The empirics of social capital and economic development: a critical perspective*

Fabio Sabatini**

November 2005

Abstract
This paper provides an introduction to the concept of social capital, and carries out a critical review of the empirical literature on social capital and economic development. The survey points out six main weaknesses affecting the empirics of social capital. Identified weaknesses are then used to analyze, in a critical perspective, some prominent empirical studies and new interesting researches published in last two years. The need emerges to acknowledge, also within the empirical research, the multidimensional, context-dependent and dynamic nature of social capital. The survey also underlines that, although it has gained a certain popularity in the empirical research, the use of "indirect" indicators may be misleading. Such measures do not represent social capital's key components identified by the theoretical literature, and their use causes a considerable confusion about what social capital *is*, as distinct from its *outcomes*, and what the relationship between social capital and its outcomes *may be*. Research reliant upon an outcome of social capital as an indicator of it will necessarily find social capital to be related to that outcome. This paper suggests to focus the empirical research firstly on the "structural" aspects of the concept, therefore excluding by the measurement toolbox all indicators referring to social capital's supposed outcomes.

Keywords: Social capital, Social networks, Trust, Economic development, Relation of economics to other disciplines, Relation of economics to social values.
JEL Classification: A120, A130, A310, O100, Z130

---

* I am deeply grateful to Cherylynn Bassani, Eric Uslaner and Stefano Zamagni for their precious and accurate comments on previous versions of this paper. I wish to thank also Tricia Helfer, Rosa McManamey and Jonathan Temple for helpful notes and suggestions. Needless to say, all views and errors are mine. Useful materials for the study of social capital are available on *Social Capital Gateway*, web site providing resources for social sciences edited by the author of this article, at the address www.socialcapitalgateway.org (see Sabatini, 2005a, for further details).

** Research Fellow, Department of Public Economics and SPES Development Studies Research Centre, University of Rome La Sapienza, and Department of Economics and Geography, University of Casssino. Address: University of Rome La Sapienza, Department of Public Economics, Via del Castro Laurenziano 9, 00161 Rome, Italy. Email: Fabio.Sabatini@uniroma1.it.

The empirics of social capital and economic development: a critical perspective

1. Introduction

From a theoretical point of view, modern political economy has developed depriving economic interactions of their social content. A typical example of this trend is given by the economy's working framework implied by Walrasian general equilibrium models. In this context, market interactions are reduced to the transmission of coded information through the auctioneer's agency. Agents never meet: they simply pass on to the auctioneer their purchase and selling proposals (Gui, 2002). However, the economic activity is deeply embedded in the social structure, and agents' decisions are always influenced by a wide range of social and cultural factors. For example, most case studies show that enterprises devote an ever more relevant part of their financial resources to activities which are not directly related to production processes. Nurturing a cooperative climate inside the workforce and building trustworthy relationships with external partners generally constitute a key task for management. On the other side, workers' satisfaction is ever more affected by the quality of human relationships among colleagues, and not only by traditional factors like wage and job's conditions. According to Gui (2000), such relational assets contribute to firms' economic performance just like new machineries and warehouses. Growing attention has thus been devoted to the role that social norms, the diffusion of trust and logics of reciprocity play in shaping different kinds of transactions (Kahneman and Tversky, 1979, Arnott and Stiglitz, 1991, Berg, Dickaut and McCabe, 1995, Fehr, Gatcher and Kirchsteiger, 1997, Frey, 1997, Bowles and Gintis, 1998, Fehr and Gatcher, 2000, Sugden, 2000). The growth literature is now pervaded by studies addressing the relationship between the economy's social and institutional fabric, the economic performance and development patterns (Kormendi and Meguire, 1985, Bénabou, 1996, Barro, 1996, Collier and Gunning, 1997, Knack and Keefer, 1997, Temple and Johnson, 1998, Whiteley, 2000, Zak and Knack, 2001, Gradstein and Justman, 2002). Such voluminous strands of the literature may be interpreted as the sign of the emerging need to fill the gap that, in economics, still separates society from the economy. The economic and sociological literature on social capital is another symptom of such need. In 1993, Robert Putnam tried to explain the different institutional and economic performance of the Italian regions as the result of the influence exerted by some aspects of the social structure, summarized into the multidimensional concept of "social capital". This study has received wide criticism in the social science debate of the 90s. However, it posed a milestone for social capital theory, which registered an explosive development in the following decade, rapidly involving the attention of economists. As pointed out by Isham, Kelly and Ramaswamy (2002), a "keyword" search in all journals in *EconLit*, the most frequently used database of references in economics, shows that citations for "social capital" have grown rapidly over the last decade, doubling each year since the late 1990s. In 2000, social capital had about a quarter of the absolute number of citations. Putnam's (1993) work on Italy has been pronounced by the editor of the mainstream *Quarterly Journal of Economics* as the most cited contribution across the social sciences in the 1990s (Fine, 2001, 83). During last ten years, the concept of social capital has been invoked almost in every field of social science research, and has been used to explain an immense range of phenomena, from political participation to the institutional performance, from health to corruption, from the efficiency of public services to the economic success of countries. However, despite the immense amount of research on it, social capital's definition remains elusive and, also due to the chronic lack of suitable data, there is neither an universal measurement method, nor a single underlying indicator commonly accepted by the literature. From a historical perspective, one could argue that social capital is not a concept but a *praxis*, a code word used to federate disparate but interrelated research interests and to facilitate the cross-fertilization of ideas across disciplinary boundaries (Durlauf and Fafchamps, 2004). As pointed out by Brown and Ashman (1996), one of the primary benefits of the idea of social capital is that it is allowing scholars, policy makers and practitioners from different disciplines to enjoy an unprecedent level of cooperation and dialogue.

Even if conceptual vagueness may have promoted the use of the term among social sciences, it also has been an impediment to both theoretical and empirical research of phenomena in which social capital may play a role. This paper provides an introduction to the concept of social capital, and carries out a critical review of the empirical literature on social capital and economic development. The survey points out six main weaknesses affecting the empirics of social capital. Identified weaknesses are then used to analyze, in a critical perspective, some prominent empirical studies and new interesting researches published in last two years. The review particularly lingers over the "Italian work" carried out by Putnam, Leonardi and Nanetti (1993), for two main reasons. Firstly, this research constitutes the seminal study of this voluminous strand of the literature. Secondly, its shortcomings are "critical", in that they repeatedly present themselves again in most of the following studies in the field.

The outline of the paper is as follows: section 2 briefly introduces the concept of social capital, and its relevance to economics. Section 3 presents a critical perspective on the empirics of social capital, pointing out the main weaknesses of existing measurement methods. Section 4 reviews the empirical literature on social capital and economic development. The paper is closed by some concluding remarks and guidelines for further researches.

2 What is social capital and why is it relevant to economics?

Although it has been popularized only in the last decade, due to Bourdieu's (1980, 1986), Coleman's (1988, 1990) and Putnam's (1993, 1995) prominent studies, the concept of social capital has a long intellectual history in social sciences. The sense in which the term is used today dates back to about 90 years, when Hanifan (1916) invoked the concept of social capital to explain the importance of community participation in enhancing school performance. After Hanifan's work, the idea of social capital disappeared from the social sciences debate. It has occasionally been considered again, but without arousing a particular interest. Social capital concept was reinvented by a team of Canadian urban sociologists (Seely, Sim and Loosely, 1956), within a research on urban communities' culture, by Homans (1961) for a theory of social interactions, and by Loury (1977), within a study on income distribution. Jacobs (1971) used the term "social capital" incidentally by way of a metaphor in her *Death and Life of Great American Cities*, within a study on communities' ability to organize themselves into self-governing "things" as a mean to overcome political problems. None of these writers, interestingly, cited earlier work on the subject, but all used the same umbrella term to encapsulate the vitality and significance of community ties. Three decades before Putnam's work, Edward Banfield (1958) used social capital concept to explain southern Italy economic backwardness, but his study did not arouse interest in the economic debate[1]. Bourdieu (1980) identifies three dimensions of capital each with its own relationship to the concept of class: economic, cultural and social capital. Bourdieu's idea of social capital puts the emphasis on class conflicts: social relations are used to increase the ability of an actor to advance his interests, and social capital becomes a resource in social struggles: social capital is 'the sum of the resources, actual or virtual, that accrue to an individual or group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition' (Bourdieu and Wacquant, 1986, 119, expanded from Bourdieu, 1980, 2). Social capital thus has two components: it is, first, a resource that is connected with group membership and social networks. 'The volume of social capital possessed by a given agent ... depends on the size of the network of connections that he can effectively mobilize' (Bourdieu 1986, 249). Secondly, it is a

[1] It can be shown that the origin of the concept can be found even further back in time, during the period of the first developments in economic sociology. For example, an implicit use of the idea of social capital can be found in the famous essay by Max Weber, *The Protestant Sects and the Spirit of Capitalism* (Trigilia, 2001). Piazza-Georgi (2002) argues that expressions of the concept can be found in Smith and in Marshall, as well as in the *Dictionary of Political Economy*, whose definition of capital expressely includes 'The Law, the Church, Literature, Art, Education, an Author's Mind' (quoted in Fisher, 1906, 55).

quality produced by the totality of the relationships between actors, rather than merely a common "quality" of the group (Bourdieu 1980). At the end of the 80s, Coleman gave new relevance to Bourdieu's concept of social capital. According to Coleman, 'Social capital is defined by its function. It is not a single entity, but a variety of different entities, with two elements in common: they all consist in some aspect of social structures, and they facilitate certain actions of actors within the structure' (Coleman, 1988, 98). In the early 90s, the concept of social capital finally became a central topic in the social sciences debate. In 1993, Putnam, Leonardi and Nanetti published their famous research on local government in Italy, which concluded that the performance of social and political institutions is powerfully influenced by citizen engagement in community affairs, or what, following Coleman, the authors termed "social capital". In this context, social capital is referred to as 'features of social life-networks, norms, and trust, that enable participants to act together more effectively to pursue shared objectives' (Putnam, 1994, 1). Like other forms of capital, social capital is productive, making possible the achievement of certain ends, that in its absence would not be possible. But, in Coleman's words, 'Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors. It is not lodged either in the actors themselves or in physical implements of production' (Coleman, 1988, 98). The use of the term "capital" is criticized by several authors belonging to the field of economics, in that it refers to things that can be owned. For example, Bowles and Gintis (2002) sustain that the term "community" would be more appropriate, 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[2].

The cited perspectives on social capital are markedly different in origins and fields of application, but they all agree on the ability of certain aspects of the social structure to generate positive externalities for members of a group, who gain a competitive advantage in pursuing their ends.

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,

[2] For other prominent sceptical views on social capital, see Solow (1999), Fine (2001), Durlauf (2002), and Harriss (2002).

people rationally invest in social capital in the context of an utility maximization problem[3]. Becker's 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 resources 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. According to the author, 'Whatever is to be diffused can reach a larger number of people, and traverse greater social distance, when passed through weak ties rather than strong. If one tells a rumour to all his close friends, and they do likewise, many will hear the rumour a second and third time, since those linked by strong ties tend to share friends' (Granovetter, 1973, 1366). Social networks can thus be considered as a powerful mean to foster the diffusion of information and knowledge, lowing 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. Whether an agent trusts another heavily depends on whether there exist intermediary personal contacts who can, from their own knowledge, assure him that the other agent is trustworthy. Trust in the others is therefore integrally related to the capacity to predict and affect their behaviour. In his famous essay on the embeddedness of economic action, Granovetter (1985) stresses the role of concrete personal relations and of structures of such relations (i.e. social networks) in generating trust and discouraging opportunistic behaviours therefore fostering transactions and the economic performance. 'The widespread preference for transacting with individuals of known reputation implies that few are actually content to rely on either generalized morality or institutional arrangements to guard against trouble' (Granovetter, 1985, 490). 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' (*ibidem*).

Coming back to a typically economic perspective, social capital may be able to improve capabilities of agents, both consumers and producers. A social environment rich of participation opportunities, allowing people to meet frequently, is a fertile ground for nurturing shared values and social norms

[3] This position is not commonly accepted within the social capital literature. For example, according to Coleman (1988, 1990), social capital has to be considered as the incidental by-product of different relational activities, and can therefore be analytically treated as an externality. The work of Becker is highly questioned in the literature; for critical reviews of his approach, see Fine (1998, 2002). On the individualistic approach to social capital see also Glaeser, Laibson and Sacerdote (2002).

of trust and reciprocity. The likelihood of repeated interactions among agents grows, increasing reputation's relevance. The better diffusion of information and the higher opportunity cost of free-riding make the agents' behaviour more foreseeable and causes an uncertainty reduction. Therefore, an increase in trust-based relations reduces the average cost of transactions, just as an increase in physical capital reduces the average cost of production. (Paldam e Svendsen, 2000, Routledge e von Amsberg, 2003, Torsvik, 2000, Zak e Knack, 2001). According to this strand of the literature, social capital constitutes an input in production processes. Its effect on firms' productive capabilities can therefore be modelled in a way similar to that of other factors reducing transactions or production costs, like spatial proximity or new transport technologies.

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. One of the main purposes of new development strategies suggested by the International Financial Institutions is to strengthen civil society and social participation in the poorest areas of developing countries. The basic idea is that social capital can be used as a tool to alleviate poverty and inequalities, due to its ability to foster collective action and to solve coordination failures. The World Bank explicitly considers social capital as a policy tool[4]. Most 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[5].

3. The problem of measuring social capital: a critical perspective

Despite the immense amount of research on it, the definition of social capital has remained elusive. Conceptual vagueness, the coexistence of multiple definitions, the chronic lack of suitable data have so far been an impediment to both theoretical and empirical research of phenomena in which social

[4] In 1996, the World Bank created, within its Social Development Department, the *Social Capital Initiative* (SCI), with the main aim to operationalize the concept of social capital. The SCI has carried out a relevant research activity on definition and measurement issues, and has provided new evidence on the causes and consequences of social capital.

[5] With the help of a grant of the Government of Denmark, the SCI has funded a set of local development projects aimed to define and measure social capital in better ways, and to improve methods to assess social capital's stocks and evolution and its impact on socioeconomic progress. For a critical review of the World Bank's research activity on social capital, see Fine (2001) and Harriss (2002).

capital may play a role. On this regard it is possible to observe that the problems suffered by social capital empirical studies are, at some level, endemic to all empirical work in economics. Heckmann (2000) states that the establishment of causal relationships is intrinsically difficult: 'Some of the disagreement that arises in interpreting a given body of data is intrinsic to the field of economics because of the conditional nature of causal knowledge. The information in any body of data is usually too weak to eliminate competing causal explanations of the same phenomenon. There is no mechanical algorithm for producing a set of "assumption free" facts or causal estimates based on those facts' (Heckman, 2000, 91). However, according to Durlauf (2002) 'The empirical social capital literature seems to be particularly plagued by vague definition of concepts, poorly measured data, absence of appropriate exchangeability conditions[6], and lack of information necessary to make identification claims plausible' (Durlauf, 2002, 22). In his article, the author reviews three famous empirical studies[7], concluding that they don't help in understanding the socioeconomic outcomes of social capital, which remain unclear and to be demonstrated. Durlauf's critique is one step forward in respect to the position of some prominent economists, who, prior to discuss the ability of the econometric analysis to investigate social capital's supposed outcomes, doubt the possibility to provide credible measures of its stock, and question about the opportunity itself to consider the concept as an useful analytical tool for economics. In his critique to Fukuyama, Solow (1995) writes: 'If "social capital" is to be more than a buzzword, something more than mere relevance or even importance is required. ... The stock of social capital should somehow be measurable, even inexactly' (1995, 36). As a reply, it is possible to observe that, during last ten years, the empirical research has proposed a great variety of methods for measuring social capital and testing its ability to produce relevant social, economic, and political outcomes. However, the empirics of social capital still continue to suffer from a definite difficulty to address macro outcomes in a convincing way, and this strand of the literature seems to be chronically affected by some definite problems. In particular, we can identify six main shortcomings:

1. despite the great amount of research on it, the definition of social capital remains substantially elusive. Following Coleman (1988), great part of the literature refers to social capital as all 'the aspects of the social structure that facilitate certain actions of actors within the structure … Making possible the achievement of certain ends that, in its absence, would

[6] One way to link many of the requirements for the structural interpretation of regressions is that a structural regression presupposes that the data under study possess conditionally exchangeable errors. Exchangeability implies that there is no prior way of distinguishing errors in a structural model (Durlauf, 2002).

[7] Durlauf's benchmark studies are Furstenberg and Hughes (1995), Narayan and Pritchett (1999), Knack and Keefer (1997).

not be possible' (Coleman, 1988, 98). Such "productive" aspects of the social structure can vary according to different environmental situations and agents' needs: 'A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others' (*ibidem*). According to this approach, it seems virtually impossible to provide a single, universal, definition of what social capital is, and a unique, underlying, method of measurement to be used within the empirical research.

2. The idea that social capital is a multidimensional concept is by now commonly accepted in the debate. This allows each author to focus on a particular aspect of the concept, according to the aims and scope of his own study. Empirical works every time address different social capital's dimensions, therefore adopting particular measures, derived from diverse data sources. This makes any general assessment difficult, due to incomparability in sampling designs and question wording (Wuthnow, 1997). Furthermore, researchers cannot account for measurement error, which we would expect to find in the survey questions used to assess social capital (Paxton, 1999).

3. Most empirical studies measure social capital through "indirect" indicators, not representing the social capital's key components already identified by the theoretical literature (commonly social networks, trust and social norms). Such indicators – e.g. crime rates, teenage pregnancy, blood donation, participation rates in tertiary education – are quite popular in the empirical research, but their use has led to considerable confusion about what social capital *is*, as distinct from its *outcomes*, and what the relationship between social capital and its outcomes *may be*. Research reliant upon an outcome of social capital as an indicator of it will necessarily find social capital to be related to that outcome. Social capital becomes tautologically present whenever an outcome is observed (Portes, 1998, Durlauf, 1999). Of course, from a lexical point of view, it is possible to attribute the "social capital" label to every aspect of the economy's social fabric providing a favourable environment for production and well-being. However, such definition poses a "logic" problem: if social capital is everything can make agents cooperate or markets work better, then any empirical analysis will find that social capital causes cooperation among agents and improves the efficiency of markets. This approach simply "sterilizes" the social capital literature, making it unable to foster the explanatory power of economic studies addressing the socio-cultural factors of growth.

4. Great part of existing cross-national studies on the economic outcomes of social capital is based on measures of trust drew from the *World Values Survey* (WVS)[8]. The WVS' way to measure generalized trust is the famous question developed by Rosenberg (1956): 'Generally speaking, would you say that most people can be trusted or that you can be too careful in dealing with people?'. Possible responses to this question are: "Most people can be trusted", "Can't be too careful", or "Don't know". The trust indicator resulting from this question is given by the percentage of respondents replying "most people can be trusted", often after deleting the "don't know" responses[9]. Trust measured through surveys 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, however, creates a measure of what can be called "macro" or "social" trust which looses its linkage with the social and historical circumstances in which trust and social capital are located. As pointed out by Foley and Edwards (1999), empirical studies based on cross-country comparisons of trust may be a "cul de sac", because of their inability to address macro outcomes, in view of the absence of the broader context within which attitudes are created and determined. Fine (2001) argues that 'if social capital is context-dependent – and context is highly variable by how, when and whom, then any conclusion are themselves illegitimate as the basis for generalisation to other circumstances' (Fine, 2001, 105).

5. Also studies focusing on social networks instead of social trust generally do not take into the appropriate account the multidimensional, context-dependent and dynamic nature of social capital. They usually analyze just one kind of network (for example voluntary organizations), which is considered as representative of the social capital concept as a whole, through a single measure. However, a simple descriptive analysis of available data allows us to point out that, even if they constitute just one aspect of the multifaceted concept

[8] See for example Knack and Keefer (1997), La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997), Zak and Knack (1998), Uslaner (2002), Beugelsdijk and van Schaik (2001), van Schaik (2002), Bjørnskov (2003). The *World Values Survey* (WVS) is a worldwide investigation of sociocultural and political change. It is conducted by an international network of social scientist who have carried out surveys of representative national samples of the publics of over 80 societies on all six inhabited continents. The WVS grew out of a study launched by the *European Values Survey* group (EVS) in 1981. A total of four waves have been carried since 1981 allowing accurate comparative analysis. The project is guided by a steering committee representing all regions of the world. Coordination and distribution of data are based at the Institute for Social Research of the University of Michigan.

[9] This generalised trust question gained prominence through the work of Putnam (1995a), who drew upon WVS data to conclude that the level of trust in the American society had declined between 1960 and 1993, and, despite widespread criticism, is now widely and internationally used, making international comparisons possible. Another popular item proposed by the WVS is the following: 'Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?'.

of social capital, social networks are themselves a multidimensional phenomenon. They are characterized by different aspects, which can be described by a composite set of multiple indicators. For example, Degli Antoni (2005a) efficaciously highlights the heterogeneity of voluntary organizations in Italy. The author identifies shows that two diverse types of associations, which are labelled, following (Knack and Keefer, 1997), as "Olsonian" and "Putnam-esque" groups, tend to follow different distributions across the Italian regions.
A similar result is obtained by another recent analysis on the Italian case (Sabatini 2005b), which highlights that four different types of social networks tend to juxtapose each other in the Italian regions. This study clearly shows that: (a) focusing on just one type of network causes a relevant loss of generality, which can compromise the effectiveness of the analysis' findings; (b) it is possible to take into account the different qualitative aspects characterizing each kind of network, through the building of synthetic indicators by means of factorial analyses. Such indicators contain almost as much information as there is in the original variables describing social networks, and can be used as new raw data in further empirical analyses.

6. Following Putnam's (1993) hints, most studies focus on voluntary organization as 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 nonjoiners, 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. According to some authors, if diversity matters for socialization of cooperative values, then voluntary associations might not be the measure to take into account, as such groups have been found relatively homogeneous in character. Voluntary associations indeed generally recruit members who have already relatively high civic attitudes (Popielarz, 1999, Mutz, 2002, Uslaner, 2002). More in general, 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.

4. The empirical literature on social capital and economic development: a critical review

After the publication of *Making Democracy Work* by Putnam, Leonardi and Nanetti in 1993, the economics research has produced a terrific 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. To the purposes of this paper, such an impressive amount of empirical studies can be partitioned into two main categories.

a. Studies finding a positive relationship between social capital and economic development, but suffering from questionable methods for the measurement of social capital, as described in the five points listed in previous section (these studies are briefly described in section 4.1).

b. Studies that, independently from the adopted measurement method, do not find a positive relationship between social capital and economic development (section 4.2), and some alternative, interesting, views (section 4.3).

4.1 Putnam and his disciples: the empirical literature on the positive relationship between social capital and economic development

The seminal study of this voluminous strand of the literature is the already cited "Italian work" carried out by Putnam, Leonardi and Nanetti (1993). In this research, social capital is measured by means of four main indicators of:

1. the number of voluntary organizations, including, for example, sport clubs and cultural circles.
2. The number of local newspapers' readers. The idea for using this indicator is that newspapers, in Italy, constitute the most effective mean to get information on local communities' problems and events. People reading newspapers are thus better informed and more likely to get involved in community's life.

3. Voter turn-out at referenda. Since voting for a referendum does not imply immediate and direct advantages, such a behaviour cannot be founded on the pursuit of personal aims. Therefore it has to be considered as a signal of civic spirit or what, following Putnam, we can term “civicness”.
4. The relevance of preference votes expressed by voters within political elections. This is interpreted as an indicator of civic backwardness, since, in the Italian political system, “preference votes” have been historically used as a mean for establishing client relationships and to obtain patronage favours[10].

The authors find a positive and significant correlation between these indicators and local institutions’ performance. Moreover, citizen-initiated contacts with government officials in the south tend to involve issues of narrowly personal concerns, while contacts in the more trusting regions tend to involve larger issues with positive implications for the welfare of the region as a whole. In a subsequent study, Heliwell and Putnam (1995) show that social capital, as measured through the same indicators, 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) posed a milestone for social capital theory, which registered an explosive development in the following decade, rapidly involving the attention of economists. Just as an example, this research has been pronounced by the editor of the mainstream *Quarterly Journal of Economics* as the most cited contribution across the social sciences in the 1990s (Fine, 2001, 83). However, it has also received wide criticism in the social science debate of the 90s: ‘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, 86). In particular,

[10] This point could be controversial and deserves a further explanation, specially for non Italian readers. In Italy, until 1994, in addition to specifying a party, voters were allowed to choose up to three individual candidates from off the party list by giving them their preference votes. Because the allocation of parliamentary seats to individual candidates depended strictly on the number of preference votes each collected, the system of preference voting gave individual legislators incentives to claim credit for specific allocations to their districts. Such allocations served to advertise the legislator's abilities, thereby protecting and enlarging his pool of preference votes. The preference vote system thus introduced a strong element of personalism into a political system in which parties and party lists otherwise dominated (Katz and Bardi, 1980, Katz, 1986). Not surprisingly, preference voting was heavily southern, rooted precisely in those parts of the country marked by endemic unemployment, lower levels of economic development, and lower levels of education. According to Golden (2003), politicians can maintain and reinforce linkages with their voters through the establishment of a complex system of political patronage. In particular, legislators have largely taken advantage of the Italian parliament's unusually strong committee system to elaborate district-specific allocative legislation. Legislation remaining in committee, out of public view, normally passes by large majorities - typically on the order of 90 per cent. Most legislation, as a result, was passed by committee, allowing legislators to target policies to the district that elected them. Furthermore, individual legislators have the ability to personally submit draft bills to the Parliament. Such bills have often a highly clientelistic nature and are subject to discussion only in committee (Sartori, 1976, Di Palma, 1977, Graziano, 1977). In the light of these arguments, it seems reasonable to consider higher amounts of preference votes as an indicator of low levels of civicness.

economists, sociologists and political scientists have largely questioned on the authors' explanation of the difference in social capital's regional endowments, and on the implications of the study in terms of social and economic policy. According to the authors, social capital endowments are highly persistent over centuries, and conditions for their formation lay down in almost a millennium previously. In the authors' words: 'Stocks of social capital, such as trust, norms and networks, tend to be self-reinforcing and cumulative. Virtuous circles result in social equilibria with high levels of cooperation, trust, reciprocity, civic engagement, and collective well-being … Defection, distrust, shirking, exploitation, isolation, disorder, and stagnation intensify one another in a suffocating miasma of vicious circles. This argument suggests that there may be at least two broad equilibria toward which all societies that face problems of collective action (that is *all* societies) tend to evolve and which, once attained, tend to be self-reinforcing' (Putnam, Leonardi and Nanetti, 1993, 177). The difference in social capital endowments of Northern and Southern regions is put down to historical reasons. In the South, the Kingdom of Sicily ruled for 700 years, till the unification in 1861. This Kingdom is described as an example of absolutism that deliberately prevented the building of social capital. It was not a particularly "bloody" regime, but it did try to control its subjects, and it had a secret police[11]. Putnam stresses that the long time the regime lasted was crucial for the destruction of trust and cooperation. Also, it led to the creation of the Mafia, which started as a secret mutual aid organization among the peasants. Such a socio-political background contrasted with the social structure of the city-states of the North, which were more democratic and open to external influences.

However, I do not want to go into details about the interpretation of Putnam's results, neither about their economic policy implications[12]. In this paper, I focus instead on few definite methodological issues. In the light of the arguments proposed in section 3, it is possible to identify three main shortcomings in the Italian work.

1. The study relies on "indirect" indicators as social capital measures. The number of newspaper readers, voter turnout at referenda and preference votes are not directly related to social capital's key components, which Putnam himself identifies with 'Features of social life-networks, norms, and trust, that enable participants to act together more effectively to pursue shared objectives' (Putnam, 1994, 1). As pointed out in section 3, point 3, this may

[11] The role of secret police organizations in destroying trust is analyzed within the social capital literature by several studies focusing on post-communist countries in transition. See for example Paldam and Svendsen (2002), and Stolle (2003).

[12] For an in-depth critique of Putnam's conclusions on social capital's accumulation processes – and on their implications for policy making - see for example Tarrow (1996), Levi (1996) and Rothstein (2001).

lead to considerable confusion about what social capital *is*, as distinct from its *outcomes*, and what the relationship between social capital and its outcomes *may be*. Research reliant upon an outcome of social capital as an indicator of it will necessarily find social capital to be related to that outcome. In this case, social capital - although previously defined by the authors as the complex set of trust and social networks - becomes tautologically present whenever an outcome, like newspapers diffusion and high voter turnout, is observed. The existence of such relationship is not proved, and neither analyzed, within the study.

2. The remaining indicator adopted by Putnam, Leonardi and Nanetti (2003) is a measure of the density of that particular type of social networks shaped by voluntary organizations. Some problems related to this measure have been briefly described in section 3, point 6. In particular, even admitting the possibility for associations to exert a positive influence on trust and development, we have to state that, until now, theoretical studies have not provided an explanation of the mechanism through which trust within groups generalizes to the entire society. Moreover, as already argued in section 3, point 5, an exploratory analysis of available data allows us to point out that, even if they constitute just one aspect of the multifaceted concept of social capital, social networks are themselves a multidimensional phenomenon. Recent studies carried out carried out on the Italian case (Piselli, 2002, Andreotti and Barbieri, 2003, Nuzzo and Micucci, 2003, Degli Antoni 2005a, Sabatini, 2005b) show that social networks and, within social networks, voluntary organizations, are both characterized by different aspects, which can be described only by a composite set of multiple indicators, or by latent indicators synthesizing the different dimensions.

3. According to the measurement carried out by Putnam, Leonardi and Nanetti (1993), the areas of Italy with the best institutional performance were those with left-wing local governments. This variable could be considered able to provide better explanations for the institutional performance. This poses the problem of the role of omitted variables in the Italian work and, more in general, in all social capital empirical studies. Moreover, social capital may be endogenous to the institutional and economic performance, rather than a cause of them. A serious attempt to overcome these shortcoming could be made through the use of structural equations models (SEMs) as a mean to carry out reliable empirical investigations accounting also for omitted variables (Sabatini, 2005c). SEMs allow to take into account the joint effect of unknown exogenous phenomena on variables explicitly considered in the model. In addition, this technique provides a better evaluation of the form

and direction of the causal relationship linking social capital to its supposed outcomes, making it possible to account for potential reverse effects (Jöreskog and Sörbom, 1979, Bollen, 1989, Corbetta, 1992).

I consider these points "critical" because they repeatedly present themselves again in most of the following literature in the field.
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 include roughly 1000 respondents in each of several dozen countries, and are intended to be nationally representative[13]. Trust values for each country are calculated as the percentage of respondents who agree that 'most people can be trusted' rather than the alternative that 'you can't be too careful in dealing with people'. Knack and Keefer (1997) find that trust and civic norms are unrelated to horizontal networks and have a strong impact on economic performance in a sample of 29 market economies, suggesting that, if declining social capital in the United States has adverse implications for growth, it is the erosion of trust and civic cooperation, as documented by Knack (1992), that are of greater concern than the decline in associational life emphasized by Putnam (1995a, 1995b). La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997) test the relationship between trust, income and firm scale, 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. The authors find that the scale measure is unrelated to income, and strongly related to the two trust measures: positively for trust in people, and negatively for trust in family. These results are coherent with the early thesis of Banfield (1958) and, more in particular, with the intuition of Fukuyama (1995), who stressed the relationship between social capital and industrial organizations[14]. 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 stronger formal institutions for enforcing contracts and reducing corruption, and in nations with less polarized populations (as measured by income or land inequality, ethnic heterogeneity, and a subjective measure of the

[13] On this regard, it is noteworthy that urban areas and better educated persons are generally overrepresented, particularly in developing countries (Inglehart, 1994).

[14] According to Fukuyama (1995), where trust does not extend beyond the family, the supply of capital and of qualified managers is more limited, constraining the scale of private firms. More generally, he argued that higher-trust societies are better able to implement efficient organizational innovations, when changes in technology or other factors make existing organizational forms obsolete.

intensity of economic discrimination)[15]. Drawing again on WVS data, Beugelsdijk and van Shaik (2001) find that, at the regional level, trust and growth are associated with each other and that associational activity and in specific active, unpaid, voluntary work is positively related to regional economic growth. These results are particularly interesting to my purposes, in that they imply an acknowledgement of the multidimensional nature of voluntary organizations.

All these works have provided relevant hints to social capital research, but they all suffer from their way to measure social trust at the national level. As already stressed in section 3, point 4, 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 looses its linkage with the social and historical circumstances in which trust and social capital are located.

More recently, a notable study carried out by Guiso, Sapienza and Zingales (2004), focusing on the relationship between social capital and another aspect of economic prosperity, financial development, has received great attention in the economics debate. The authors' basic idea is that: 'One of the mechanisms through which social capital impacts economic efficiency is by enhancing the prevailing level of trust … Since financial contracts are the ultimate trust-intensive contracts, social capital should have major effects on the development of financial markets' (Guiso, Sapienza and Zingales, 2004, 527). Without providing a precise definition first, the authors measure social capital through blood donation and electoral participation, claiming that both measures 'are driven only by social pressure and internal norms, i.e., the fundamental components of social capital' (Guiso, Sapienza and Zingales, 2004, 528). As already pointed out in section 3, point 3, this study measures social capital through indicators of what could be considered as one of its outcomes. The authors claim to have found a positive and significant relationship between social capital and financial development, but they rather prove the existence of a positive correlation between financial development, blood donation and electoral participation, without providing a credible explanation nor for such a relationship, neither for the supposed linkage between social capital and the variables adopted for its measurement. An interesting hint in the direction followed by Guiso, Sapienza and Zingales (2004) is provided by Hong, Kubik, and Stein (2004), who find that, in the United States, people who "know their neighbours" have higher stock-market participation rates.

4.2 Is social capital necessarily good for economic development?

[15] On the influence of ethnic heterogeneity, income inequalities and socio-economic fragmentation on trust and social capital, see Alesina and La Ferrara (2000, 2002), and Uslaner (2002). For an in-depth discussion of results obtained by Knack and Keefer (1997) and Zak and Knack (1999), see Beugelsdijk, de Groot and van Schaik (2004).

Besides social capital's measurement problems, the empirical evidence on the linkage between economic prosperity and social capital is sometimes conflicting. Putnam (2000) and Costa and Kahn (2003) document the large decline in social capital in the United States in the twentieth century. However, it is hard to argue that the U.S. economy did not flourish over this same period. On the other hand, the decline itself of U.S. social capital has been widely questioned. For example, Paxton (1999) analyzes multiple indicators of social capital in the United States over a 20-year period. The results do not support Putnam's claims, showing instead some decline in a general measure of social capital, a decline in trust in individuals, no general decline in trust in institutions, and no decline in associations.

The role of associational activity is a subject of greater contention. Putnam attributes the economic success and governmental efficiency of northern Italy, relative to the south, in large part to its richer associational life, claiming that associations 'instil in their members habits of cooperation, solidarity, and public-spiritedness' (Putnam, Leonardi and Nanetti, 1993, 89-90). This cooperation and solidarity is invoked most commonly to resolve collective action problems at the level of smaller groups, however. If the economic goals of a group conflict with those of other groups or of unorganized interests, the overall effect of group memberships and activities on economic performance could be negative. Adam Smith noted that when "people of the same trade" meet "even for merriment and diversion" the result is often "a conspiracy against the public" or "some contrivance to raise prices"[16]. Similarly, Olson (1982) observes that horizontal associations can hurt growth because many of them act as special interest groups lobbying for preferential policies that impose disproportionate costs on society. Putnam's claims have been widely questioned also by empirical studies on Italy. In a recent paper, Peri (2004) provides a measure of social capital as civic involvement, given by the first principal component of three variables representing associational density, newspapers readers and voter turnout at a particular referendum. The author finds a positive correlation of civic involvement with measures of economic development in the raw data, but attributes it mostly to North-South differences: the correlation in fact does not survive to robustness checks and to the inclusion of geographic controls. It is noteworthy that Peri's (2004) measurement of social capital follows a conceptual pathway very similar to that already covered by Putnam, Leonardi and Nanetti (1993), and suffers from the shortcomings described in sections 3, point 3 and 4.1, point 1.

Keefer and Knack (1993) provide some evidence for the conflicting influences of associational activity on growth, using a variable from Banks and Textor (1963) called "interest articulation" which assesses (on a subjective scale ranging from 1 to 4) how effectively groups articulate their

[16] This quotation is taken from Knack and Keefer (1997).

policy preferences to government. Although the ability of groups to articulate their interests is likely to be an important restraint on government, it also provides groups a way to capture private benefits at the expense of society. Consistent with the view that these two effects tend to counteract each other, "interest articulation" proves to be an insignificant predictor of growth when introduced into Barro-type cross-country tests. As pointed out in the previous section, Knack and Keefer (1997) find that trust and civic norms are unrelated to horizontal networks and have a strong impact on economic performance in a sample of 29 market economies.

Helliwell (1996) shows that trust, and an index of group memberships, are each negatively and significantly related to productivity growth for a sample of 17 OECD members. This sample omits the poor and middle-income nations for which trust has the largest effects.

The complexity of the relationship between social capital and growth 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 destruction: if people devote too time to work and consumption, therefore sustaining growth, few time remains for social participation. Routledge and von Amsberg (2003) show that the process of economic growth is generally accompanied with higher labour turnover, which changes the social structure increasing heterogeneity and affecting social capital. The authors focus on social capital as the aspects of the social structure influencing cooperative behaviour. In larger communities, which grow faster or are more efficient, social capital can deteriorate, making cooperative trade generally harder to sustain. On the contrary, reduced labour mobility, which results in decreased labour efficiency, increases welfare by increasing the proportion of trades that are cooperative. In other terms, 'the benefit of the increased social capital can outweigh the cost of lost efficiency' (Routledge and von Amsberg, 2003, 172). This result is supported by Alesina and La Ferrara (2000), who show that in heterogeneous communities participation in groups that require direct contact among members is low, arguing that such a decline destroys social trust therefore hampering economic growth. This study contains an interesting empirical result about the substitution between social and private activities. The authors show that, controlling for individual and community level variables, 'moving from a full-time to a part-time job increases the propensity to participate' (Alesina and La Ferrara, 2000, 880): working more brings about a reduction in social participation. Costa and Kahn (2003) show that this process has been particularly relevant for women in the last half century, since the enormous increase in their labour force participation rate, in the U.S. as well as in other advanced societies, has subtracted them much time previously available for social activities. Devoting most time to work and consumption can also be interpreted as a "defensive choice": Antoci, Sacco and Vanin (2002) argue that the individual utility of social participation depends both on own and on aggregate participation, as well as on the opportunities available in the social environment. Agents may "defend" themselves from a poor social environment by shifting to private activities, less exposed to external effects. The authors show that: 'If this strategy spreads over, private activities will be fostered, but at the expense of social activities. Since both effects accumulate over time, the outcome may be a joint occurrence of economic growth and social poverty' (Antoci, Sacco and Vanin, 2002, 23). On the contrary, spending more time in social activities can lead to a richer social environment, but may act as an obstacle to private growth. However, the political science literature widely shows that social participation can foster the diffusion of trust (Almond and Verba, 1963, Brehm and Rahn, 1997, Stolle, 1998, Stolle and Rochon, 1998, Hooghe and Stolle, 2003, Wollebæk and Selle, 2003), therefore indirectly supporting economic growth. In other terms, it is possible to argue that, if economic growth destroys social participation and trust, it can run faster, but is not sustainable in the long run.

All empirical studies reported in former two sections present also a further, critical, limit: they do not take into the appropriate account the very multidimensionality of the concept of social capital. Therefore, ignoring fertile insights provided by the sociological literature, the economics research on the empirics of social capital generally neglects the necessary distinction between different forms of social capital, e.g. "bonding" and "bridging social capital". Studies in this field generally consider just from one to three social capital's dimensions for carrying out empirical investigations on their effects on few, definite, outcomes. According to such a limited scope of analysis, these studies in turn conclude that social capital is good or bad for economic growth.

4.3 Some alternative views

This section gathers some recent views alternately containing: (a) the proposal of a different approach to the measurement of trust and of its supposed consequences; (b) or a focus on social networks, with the attempt to acknowledge their multidimensional nature within empirical analyses.

Even if it is possible to consider trusting and trustworthiness behaviours as epiphenomena, arising from social networks (Fukuyama, 1999), and despite problems connected to its measurement (Edward and Foley, 1999, Fine, 2001) it must be acknowledged that the topic of trust is closely related to the economic role of social networks (Granovetter, 1985). In the absence of a credible theoretical explanation of the transmission mechanism allowing trust among groups' members to extend to entire community, the need emerges to carry out at least further empirical investigations to test which kind of social networks is able to foster trust's diffusion. On this regard, it would be of great interest to perform new empirical analyses investigating the relationship between social networks' measures built by studies addressing the measurement of social networks and various trust and trustworthiness indicators elaborated within the more recent empirical literature.

Measures of trust adopted in most empirical studies on social capital are based on the idea that trust can be identified with 'a particular level of the subjective probability which an agent assesses that an other agent or group of agents will perform a particular action' (Gambetta, 1988, 217). However, trusting another agent does not protect against his possible opportunistic behaviour. In other terms, as already pointed out in section 3, point 4, trust measured through surveys 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, but does not catch people's effective behaviour. On this regard, it is noteworthy that Glaeser, Laibson and Sacerdote (2000) find a positive and significant relationship between people's propensity to trust others and their attitude to behave trustworthy. Trusting people may be more exposed to the risk of being damaged by opportunistic behaviours. A possible way to overcome this problem has been recently proposed by Degli Antoni (2005a). The author states that, if we define social capital as all the aspects of the social structure fostering cooperation, a measurement method based on an indicator of trustworthiness would be more reliable than indicators of trust measured through surveys. To this purpose, Degli Antoni defines social capital as the likelihood to observe "trustworthy behaviours" in reply to "trusting behaviours". Trustworthiness is thus measured relying on indicators catching people's effective behaviour, as collected by the Italian National Bureau of Statistics (Istat), like the number of legal proceedings for work disputes, the number of protests for bank bills and cheques, and the number of people reported to judicial authorities by the police. In a subsequent study, Degli Antoni (2005b) finds a robust and positive relationship between this notion of social capital and per capita GDP growth rate in the Italian regions and provinces. On the one hand, it is possible to object that this measurement method does not overcome the shortcoming underlined in the third point of section 3. If we attribute the social capital label to a particular aspect of the social fabric – the absence of crime, of work disputes and of financial frauds – which commonly provides a favourable environment for the economic activity, then any empirical analysis will necessarily find that such form of social capital fosters the economic activity. On the other hand, what is new in Degli Antoni's (2005a) study is the critical distinction between trust and trustworthiness and the valuable attempt to use non-cognitive indicators, measuring people's effective behaviour. Theoretically, the measurement of people's real actions founds also the study on social capital and financial development in Italy carried out by Guiso, Sapienza and Zingales (2004). However, as already pointed out in sections 3 and 4.2, indicators adopted in this work suffer from an excessive distance social capital's key components identified by the theoretical literature. A new approach, aiming to address the limits of the empirical literature pointed out in section 3, is that carried out in Sabatini (2005b, 2005c). These studies focus only on the "structural" components of social capital, as identified with social networks, and try to account for the very multidimensionality of each type of social network. By means of factor analyses performed on a wide set of basic indicators, four main kinds of social networks are identified: informal networks of strong family ties (i.e. bonding social capital), informal networks of weak bridging ties connecting friends and acquaintances (i.e. bridging social capital), formal networks connecting members of voluntary organizations (i.e. linking social capital) and formal networks of activists in political parties. The density of such networks in the Italian regions is measured through synthetic indicators given by first factors resulting from principal component analyses performed on four distinct groups of variables. Basic variables account for different aspects of considered social networks, like their dimension and the intensity and quality of social interactions arising inside their ideal borders. Rough data are drawn from a set of multipurpose surveys carried out by the Istat, and represent people's effective behaviour. The causal relationship existing between synthetic indicators of different social capital's dimensions and the quality of economic development is then analyzed by means of structural equations modelling. Linking social capital is found to exert a positive influence on the economic performance and well-being, differently from bonding and bridging social capital and from active political participation. Such a strategy, besides providing an operational definition of social capital as social networks, partially allows to overcome the empirical literature's shortcomings underlined in points 3, 4, and 5 of section 3.

As regards point 2, on the problem of comparability, it is noteworthy that other national bureaus of statistics have started building panels for the measurement of social capital which, in most cases, include items very similar to those elaborated by the Istat and adopted in Sabatini (2005b). In particular, significant progress in this direction has been recently carried out in Australia (Australian Bureau of Statistics, 2004), the United Kingdom (National Statistics, 2001 and 2003, Harper and Kelly, 2003, Green and Fletcher, 2003a and 2003b, Whiting and Harper, 2003, Deviren and Babb, 2005, Babb, 2005), New Zealand (Statistics New Zealand, 2004), the Netherlands (Van der Gaag and Snijders, 2004, Flap and Wölker, 2004)[17], Sweden (Kumlin and Rothstein, 2005)[18]. In Germany, the German Institute for Economic Research started elaborating the German Socio-

[17] Van der Gaag and Snijders (2004) and Flap and Wölker (2004) suggest a framework for the measurement of social capital on the basis of data supplied by the Dutch Central Bureau of Statistics in its annual *Survey of Social Networks of the Dutch*.

[18] Kumlin and Rothstein (2005) adopts a framework for the measurement of trust in Sweden drawing data from the SOM Institute's annual nationwide survey, *Risk-SOM*. The SOM (Society, Opinion, Media) Institute is a research centre at the Göteborg University.

Economic Panel Study (SOEP) in 1984. This wide-ranging longitudinal survey currently covers about 23,000 individuals living in more than 12,000 private households, and collects items very similar to those proposed in the Istat's multipurpose surveys. In the United States, the *General Social Survey* (GSS), developed by the National Opinion Research Centre (NORC) at the University of Chicago, contains multiple indicators capturing different social capital's dimensions from 1975 to date. Moreover, the *Saguaro Seminar* of the John F. Kennedy School of Government at Harvard University measures different social capital's dimensions within the *Social Capital Community Benchmark Survey*, the largest-ever survey on the civic engagement of Americans, involving about 30,000 people. In Europe, the European Commission Directorate General for Employment and Social Affairs has recently established to fund the creation of a *Network on Social capital, Social Cohesion, Trust and Participation*, as part of the new *European Observatory* aimed at informing the social policy debate and providing analytical input for the Report on the social situation in the European Union. The network will involve academic institutions belonging to all member countries (including new entrants) with the aim to carry out an accurate measurement of diverse social capital's dimensions. Most of cited measurement systems elaborate also measures of trustworthiness like those considered in Degli Antoni (2005a). A new frontier for cross-country empirical studies on social capital could thus be given by the building of international datasets with the aim to enjoy benefits from ten years of serious social capital research carried out by national bureaus of statistics all over the world.

5. Concluding remarks

Social capital is a multidimensional concept. Its most effective definition is that provided by Coleman, who stated that 'Social capital is defined by its function. It is not a single entity, but a variety of different entities, with two elements in common: they all consist in some aspect of social structures, and they facilitate certain actions of actors within the structure'. (Coleman, 1988, 98).

Such a vague definition makes every attempt of empirical analysis difficult and hazardous. The review of measurement methods carried out in this paper has pointed out five main weaknesses affecting almost all the empirical studies:

1. there is not a single, universal, definition of what social capital is, and a unique, underlying, method of measurement to be used within the empirical research.
2. The use of different definitions, diverse indicators from various data sources makes any general assessment difficult, due to incomparability in sampling designs and question wording.

3. The use of measures of trust drawn from the *World Values Survey* leads to the creation of indicators of “social” trust loosing their linkage with the social and historical circumstances in which trust and social capital are located. As argued by Fine (2001) ‘if social capital is context-dependent – and context is highly variable by how, when and whom, then any conclusion are themselves illegitimate as the basis for generalisation to other circumstances’ (Fine, 2001, 105).
4. The use of “indirect” indicators, not representing social capital’s key components as identified by the theoretical literature, may be misleading, and causes a considerable confusion about what social capital *is*, as distinct from its *outcomes*, and what the relationship between social capital and its outcomes *may be*. Research reliant upon an outcome of social capital as an indicator of it will necessarily find social capital to be related to that outcome.
5. The difficulty to account for the multidimensionality of each of social capital’s diverse facets, like social networks. Just few recent studies, for example, acknowledge the existence of different types of voluntary organizations, exerting a diverse effect on socioeconomic outcomes.

6. There are several reasons to doubt of the efficacy of social capital measures simply based on the density of voluntary organizations. The most evident problem is that the logic underlying the connection between social ties and generalized trust has never been clearly developed, neither theoretically nor empirically.

Of course, from a lexical point of view, it is possible to attribute the “social capital” label to every aspect of the economy’s social fabric providing a favourable environment for production and well-being. However, such definition poses a “logic” problem: if social capital is everything can make agents cooperate or markets work better, then any empirical analysis will find that social capital causes cooperation among agents and improves the efficiency of markets. This approach simply “sterilizes” the social capital literature, making it unable to foster the explanatory power of economic studies addressing the socio-cultural factors of growth. The survey of the literature carried out in this paper points out: (a) the need to acknowledge the multidimensional nature of social capital. It does not make sense taking into consideration just a single dimension, considering it as representative of the concept as a whole, and analyzing its effect on the economic performance. Differently from what to date has been done by most cross-country studies, we have to be very cautious in carrying out international comparisons laying just on a single basic indicator (like trust levels). Each social capital's dimension may exert diverse effects on economic variables, in turn fostering or hampering growth and development. The need emerges to distinguish at least between "bonding" and "bridging social capital". Bonding social capital is shaped by social ties fostering the pursuit of narrow - sometimes sectarian and contrasting with community's well-being - interests, and hampering the diffusion of knowledge and information. Bridging social capital is composed by weak ties building bridges and connections between different types of networks, therefore fostering knowledge diffusion and socioeconomic progress. (b) The expediency of focusing just on structural key dimensions of the concept, therefore excluding by the measurement toolbox all indicators referring to social capital's supposed outcomes. Some recent studies advance the possibility to focus on social networks, rather than on measures of perceived trust or on hazardous "indirect" indicators. Such a strategy can foster the robustness of analysis without causing a relevant loss of generality. In this case, however, it must be remembered the existence of different types of social networks. Some of them not necessarily play a positive role in the process of economic development and, at the micro level, in the agents' everyday life. Even if it is possible to consider trusting and trustworthiness behaviours as epiphenomena, arising from social networks, and despite problems connected to its measurement, it must be acknowledged that the topic of trust is closely related to the economic role of social networks. In the absence of a credible theoretical explanation of the transmission mechanism allowing trust among groups' members to extend to entire community, the need emerges to carry out at least further empirical investigations to test which kind of social networks is able to foster trust's diffusion. On this regard, it would be of great interest to perform new empirical analyses investigating the relationship between social networks' measures built by studies addressing the measurement of social networks and various trust and trustworthiness indicators elaborated within the more recent empirical literature.

6. Bibliography

Alesina, A., La Ferrara, E. (2000), "Participation in Heterogeneous Communities", *The Quarterly Journal of Economics*, August 2000, Vol. 115, No. 3, 847-904(58).

Alesina, A., La Ferrara, E. (2002), "Who Trusts Others?", *Journal of Public Economics*, 85, 207-234.

Almond, G., Verba, S. (1963), *The Civic Culture*, Princeton: Princeton University Press.

Andreotti A., Barbieri P (Eds) (2003), *Reti e capitale sociale*, Inchiesta, No. 139/2003.

Antoci A., Sacco P.L., Vanin P. (2002), "On the Possible Conflict Between Economic Growth and Social Development", Paper presented at the Conference 'Il valore economico delle relazioni impersonali', Milano-Bicocca, September, 24, 2002.

Arnott, R., Stiglitz, J. (1991), “Moral Hazard and Non-Market Institutions: Dysfunctional Crowding Out or Peer Monitoring”, *American Economic Review*, 81(1), pp. 179-190.

Arrow, K., (1999), “Observations on Social Capital”, in: Dasgupta, P. Serageldin, I. (Eds), *Social Capital. A Multifaceted perspective*. The World Bank, Washington D.C.

Australian Bureau of Statistics (2004), *Measuring Social Capital An Australian Framework and Indicators 2004*, Canberra, Australian Bureau of Statistics.

Babb, P. (2005), “Measurement of Social Capital in the UK, 2005”, London, Office for National Statistics.

Banfield, E.G. (1958), *The Moral Basis of a Backward Society*, New York, Free Press.

Banks, A.S., Textor, R.S. (1963), *A Cross-Polity Survey*, Cambridge, Ma, MIT Press.

Barro, R.J. (1996), “Determinants of Economic Growth: A Cross-Country Empirical Study”, NBER Working Paper, 5698, National Bureau of Economic Research, Cambridge, Ma.

Becker, G. (1974), “A Theory of Social Interactions”, *Journal of Political Economy*, 82, n. 6, pp. 1063-1093.

Becker, G. (1996), *Accounting for Tastes*, Cambridge, Ma, Harvard University Press.

Bénabou, R. (1996), “Heterogeneity, Stratification and Growth: Macroeconomic Implications of Community Structure and School Finance”, *American Economic Review*, 86 (1996) 584-609.

Berg, J., Dickaut, J., McCabe, K. (1995), “Trust, Reciprocity and Social History”, *Games and Economic Behavior*, 10, 122-142.

Beugelsdijk, S., van Schaik, T. (2001), “Social Capital and Regional Economic Growth”, Tilburg University, Center for Economic Research, Discussion Paper No. 102.

Beugelsdijk, S., de Groot, T., and van Schaik, T. (2004), “Trust and economic growth: a robustness analysis”, *Oxford Economic Papers*, Vol. 56, Issue 1, 118-134.

Bjørnskov, C. (2003), “The Happy Few: Cross-Country Evidence on Social Capital and Life Satisfaction”, *Kyklos*, Vol. 56, Issue 1, 3-16.

Bollen, K. (1989), *Structural Equations with Latent Variables*, New York, Wiley.

Bourdieu, P., (1980), “Le capital social”, *Actes de la Recherche en Sciences Sociales* 31, 2-3.

Bourdieu, P., (1986), “The forms of capital”, in: Richardson, J.G. (Ed.), *Handbook of Theory and Research for the Sociology of Education*. New York, Greenwood Press, pp. 241-258.

Bourdieu, P., Wacquant, L., (1996), *An Invitation to reflexive sociology*. Cambridge, Polity.

Bowles, S., Gintis, R. (1998), “The Evolution of Strong Reciprocity”, *Research in Economics*, 98-08-073e, Santa Fe Institute.

Bowles, S. and H. Gintis (2002), “Social Capital and Community Governance”, in *The Economic Journal*, Vol. 112, I. 483, 419-436.

Brehm, J., Rahn, W. (1997), “Individual-Level evidence for the causes and consequences of Social Capital”, *American Journal of Political Science*, 41, 3, 999-1023.

Brown, L.D., Ashman, D., (1996), “Participation, social capital and intersectoral problem solving, African and Asian cases”. *Worl Development* 24(6), 1467-79.

Coleman, J., (1988), “Social Capital in the Creation of Human Capital”. *American Journal of Sociology* 94, 95-120.

Coleman, J., (1990), *Foundations of Social Theory*. Cambridge, MA, Harvard University Press.

Collier, P., Gunning, J.W. (1997), “Explaining African Economic Performance”, *Journal of Economic Literature*, 64-111.

Corbetta, P. (1992), *Metodi di analisi multivariata per le scienze sociali*, Bologna, Il Mulino.

Costa, D.L., Kahn, M. (2003), “Understanding the American Decline in Social Capital, 1952–1998”, *Kyklos*. Vol. 56, No. 1: 17-46(30).

Degli Antoni, G. (2005a), "Le determinanti del capitale sociale, analisi teorica e verifica empirica a livello micro e macroeconomico", Third Sector and Civil Economy Working Paper Series, No. 12 (April 2005), University of Bologna, Faculty of Economics.

Degli Antoni, G. (2005b), “Capitale sociale e crescita economica: verifica empirica a livello regionale e provinciale”, Paper presented at the XX National Conference of Labour Economics, University of Rome La Sapienza, Rome, 22-23 September 2005.

Deviren, F., Babb, P. (2005), “Young People and Social Capital”, London, Office for National Statistics.

Di Palma, G. (1977), *Surviving Without Governing: The Italian Parties in Parliament*, Berkeley: University of California Press.

Durlauf, S.N. (2002), “On the Empirics of Social Capital”, University of Wisconsin, Department of Economics, mimeo.

Durlauf, S.N., Fafchamps, M. (2004), “Social Capital”, The Centre for The Study of African Economies Working Paper Series, No. 214, The Berkeley Economic Press.

Evans, G., Letki, N. (2005), “Endogenizing Social Trust: Democratization in East-Central Europe”, *British Journal of Political Science* 2005, Vol. 35 No. 3, pp. 515-529.

Fehr, E., Gatcher, S. (2000), “Fairness and Retaliation: The Economics of Reciprocity”, *The Journal of Economic Perspectives*, Vol. 14, No. 3, 159-181.

Fehr, E., Gatcher, S., Kirchsteiger, G. (1997), “Reciprocity as a Contract Enforcement Device: Experimental Evidence”, *Econometrica*, Vol. 65, No. 4, 833-860.

Fine, B. (2001), *Social Capital versus Social Theory. Political Economy and Social Science at the Turn of the Millennium*, London and New York: Routledge.

Flap, H., Volker B. (Eds.) (2004), *Creation and returns of Social Capital*, London, Routledge.

Foley, M.W., Edwards, B. (1999), "Is It Time to Disinvest in Social Capital?", *Journal of Public Policy* 19, No. 2, 199-231.

Frey, B.S. (1997), *Not Just for the Money: An Economic Theory of Personal Motivation*, Cheltenham, Edward Elgar.

Fukuyama, F. (1995), *Trust. The Social Virtues and the Creation of Prosperity*, New York, Free Press.

Furstenberg, F. and M. Hughes, (1995), "Social Capital and Successful Development Among At-Risk Youth", *Journal of Marriage and the Family*, 57, 580-592.

Gambetta D. (1988), *Trust: Making and breaking of cooperative relations*, Oxford: Blackwell

Glaeser, E., Laibson, D., Sacerdote, B. (2002), "An Economic Approach to Social Capital", *The Economic Journal*, Vol. 112, Issue 483, 437-458.

Golden, M.A. (2003), "Electoral Connections: The Effects of the Personal Vote on Political Patronage, Bureaucracy and Legislation in Postwar Italy," *British Journal of Political Science,* vol. 33 (April 2003), pp. 189-212.

Gradstein, M., Justman, M. (2002), "Education, Social Cohesion and Economic Growth", *The American Economic Review*, 1 September 2002, vol. 92, no. 4, pp. 1192-1204(13).

Granovetter, M. (1973), "The Strength Of Weak Ties", in *American Journal of Sociology*, 78, pp. 1360-80.

Granovetter, M. (1985), "Economic Action And Social Structure: The Problem Of Embeddedness", in *American Journal of Sociology*, n. 91, pp. 481-510.

Graziano, L. (1977), "Patron-Client Relationships in Southern Italy", in Schmidt, S.W., Guasti, L. Landé, C.H. and Scott, J.C. (Eds.), *Friends, Followers, and Factions: A Reader in Political Clientelism*, Berkeley, University of California Press.

Green, H., Fletcher, L. (2003a), "The Development of Harmonised Questions on Social Capital", London, Office for National Statistics.

Green, H., Fletcher, L. (2003b), "Social Capital Harmonised Question Set. A Guide to Questions for Use in the Measurement of Social Capital", London, Office for National Statistics.

Gui, B. (2000), "Beyond Transactions: On the Interpersonal Dimension of Economic Reality", *Annals of Public and Cooperative Economics***,** Volume 71, Issue 2: 139.

Gui, B. (2002), "Più che scambi, incontri. La teoria economica alle prese con i fenomeni interpersonali", in Sacco, P.L. e Zamagni, S. (a cura di), *Complessità relazionale e comportamento economico*, Bologna, Il Mulino.

Guiso, L., Sapienza, P, and Zingales, L, (2004), "The Role of Social Capital in Financial Development", *The American Economic Review*. Vol. 94, No. 3: 526-556.

Hanifan, L.J. (1916), "The Rural School Community Centre", *Annals of the American Academy of Political and Social Sciences*, 67, 130-38.

Harper, R., Kelly, M. (2003), "Measuring Social Capital in the United Kingdom", London, Office for National Statistics.

Harriss, J. (2002), *Depoliticizing Development: the World Bank and social capital*, London, Anthem Press.

Heckman, J,J. (2000), "Causal Parameters and Policy Analysis in Economics: a Twentieth Century Retrospective", *Quarterly Journal of Economics*. Vol. 115, Issue 1: 45-97.

Heliwell, J.F., Putnam, R.D. (1995), "Economic Growth And Social Capital In Italy", *Eastern Economic Journal*, 21, 295-307.

Homans, G. (1961), *Social Behavior: Its Elementary Forms*, New York, Harcourt, Brace and World.

Hong, H., Kubik, J.D. and Stein, J.C. (2001), "Social interaction and stock-market participation", NBER Working Paper No. 8358.

Hooghe, M., Stolle, D. (Eds) (2003), *Generating Social Capital: Civil Society and Institutions in Comparative Perspective*, New York: Palgrave.

Inglehart, R. (1994), *Codebook for World Values Surveys*, Ann Arbor, Mi, Institute for Social Research.

Inglehart, R. (1996), "Trust, Well-being and Democracy", Paper presented at the Georgetown University Conference on Trust and Democracy.

Isham, J. Kelly, T. and Ramaswamy, S. (eds) (2002), *Social Capital and Economic Development. Well-Being in Developing Countries*, Cheltenham, UK, Northampton, MA.

Jacobs, J. (1961), *The Death and Life of Great American Cities*, New York, Random House.

Jöreskog, K.G., Sörbom, D. (1979), *Advances in Factor Analysis and Structural Equation Models*, Cambridge, Ma, Abt Books.

Kahneman, D., Tversky, A. (1979), "Prospect Theory: An Analysis of Decision under Risk", *Econometrica*, 47, 263-291.

Katz, R.S. (1985), "Preference Voting in Italy: Votes of Opinion, Belonging, or Exchange," *Comparative Political Studies* 18(2), 229-49.

Katz, R.S. (1986), "Intraparty Preference Voting," in Grofman, B. and Lijphart, A. (Eds), *Electoral Laws and Their Political Consequences*, New York: Agathon Press, 1986.

Katz, R.S., Bardi, L. (1980), “Preference Voting and Turnover in Italian Parliamentary Elections”, *American Journal of Political Science*, vol. 17, pp. 97-114.

Knack, S. (1992), “Civic Norms, Social Sanctions, and Voter Turnout”, *Rationality and Society*, Vol. IV (1992), 133-156.

Knack, S., Keefer, P. (1997), “Does Social Capital Have An Economic Payoff? A Cross Country Investigation”, *Quarterly Journal of Economics*, 112/4, 1251-1288.

Kormendi, R.C. e Meguire, P.G. (1985), “Macroeconomic Determinants Of Growth: Cross-Country Evidence”, *Journal of Monetary Economics*, 16, 141-163.

Kumlin, S., Rothstein, B. (2005), “Making and Breaking Social Capital: The Impact of Welfare-State Institutions”, *Comparative Political Studies* 2005; 38: 339-365.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W. (1997), “Trust in Large Organizations”, *The American Economic Review*, Papers and Proceedings of the Hundred and Fourth Annual Meeting of the American Economic Association (May 1997), 333-338.

Levi, M. (1996), “Social and Unsocial Capital. A Review Essay of Robert Putnam’s *Making Democracy Work*”, *Politics & Society* 24, 1, 45-55.

Loury, G. (1977), “A Dynamic Theory of Racial Income Differences”, in Wallace, P.A., Le Mund, E., (eds.), *Women, Minorities, and Employment Discrimination*. Lexington, MA, Lexington Books.

Marsh, C. (2000), *Making Russian Democracy Work: Social Capital, Economic Development and Democratization*, Lewiston, N.Y., Edwin Mellen Press.

Micucci, G., Nuzzo, G., (2003), “La misurazione del capitale sociale. Evidenze da un’analisi sul territorio italiano”, Paper presented at the Symposium on “Economie locali, modelli di agglomerazione e apertura internazionale”, organized by the Bank of Italy and the University of Bologna, Bologna, 20 November, 2005.

Narayan, D. Pritchett, L: (1999), “Cents and Sociability: Household Income and Social Capital in Rural Tanzania”, *Economic Development and Cultural Change*, 47, 4, 871-897.

National Statistics (2001), “Social Capital Matrix of Surveys”, London, Office for National Statistics.

Olson, M. (1982), *The Rise and Decline of Nations*, New Haven, Yale University Press.

Paldam, M., Svendsen, G.T. (2000), “An essay on social capital: Looking for the fire behind the smoke”, *European Journal of Political Economy*, 16, 339-66.

Paldam, M. and Svendsen, G,T. (2002), “Missing Social Capital And The Transition From Socialism”, in *Journal for Institutional Innovation, Development and Transition*, 5, 21-34.

Paxton, P. (1999), "Is Social Capital Declining in the United States? A Multiple Indicator Assessment", *The American Journal of Sociology*, Vol. 105, No.1, 88-127.

Peri, G. (2004), "Socio-Cultural Variables and Economic Success: Evidence from Italian Provinces 1951-1991", *Topics in Macroeconomics*, Vol. 4, Issue 1, Article 12.

Piazza-Georgi, B. (2002), "The Role of Human and Social Capital in Growth: Extending Our Understanding", *Cambridge Journal of Economics* 2002, 461-479.

Piselli F. (2001), "Capitale sociale: un concetto situazionale e dinamico", in Bagnasco A., Piselli F., Pizzorno A.and Trigilia C., *Il Capitale Sociale*, Bologna, Il Mulino.

Portes, A. (1998), "Social capital: its origins and applications in modern sociology", *Annual Review of Sociology* 24, 1-24.

Putnam, R.D., (1994), "Tuning In, Tuning Out: The Strange Disappearance of Social Capital in America", *PS Online: American Political Science Association's Journal of the Profession*.

Putnam, R.D., (1995a), "Bowling Alone: America's Declining Social Capital", *Journal of Democracy* 6, 1, 65-78.

Putnam, R.D. (1995b), *Tuning In, Tuning Out: The Strange Disappearance of Social Capital in America*, "PS: Political Science and Politics", XXVIII, 664-683.

Putnam, R.D. (2000), *Bowling Alone : The Collapse and Revival of American Community*, New York, Touchstone Books.

Putnam, R.D., Leonardi, R. and Nanetti, R.Y. (1993), *Making Democracy Work*, Princeton: Princeton University Press.

Raiser, M. (1997), "Informal Institutions, Social Capital and Economic Transition: Reflections on a Neglected Dimension", European Bank for Reconstruction and Development, EBRD Working Paper n. 25.

Raiser, M., Haerpfer, C., Nowotny, T. e Wallace, C. (2001), "Social Capital in Transition: A First Look at the Evidence", European Bank for Reconstruction and Development, EBRD Working Paper n. 62.

Rose, R. (1999), "Getting Things Done in an Anty-Modern Society: Social Capital Networks in Russia", in Dasgupta, P., Serageldin, I. (eds), *Social Capital, A Multifaceted Perspective*, Washington D.C., The World Bank.

Rosenberg, M. (1956), "Misanthropy and Political Ideology", *American Sociological Review*, 21, 690-695.

Rosenblum, N.L. (1998), *Membership and Morals*, Princeton: Princeton University Press.

Rothstein, B. (2001), "Social Capital in the Social Democratic Welfare State", *Politics and Society*, Vol. 29, 206-240.

Routledge, B. and von Amsberg, J. (2003), “Social Capital and Growth”, *Journal of Monetary Economics*. Vol. 50, Issue 1, 167-193.

Sabatini, F. (2005a), “Resources for the Study of Social Capital”, *The Journal of Economic Education*, Vol. 36, No. 2, Spring 2005: 198.

Sabatini, F. (2005b), “Social Capital as Social Networks: a New Framework for Measurement”, Working Paper No. 83, Department of Public Economics, University of Rome La Sapienza.

Sabatini, F. (2005b), “Social Capital and Economic Development. Investigating the Causal Relationship through Structural Equations Models”, University of Rome La Sapienza, Department of Public Economics, mimeo.

Sartori, G. (1976), *Parties and Party Systems: A Framework for Analysis*, New York, Cambridge University Press.

Seeley, J.R., Sim, A.R., Loosley, E.W. (1956), *Crestwood Heights: A Study of The Culture of Suburban Life*, New York, Basic Books.

Solow, R.M. (1995), “But Verify”, *The New Republic* (September 11), 36-39, Review of F. Fukuyama (1995), Trust: The Social Virtues and the Creation of Prosperity, New York, Free Press.

Solow, R. (1999), “Notes on Social Capital and Economic Performance”, in Dasgupta, P. and Serageldin, I. (eds), *Social Capital. A Multifaceted perspective*, The World Bank, Washington D.C.

Statistics New Zealand (2004), *Framework for the Measurement of Social Capital in New Zealand*, Auckland, Statistics New Zealand.

Stolle, D. (1998), “Bowling Together, Bowling Alone: The Development of Generalized Trust in Voluntary Associations”, *Political Psychology*, No. 19: 497-525.

Stolle, D. (2003), “The Sources of Social Capital**”,** in Hooghe, M. e Stolle, D. (a cura di), *Generating Social Capital: Civil Society and Institutions in Comparative Perspectiv*, New York, Palgrave, 19-42.

Stolle, D., Rochon, T.R. (1998), “Are All Associations Alike? Member Diversity, Associational Type, and the Creation of Social Capital”, *American Behavioural Scientist*. No. 42: 47-65.

Sudgen, R. (2000), “Team Preferences”, *Economics and Philosophy*, n. 16, pp.175-204.

Tarrow, S. (1996), “Making Social Science Work Across Space and Time: A Critical Reflection on Robert Putnam's *Making Democracy Work*”, *American Political Science Review*, Vol. 90, 389-397.

Temple, J., Johnson, P.A. (1998), “Social Capability and Economic Growth”, *The Quarterly Journal of Economics*, 113(3), 965-990.

Torsvik, G. (2000), “Social Capital and Economic Development: A Plea for the Mechanism”, *Rationality and Society*, 12, 451-476.

Trigilia, C. (2001), “Social Capital and Local Development”, *European Journal of Social Theory*, 2001; 4, 427-442.

Uslaner, E.M. (2002), *The Moral Foundations of Trust*, Cambridge, Cambridge University Press.

Van Der Gaag, M.P.J., Snijders, T.A.B. (2004), “Proposals for the measurement of individual social capital”, in Flap, H. Volker B. (Eds.), *Creation and returns of Social Capital*, London, Routledge.

Van Shaik, T. (2002), “Social Capital in the European Values Study Surveys”, Country paper presented at the OECD-ONS International Conference on Social Capital Measurement London, September 25-27, 2002

Whiteley, P.F. (2000), “Economic Growth and Social Capital”, *Political Studies*, Vol. 48, 443- 466.

Whiting, E., Harper, R. (2003), “Young People and Social Capital”, London, Office for National Statistics.

Wollebæk, D., Selle, P. (2003), “Participation and Social Capital Formation: Norway in a Comparative Perspective”, *Scandinavian Political Studies*. Vol. 26, Issue 1: 67.

Wuthnow, R. (2002), “The Changing Character of Social Capital in the United States, in Putnam”, R.D. (ed), *Democracies in Flux: The Evolution of Social Capital in Contemporary Society*, Oxford, Oxford University Press.

Zak, P., Knack, S. (2001), “Trust and Growth”, *The Economic Journal*, 111, 295-321.