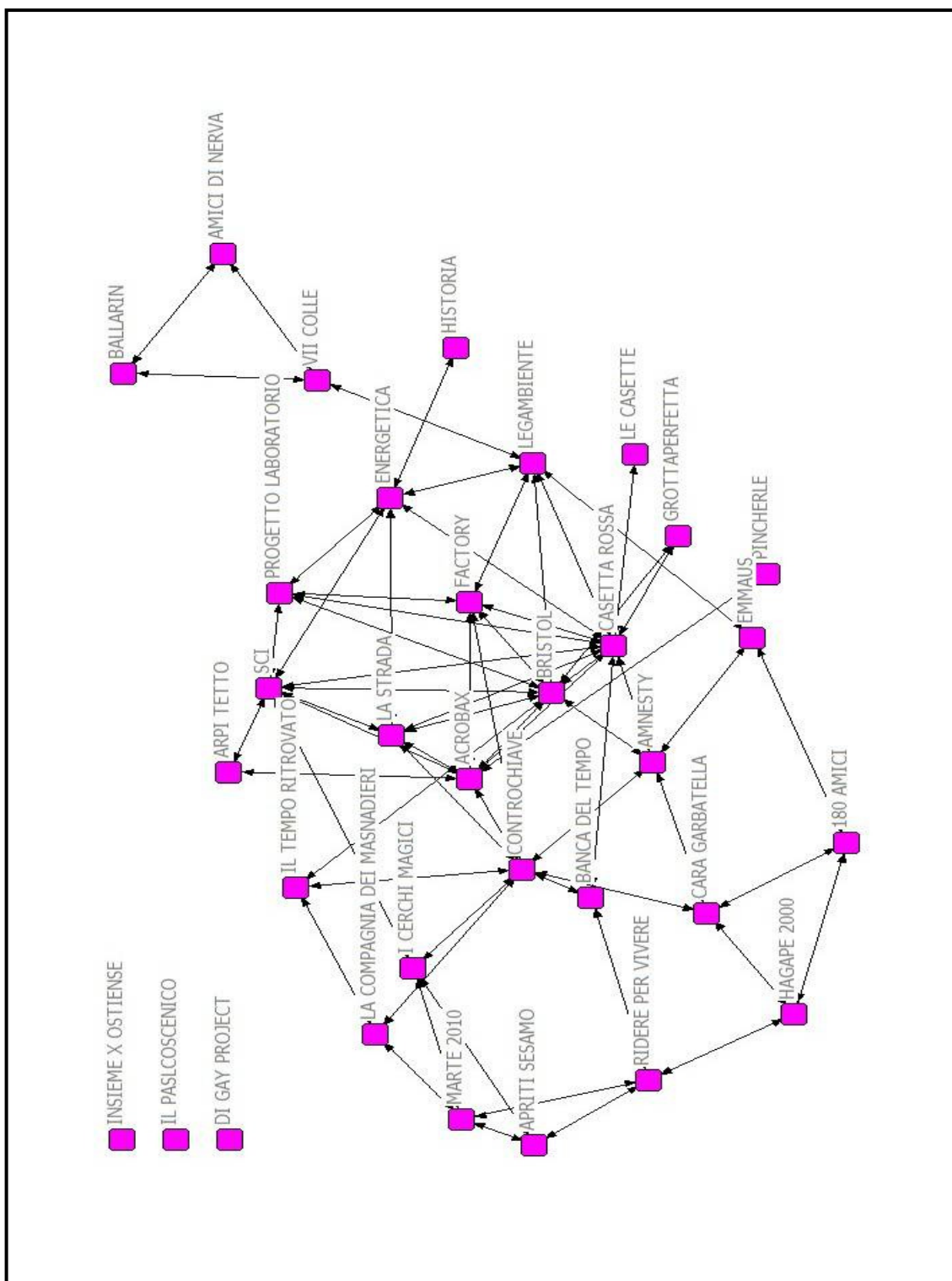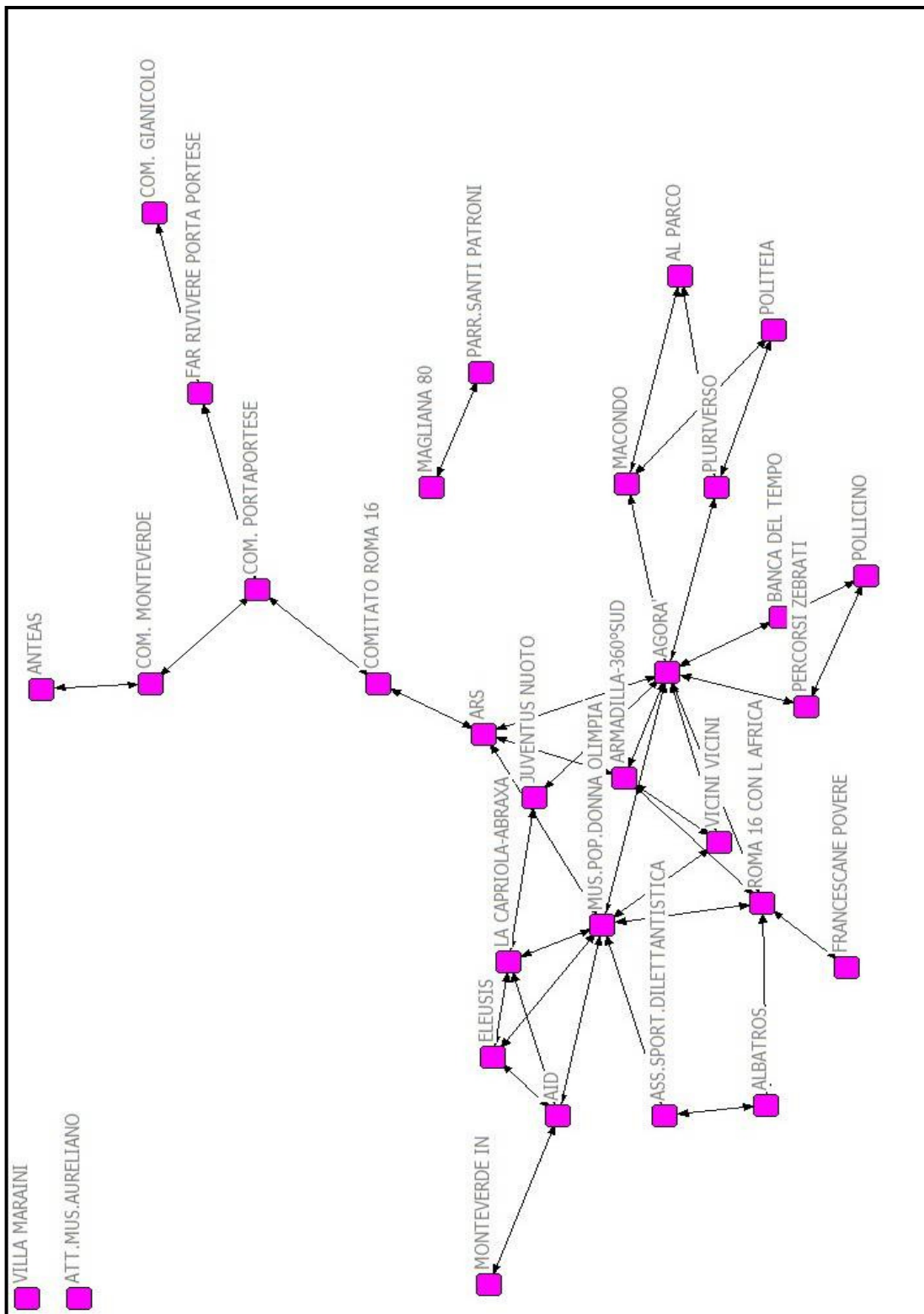**Figure 4.8 Network social map of borough XI**

Figure 4.9 Network social map of borough XVI

The social network of borough XI is composed by 33 nodes with 132 undirected[6] actives ties. Even if the network is disconnected, there are only two components and the level of fragmentation (proportion of nodes that cannot reach it another) is quite low (0.176). As we can see from figure 4.10, only three associations, *Insieme per Ostiense*, *Il palcoscenico* and *Di Gay Project* are isolated while the rest of the graph is well connected.

Figure 4.10 Components of the network of XI borough
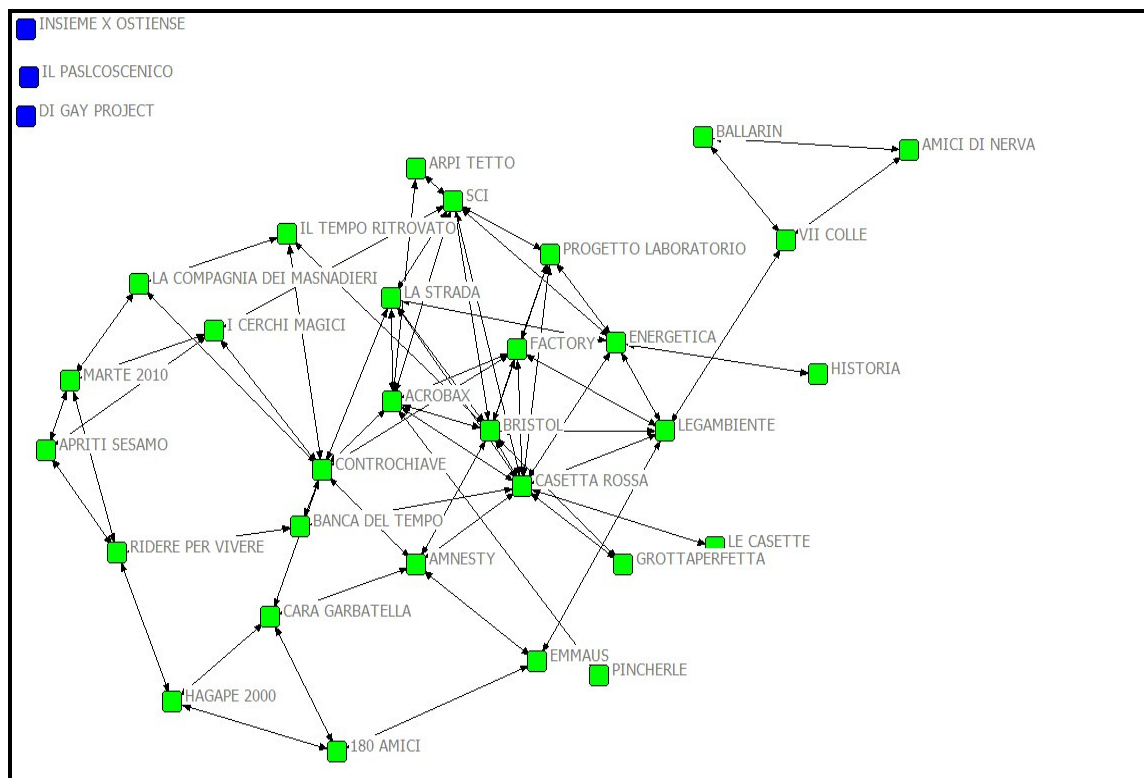
The first set of measures refers to the network as a whole to capture the amount and the shape of the social capital embedded in the network. We focused on three dimension of social capital, each one expressed by some network indicators.

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[6] In both boroughs, directed data were collected. Considering that the ties express the presence of a form of collaboration between the associations, we can assume that the link must be reciprocal as the collaboration necessarily exist between almost two nodes. So the Adjacency matrix has been symmetrised.

The first dimension is the density of social capital; this is a quantitative measurement to assess the volume of the social capital in terms of ties within the actors. This dimension is expressed by the proportion of the maximum number of possible ties. The density of the network of borough XI is .1250, which means that the 12.5% of the possible ties has been activated (see table 4.4). The average degree of each node is 4, which is a good result considering the general lean vivacity of the third sector networks in Rome.

Table 4.4 Density of social capital in borough XI

	Density	Avg Degree
Borough XI	*0,125*	*4*

The second dimension of social capital reflects the *cohesion* within the network which is very important in terms of social exclusion and social capital. The network presents a score for average distance and a distance-based cohesion not so small but a quite high measure of fragmentation because of the presence of isolates components and clusters (see table 4.5).

Table 4.5 Cohesion of network XI

	Average distance	Distance-based cohesion	Distance-based fragmentation
Borough XI	2.623	0.388	0,612

The third dimension of social capital is the *centralization* which reflects the shape of social capital and the way in which it is distributed within the actors of the network. In fact, the indexes of centralization expresses the structure of

the network compared to the maximum centralized network, which is the star network. For this analysis, we calculated the degree centralization and the betweeness centralization, which score respectively 26,61% and 15,20% (see table 4.5). Network centralization (or global centrality) measures the degree to which an entire network is focused around a few central nodes (Scott 1991). It is a measure of the gerarchization of the graph. It is a measure of the variance of the betweeness (the measure of the number of times a vertex occurs on a geodesic)of the nodes within a network; this measure reflects how much the network is organized around its central nodes.

Table 4.6 Centralization of network XI

	Degree Centralization	Betweeness Centralization
Borough XI	26,61%	15,20%

The second level of analysis refers to the individual level and thus to the social capital possessed by each associations. In this case we referred to the network measures elaborated by Borgatti, Everett and Jones (1998) for the individual social capital (see table 3.2). We calculated degree centrality and Bonacich eigenvector, both positively correlated to social capital; we did not take into account the closeness because our network is not connected and technically, closeness centrality cannot be computed, as there are infinite distances. In fig 4.6 and 4.7 we summarized the group of associations with a score above the mean of the network. As we see the associations ranked for descendent degree and eigenvector are almost the same (with the exception of one) but their ranking changes a lot. In fact, for social capital evaluation, one of the

most important thing, as the often-cited aphorism said, "is not what you know but who you know"; more than how many ties you possesses it is relevant the quality of your connections. This is very similar to the theory of "the strength of weak ties" (Granovetter, 1985) as the added value derives not from to how many people you are directly connected but how much you are embedded within the network.

Fig 4.11 Associations XI ranked by Bonacich eigenvector
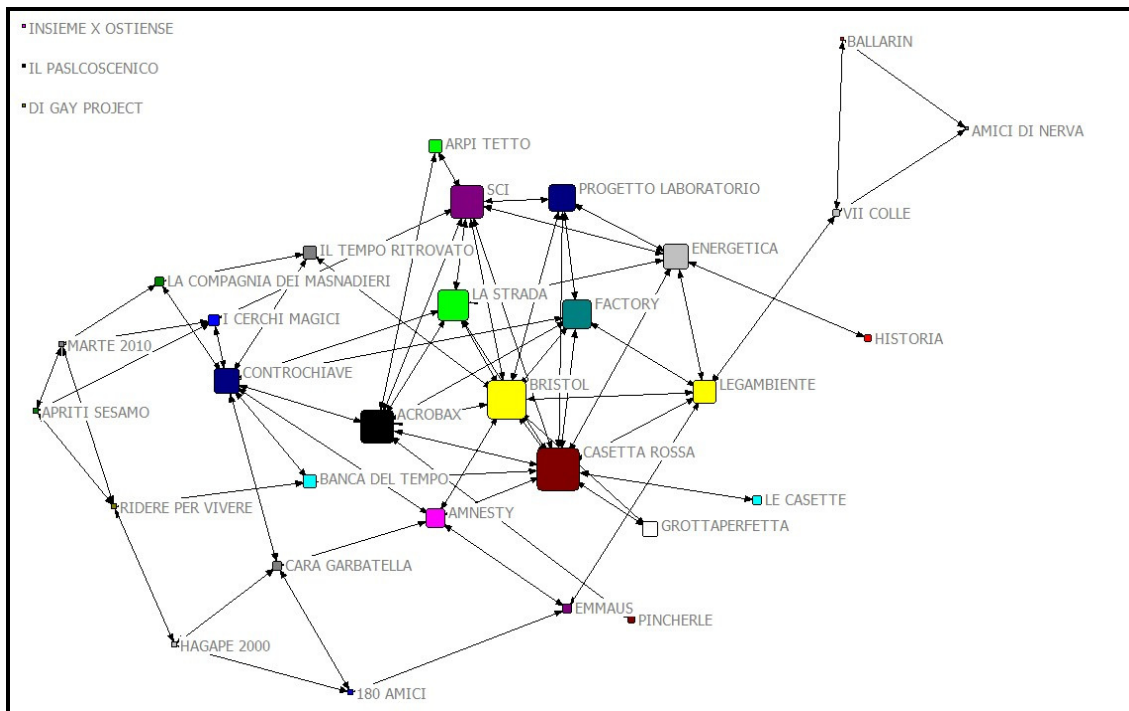
Casetta Rossa	0,419	La factory	0,276
Bristol	0,379	Progetto Lab.	0,249
SCI	0,317	Energetica	0,233
Acrobax	0,314	Controchiave	0,225
La strada	0,289	Legambiente	0,215

Fig 4.12 Associations XI ranked by degree
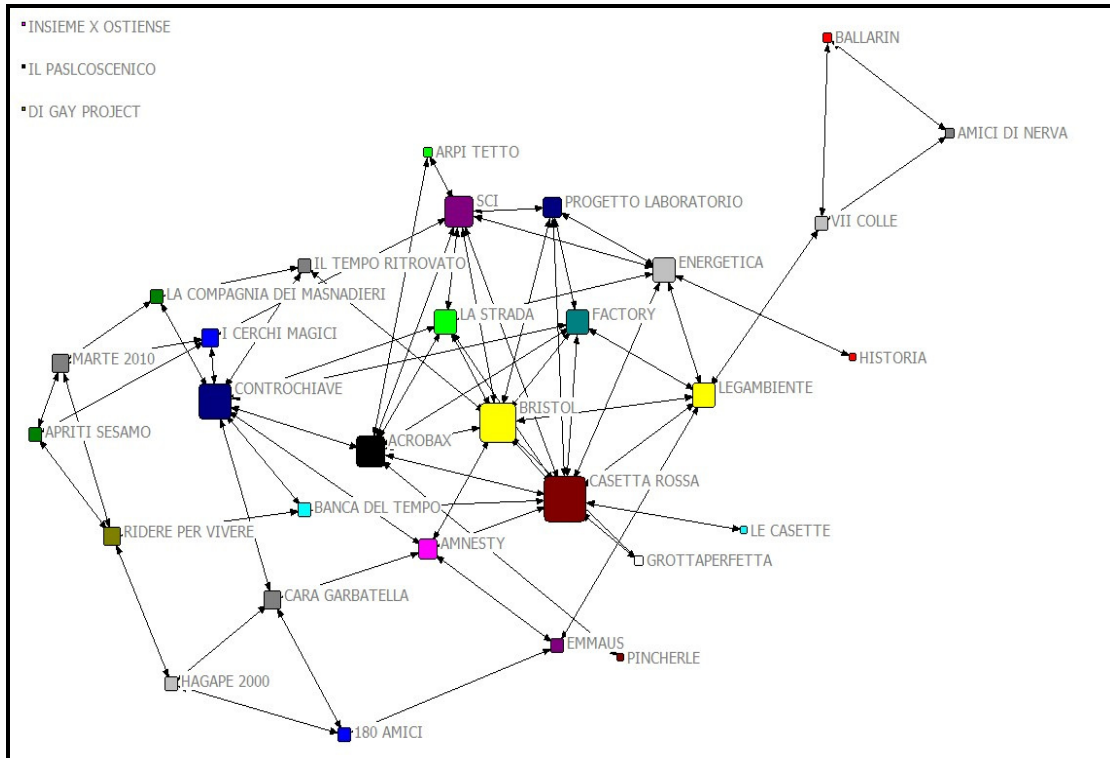
Casetta Rossa	12	La factory	6
Bristol	10	La strada	6
Controchiave	9	Energetica	6
Acrobax	8	Legambiente	6
SCI	8	Progetto Lab.	5

The evaluation of each associations social capital is a bit different if we consider their degree or the Bonacich eigenvector components. This difference is graphically shows comparing fig. 4.4 and 4.5. In our case, considering the small sampling levelling, the impact of the evaluation of the quality of ties is not so evident. Despite that, we can see that the association *Controchiave,* loses some positions when it is considered the quality of its ties, while *SCI* and *Acrobax* rack up (fig 4.8).

Table 4.7 Associations XI ranked by degree and eigenvector

	Degree		*Eigenvector*
Casetta Rossa	12	Casetta Rossa	0,419
Bristol	10	Bristol	0,379
Controchiave	9	SCI	0,317
Acrobax	8	Acrobax	0,314
SCI	8	La strada	0,289
La factory	6	La factory	0,276
La strada	6	Progetto Lab.	0,249
Energetica	6	Energetica	0,233
Legambiente	6	Controchiave	0,225
Progetto Lab.	5	Legambiente	0,215

Referring to the second network in analysis, the third no profit sector of associations of borough XVI, it is composed by 31 nodes with 82 active ties.

This is a unconnected graph with 3 components; two nodes (those in blue in fig. 4.13) are isolated.

Figure 4.13 Components of the network of XVI borough
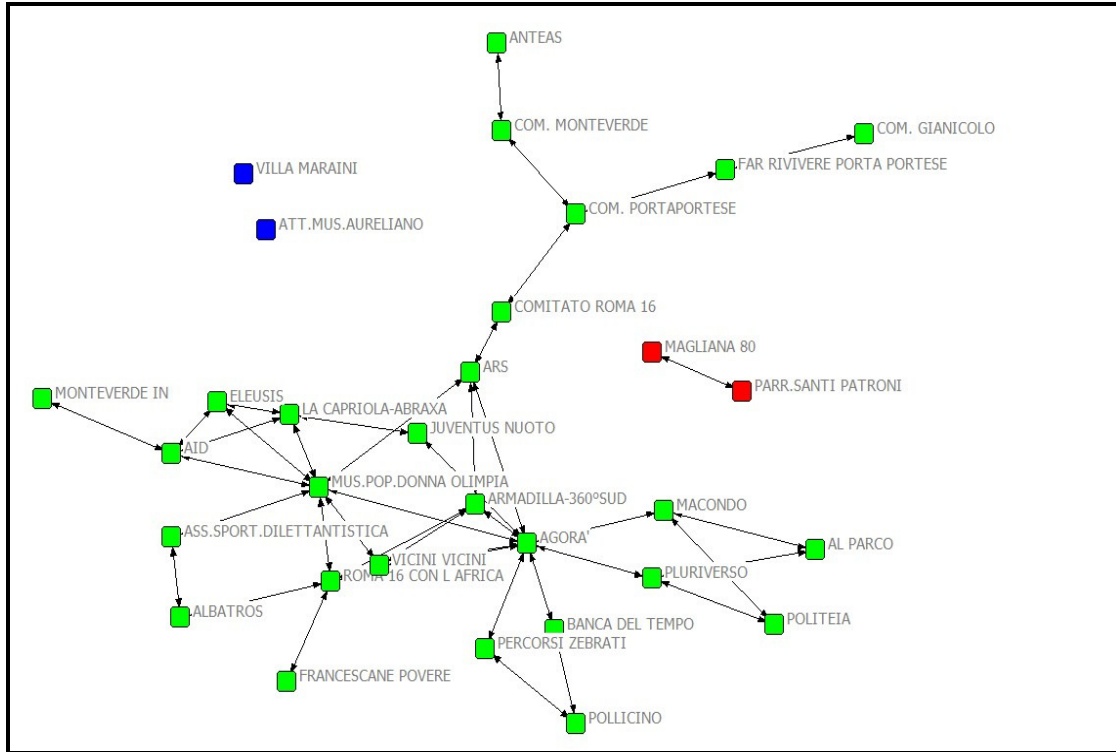
Referring to the first dimension, *density*, borough XVI has a value of   .0882, which means that the 8.8% of the possible ties has been activated (see table 4.10). The average degree of each node is 2.645, which is much more low than the one of borough XVI, especially in consideration that the number of the nodes are much more lower.

Table 4.8 Density in borough XVI

	Density	Avg Degree
Borough XVI	*0,0882*	*2.645*

Concerning the second dimension of social capital, *cohesion*, the network presents a very bad score for average distance and a distance-based cohesion not so small but a quite high measure of fragmentation because of the presence of isolates components and clusters (see table. 4.11).

Table 4.9 Cohesion of network XVI

|	Average distance	Distance-based cohesion	Distance-based fragmentation
Borough XVI	3.318	0.304	0.696

The results of the third dimension, centralization, are summarized in table 4.12.

Table 4.10 Centralization of network XVI

	Degree Centralization	Betweeness Centralization
Borough XVI	26.21%	34.15%

Referring to the individual social capital, the ranking of associations has been done Bonacich eigenvector (fig. 4.14) and degree centrality (fig. 4.15). In both figures, the shape of nodes expresses their score in the ranking and the colour the result.

Figure 4.14 Associations XVI ranked by eigenvector
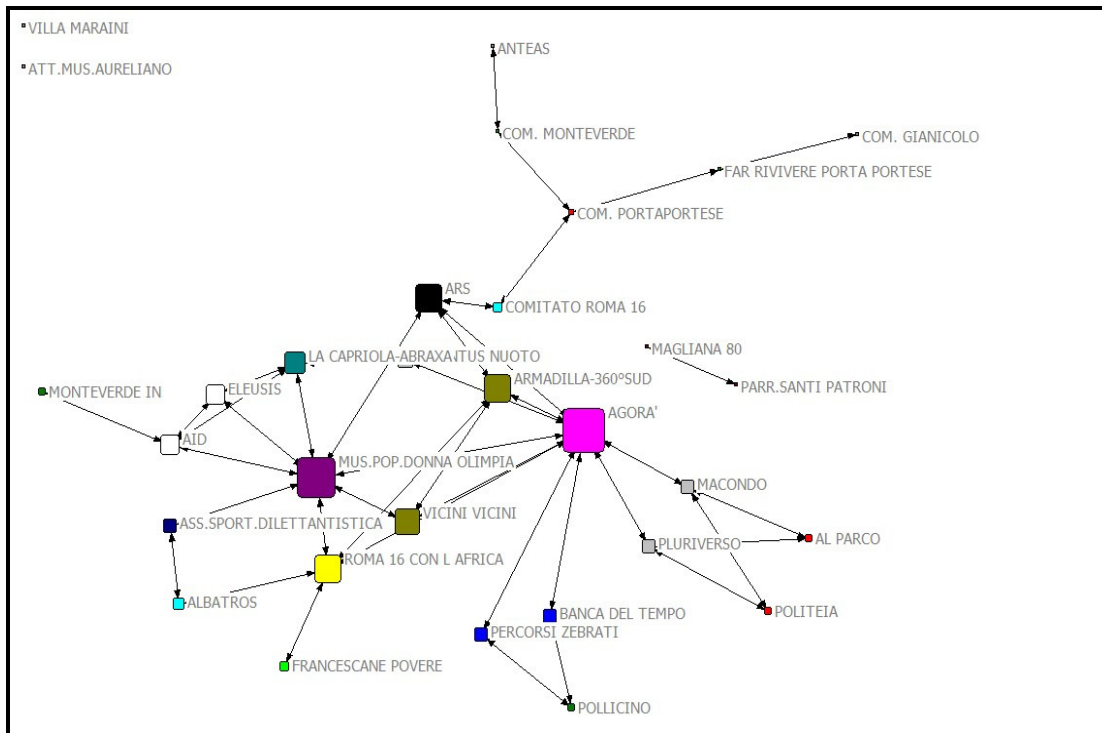
Agorà	0,486	Vicini Vicini	0,266
Mus.D. Olimpia	0,444	La capriola	0,212
Roma16 l'Africa	0,300	AID	0,193
Armadilla	0,290	Eleusis	0,185
ARS	0,280	Macondo	0,131

Figure 4.15 Associations XVI ranked by degree

Agorà	10	AID	4
Mus. D. Olimpia	8	La capriola	4
Roma16 l'Africa	5	Eleusis	3
Armadilla	4	Macondo	3
ARS	4	Pluriverso	3

Table 4.11 Associations XVI ranked by degree and eigenvector

	Degree		Eigenvector
Agorà	10	Agorà	0,486
Mus. D. Olimpia	8	Mus.D. Olimpia	0,444
Roma16 l'Africa	5	Roma16 l'Africa	0,300
Armadilla	4	Armadilla	0,290
ARS	4	ARS	0,280
AID	4	Vicini Vicini	0,266
La capriola	4	La capriola	0,212
Eleusis	3	AID	0,193
Macondo	3	Eleusis	0,185
Pluriverso	3	Macondo	0,131

In case of borough XVI, the network is much more polarized around central nodes which present a score of degree and eigenvector much higher than the rest of nodes. The comparison between the two measures of individual social capital are not so evident because of the low sampling level; in any case, we can see that *Vicini Vicini*, for instance, has got a low degree but high in the eigenvector ranking; on the opposite, *Macondo* is in the first half of the classification of degree but probably they are scarcely qualitatively good.

4.4.5. Comparison with the traditional measurement à la Putnam

As we have seen before, the approach of Robert Putnam is based on a *civicness* definition of social capital, which has been measured with a multidimensional index. In his work of 1993, *Making democracy work*, he ranked the Italian regions measuring the social capital of the Italian regions making a simple mean of four indicators:

1.   Membership in cultural and sports associations.

 In his work of 1993, Putnam supports Toqueville's observations about the positive effects of associations in both embodying and reinforcing civic community. One of his main findings is that associations, among their participants, foster understanding, cooperation, solidarity, and a willingness to take part in political affairs. Putnam's study of Italy shows that the regions with a comparatively large number of sports, leisure, and cultural associations also tend to be the regions that rank higher in other correlates that indicate civic community. For Putnam, the density of sports clubs, for example, provides the "first clues as to which regions most closely approximate the ideal of the civic community".

2.   Newspaper readership.

Both Putnam and Tocqueville emphasized the connection between newspapers and associations, civic community, and equality. In particular, Tocqueville points out that newspapers, as associations, are necessary to carry on common activity, particularly in democratic countries. Putnam finds a significant positive correlation between the level of newspaper readership and the strength of civic community.

Both the incidence of association participation and newspaper readership are used by Putnam as indicators of civicness, in the meaning of population civic and political commitment.

3. Turnout at referenda.

As explained by Putnam (1993: 93-94), referenda turnout captures well civic engagement. Contrary to general elections, participation to referenda is neither a legal duty nor it leads to patronage-driven personal benefits. Putnam argues that the "primary motivation of the referendum voter is concern for public issues, perhaps enhanced by a keener than average sense of civic duty" (Putnam, 1993, pag.93). Turnout for referenda, therefore, "offers a relatively 'clean' measure of civic involvement" (ibidem). Based on this theoretical assumption, Putnam used referenda turnout in Italy during 1974–1987 as his third civic community indicator. Referenda turnout represents the main measure of social capital also in Guiso et al (2003).

4. Preferential voting.

As his forth indicator of civicness, Putnam refers to an oddity of the Italian political system, the preference vote, which allows voters in national elections to indicate a preference for a particular candidate from the party list they have chosen. As he states, "the preference vote becomes essential to the patron–client exchange relationship …. In that sense," Putnam concludes, "preference voting can be taken as an indicator for the absence of a civic community" (Putnam 1993, p. 94).

An interesting way to deepen the big power of network measures in the context of the boroughs of Rome can be to compare the two different way

of defining and measuring social capital. Referring to the network analysis, we can consider as the general value of social capital the eigenvector of the two municipalities; as we have already seen in the last paragraph, the two values are quite different from each other. In the case of our case-study, we can use Putnam definition of social capital and measure it using the same dimensions:

1. The number of cultural and sports associations can be taken from the list of the sports and cultural associations registered at the municipality.

2. The number of the newspaper readers is a data not available. A good proxy for the concept (which aims to express the interest of the population in the civil life and occurrences) can be the number of newspapers read in public libraries.

3. Instead of turnout at referenda, we use turnout at European elections in 2004. In fact, the referenda voter expresses the interest of population in matter of public interest; the same attitude can be assessed with the percentage of the voter at the European Parliament election of 2006.

4. Considering that nothing similar to the preference vote still exists now in Italy, it was necessary to find an indicator to replace it. The percentage of preference votes is negatively related to social capital as they are the expression of the backwardness of the community in terms of the presence of nepotism and bias. The presence of un-civicness in a borough can be assessed by the number of people protested; even if this indicator is not properly the same as the Putnam one but considering the lack of data available for the each boroughs, the closer to this indicator, differently from the *Putnamian* one, is positively related to social capital as it expresses the participation of the population, resident there or abroad, to the political life of the borough.

The four indicators listed above have been combined into a civic index à la Putnam, which measures the degree of social capital of the two boroughs chosen for the case study.

This index of social capital has been created with the same methodology used by Putnam in Making Democracy Work, that is the simple mean of the four indicators; the only exception is that in our case all the four indicators are positively related to social capital and thus they all show positive signs.

Table 4.12 Indexes of social capital

Borough	INDEX OF SOCIAL CAPITAL
Borough XI	34,11
Borough XVI	33,60

As we can see looking at these results, the two values are very similar to each other and the difference is not significant. The two indexes are comparable given that each value has been related to the maximum population of reference; all these values are percentages and thus comparable.

Moreover, the final result is similar although the four components are quite different in the two borough. For example, the incidence of newspaper reader, approximated by the number of readers of periodicals at the libraries of the municipality, is much more high for the XI compared to the number of protested which is higher in the XVI than in the XI one.

We can conclude that these results are in line this the main thesis of this work that is the traditional way of assessing social capital are inadequate in particular if they refer to small territory or group of social networks. In fact, our indexes met the same limitations.

First of all, measuring social capital with the use of proxy indicators can be inferred from its powerful effects.

Secondly, some kind of indicators, as those used in our index and also very often in literature, are not so significant in small territory or populations; those percentages, such as newspaper readers or voters, are not able to capture such an informal, multidimensional, local and fleeting concept as social capital is.

Moreover, the aggregation of individual data does not assure to catch the value of the concept for the community as a whole; individual properties are not necessary property of the community and particularly does not necessary refer to a public good, as social capital is.

Last, but not least, the choice of indicators is guided by the social capital definition the research is based on. In this way, social capital becomes present every time it is measured by some proxies.

4.4.4. Conclusions

The two boroughs, despite their similar socio-economic features, presented a very different social structure and a similar social capital endowment.

Immediately, we can say that the XI has got a stronger social networks than the XVI, as the value of density and average degree shows. For XI borough, the matrix has 33 nodes and 132 active links, resulting a density of .125. For the XVI borough, nodes are 31 and ties only 82, with a density of .0882. The XI borough is considerably more integrated than the XVI, as the results for

average degree show (4 for XI and 2.645 for XVI). We must remember that density is calculated as a ratio of the possible ties and number of nodes, so it allows comparison despite the different number of nodes.

Similar conclusions can be drawn from the analysis of the cohesion indices. The XVI has a more fragmentised and segmentated network than the XI, also considering in the former the presence of isolate nodes and the consequent long distance from one part to another. The XI has a centralized structure (due to the presence of powerful nodes) and a considerable level of density. On the contrary, the XVI has a totally de-centralized structure, in which the nodes are not interactive and are not reachable from one part of the graph to the other.

CONCLUSIONS

Across most of social capital literature, largely reviewed in this thesis, there is widespread agreement on the importance of *networks* for social capital's existence and functioning. The discussion tackled in chapters 1 and 2 highlights that, even with the problems and inconsistencies of any particular approach, the strength of social capital lies in the notion that *relations make a difference* in individuals and groups' achievement of resources and well-being.

Taking suggestion by the approach of Nan Lin (2001), this research considers social capital not located neither in the individual nor in the economic system, but inhering to the relational structure between interacting actors. This is both an individual and collective approach, relational and structural, which considers social capital as embedded in the social networks within a territory.

In line with this approach, social capital has been defined as *a network, more or less stable, of relationships between no-profit associations, which operate within the territory and have an impact on the socio-economic structure of the area.*

The emphasis on social capital being a relational and embedded resource has led us to adopt the social network analysis as a methodology for studying the social capital of individuals and groups. This research aims to apply this paradigm, the social network analysis, relatively new in economics, to social capital measurement and evaluation.

Considering the scarce use of social capital analysis in economics and the lack of studies about social capital of Rome and in its boroughs, this research tried to fill this gap.

The innovation of methodology and unit of analysis of this case-study allowed us a certain flexibility at both theoretical and operative levels.

As a conclusion of this experimental analysis we can say that in the case of a territory or population the network based approach to social capital is a good way to get some useful information about the consistency and the shape of this peculiar kind of capital. Even if this kind of approach has met with a great amount of problems referred to the collection of data, the significance of the sample and the methodology which does not allow to give causal explanations, the social network approach is a powerful methodology for social capital evaluation. The aim of this work was, in fact, to catch, more than causal explanations, the existence and the evaluation of the concept, in the meaning of social capital we have given to it before.

This work should be considered not as an arrival but a good starting point for the spread of this methodology in the field of social capital's measurement in economics.

Further steps could be to conduct a census of the associations of the third sector which operates in the two boroughs and get the complete social network maps.

Furthermore, this model could be exported in the rest of boroughs of Rome. A complete research on the city of Rome, disaggregated by boroughs, could be a good way to assess the social capital of the city.

As Putnam states in the end of the Italian work (1993) "Building social capital will not be easy, but it is the key to making democracy work". The starting point to build social capital, should be to measure it properly.

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Appendix

Appendix 1. List of the associations of XI included in our sample.

1. CASETTA ROSSA
2. PROGETTO LABORATORIO
3. HISTORIA
4. PINCHERLE
5. BRISTOL
6. LA CASETTE
7. BALLARIN
8. GROTTAPERFETTA
9. VII COLLE
10. INSIEME X OSTIENSE
11. AMICI DI NERVA
12. 180 AMICI
13. EMMAUS
14. HAGAPE 2000
15. ARPI TETTO
16. BANCA DEL TEMPO
17. LEGAMBIENTE
18. RIDERE PER VIVERE
19. CARA GARBATELLA
20. AMNESTY
21. ACROBAX
22. ENERGETICA
23. FACTORY
24. SCI
25. LA STRADA
26. CONTROCHIAVE
27. MARTE 2010
28. I CERCHI MAGICI
29. APRITI SESAMO
30. IL TEMPO RITROVATO
31. IL PASLCOSCENICO
32. LA COMPAGNIA DEI MASNADIERI
33. DI GAY PROJECT

Appendix 2. List of the associations of XVI included in our sample.

34. AL PARCO
35. BANCA DEL TEMPO
36. AGORA'
37. VILLA MARAINI
38. PERCORSI ZEBRATI
39. ARS
40. POLLICINO
41. FRANCESCANE POVERE
42. COMITATO ROMA 16
43. ROMA 16 CON L AFRICA
44. FAR RIVIVERE PORTA PORTESE
45. COM. MONTEVERDE
46. ANTEAS
47. COM. PORTAPORTESE
48. ALBATROS
49. MONTEVERDE IN
50. COM. GIANICOLO
51. MAGLIANA 80
52. ASS.SPORT.DILETTANTISTICA
53. ARMADILLA-360°SUD
54. MUS. POP. DONNA OLIMPIA
55. JUVENTUS NUOTO
56. LA CAPRIOLA-ABRAXA
57. ELEUSIS
58. VICINI VICINI
59. AID
60. PARR.SANTI PATRONI
61. ATT.MUS.AURELIANO
62. PLURIVERSO
63. MACONDO
64. POLITEIA