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POVERTY REDUCTION: MEASUREMENT  
ISSUES IN LONGITUDINAL AND CROSS-  
COUNTRY COMPARISONS. TOWARDS A  
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# SOCIAL CAPITAL AND ITS IMPACT ON POVERTY REDUCTION: MEASUREMENT ISSUES IN LONGITUDINAL AND CROSS- COUNTRY COMPARISONS. TOWARDS A UNIFIED FRAMEWORK IN THE EUROPEAN UNION.

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## ABSTRACT

*While there is widespread consensus that social capital contributes significantly to development outcomes - growth, equity and poverty alleviation - and that it represents a significant determinant of household well-being, the same cannot be said of its measurement criteria. Different strategies and statistical methods have been used so far to define appropriate measures of social capital so that assessing its effects on household economic well-being lacks of a unified and a systematic methodological approach. Given the particular relevance of the topic, this paper aims to provide a unified framework for social capital measurement in the context of European Union because of its strong commitment in the fight against poverty (Bruxelles, 13.10.2011- COM(2011) 637 final - Increasing the impact of E.U. Development Policy: an Agenda for Change). In particular, the paper starts with a short review of the concept of social capital and of the main proxy indicators proposed so far to measure it when the aim is to evaluate its impact on poverty reduction; then it turns to issues in measurement and finally explores the currently available surveys and databases at European level in order to identify the appropriate proxy indicators of social capital. Specific attention will be devoted to the European Union Statistics on Income and Living Conditions (EU-SILC) and to Eurostat statistic database, as regards, respectively, individual/household and community social capital endowment.*

**Classification JEL:** I32, D10, I38

**Keywords:** Social Capital, Poverty, Household, European Union, EU-SILC

## 1. INTRODUCTION

The issue of poverty has always been, both in rich and poor countries, a major concern for governments, policy-makers, institutions and researchers shaping the path towards the eradication of poverty <sup>3</sup>. Nowadays, it is

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<sup>3</sup>End poverty by 2015. This is the historic promise the world leaders made at the United Nations Millennium Summit in 2000 when they signed onto the Millennium Declaration and agreed to meet the Millennium Development Goals (MDGs). The MDGs are an eight-point road map with measurable targets and clear deadlines for improving the lives of the world's poorest people. World leaders have agreed to achieve the MDGs by 2015

widespread opinion that the concept of poverty, as well as measures of the extent of poverty at national or local level, cannot be linked exclusively to income and assets but because of its multidimensionality necessarily involves a variety of individual/household characteristics (age, gender, education level, employment status, household size and so on) and several territorial and societal level aspects. Social capital plays a crucial role, here.. Among others, social capital, which according to the most widely accepted definition suggested by the *World Bank Social Capital Initiative Program* research group (Grootaert and van Bastelaer, 2001 and 2002) social capital *includes the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development*. This definition encompasses economic, social and political aspects [Coleman (1988, 1990); Putnam et al. (1993); Olson (1982) and North (1990)] and implies that socio-institutional relationships can foster economic development and improve both the quality of the territorial context where households live and the welfare of the whole population (Santini, 2008).

There is growing theoretical and empirical evidence that social capital contributes significantly to development outcomes — growth, equity and poverty alleviation. In particular, for researchers interested in economic development, social capital has great intuitive appeal as a resource available to poor people who are often described as *deficient* along other vectors (such as human, physical, and financial capital) (Grootaert and van Bastelaer, 2001; Woolcock, 2002). As a matter of fact, since the seminal work of Putnam et al. (1993)<sup>4</sup> on the role of social capital in explaining Italian regions' economic success, interest in the relations between social capital and poverty has been growing rapidly (Grootaert, 1999; Grootaert et al., 1999; Narayan, 1999; Narayan and Pritchett, 1999; Rose, 1999; Maluccio et al., 2000; Woolcock and Narayan, 2000; Tiepoh and Reimer, 2004; Levesque, 2005; Yusuf, 2008; Roslan et al., 2010). The mechanism through which social capital is said to reduce poverty can be summarized as follows : i) at the micro level social ties and interpersonal trust facilitate the flow of technical information and knowledge that help to reduce economic transactions costs (Barr, 2000) and ameliorate conventional resource constraint such as labour (Coleman et al., 1966; Granovetter, 1995;

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(see for details <http://www.endpoverty2015.org/>). The European Union has set five ambitious objectives - on employment, innovation, education, poverty/social inclusion and climate/energy - to be reached by 2020 (Europe2020). Each Member State has adopted its own national targets in each of these areas. Concrete actions at E.U. and national levels underpin the strategy (see for details [http://ec.europa.eu/europe2020/index\\_en.htm](http://ec.europa.eu/europe2020/index_en.htm)).

<sup>4</sup> Yet, it should not be forgotten the innovative contribution of Loury who in 1977 had already highlighted the importance of social interactions (at home, in the community, at school and so on) as determinants of economic productivity of people. However, he did not go on to develop the concept of social capital in any detail.

Fernandez et al., 2000) and credit market access or credit limitations, thus reducing the vulnerability of households to poverty (Knack, 1999); ii) at the macro level social engagement and civic responsibility can also strengthen democratic governance (Almond and Verba, 1963), a mix of norms and sanctions can control defection and dishonesty (Bebbington and Perreault, 1999) and improve the efficiency and honesty of public administration (Putnam et al., 1993; Fukuyama, 1995) as well as the quality of economic policies (Easterly and Levine, 1997). Moreover, social capital can be viewed as a form of asset embedded in social structures and relationships with a productive capacity that can be extended beyond generating economic returns to providing (but not always) useful benefits for attaining many other different goals (Knack and Keefer, 1997) [i.e. human capital accumulation (Galor and Zeira 1993 ; Coleman, 1988), social efficient outcomes such as social cohesion (Reimer,2002; Greene et al., 2003) and social capability (Abramovitz, 1986; Abramovitz and David, 1996), and so on]. As it is well summarized by the Sanderfur and Laumann (1998) paradigm: *(i) A given form of social capital may provide one or more benefits[...]. (ii) A given form of social capital may confer benefits useful for a single goal of an actor, or the productive capacity of a form of social capital may generalize to aid in the attainment of many kinds of goal. That is forms of social capital vary in the effective specificity of the benefits they confer; (iii) At the same time a form of social capital may confer benefits useful for one or more purposes but it can confer liabilities as well. A form of social capital acquired to aid in one type of action may hinder other actions; thus forms of social capital may be said to have a valence contingent upon the goals which the actor wishes to attain.*

The growing importance of social capital as a major determinant of well-being at micro and macro level increases its implications in social policy as a tool to achieve better outcomes of traditional public policies aimed at poverty reduction. For example, public policies can improve household welfare and alleviate poverty not only through traditional income support measures but also facilitating or enhancing the development of the desirable forms of social capital in the areas where households live (i.e. social networks and connections which cross boundaries of social class, ethnicity and gender and which strengthen mutual trust; voluntary initiatives and so on).

Despite the relevance of the subject, different strategies and statistical methods have been used so far to define appropriate measures of social capital so that assessing its effects on household economic well-being lacks of a unified and a systematic methodological approach.

Given the particular relevance of the topic, this paper aims to provide a unified framework for social capital measurement in the context of European Union because of its strong commitment in the fight against poverty (Bruxelles, 13.10.2011- COM(2011) 637 final - Increasing the impact of E.U. Development Policy: an Agenda for Change).

The paper is divided into four sections. Section 2 presents a short review of the concept of social capital and of the main proxy indicators proposed so far to measure it in order to evaluate its impact on household economic well-being. Section 3 turns to issues in measurement and specifically explores the currently available surveys and databases at European level in order to identify the appropriate proxy indicators of social capital. Specific attention will be devoted to the European Union Statistics on Income and Living Conditions (EU-SILC) and to Eurostat statistic database, as regards respectively individual/household and community social capital endowment. Section 4 provides the conclusions.

## 2. THE CONCEPT OF SOCIAL CAPITAL: DEFINITION AND FORMS

The concept of social capital was introduced for the first time by Hanifan (1916, 1920)<sup>5</sup>, a social reformer, who highlighted the importance of the social structure to people with a business and economic perspective<sup>6</sup>. Only in the past twenty years or so, however, has the concept of social capital received increasing attention among sociologists, economists and political scientists, and it has been put forth as a unifying concept embodying multidisciplinary views<sup>7</sup>. In particular, there is a widespread consensus among researchers that the concept of social capital is the synthesis of three different points of view (Grootaert and van Bastelaer, 2001). The first one is associated with Putnam et al. (1993) who define social capital as those features of social organizations, such as networks of individuals or households, and the associated norms and values that create externalities for the community as a whole. Coleman (1988, 1990) advocated a broader interpretation of social capital His definition of social capital as *a variety of different entities [which] all consist of some aspect of social structure and [which] facilitate certain actions of actors – whether personal or corporate actors – within the structure* implicitly considers relations among groups rather than individuals, including vertical as well as horizontal associations and behaviour within and among other entities such as firms. Finally, the third view is associated with Olson (1982) and North (1990), and it includes the social and political environment that shapes social structure and enables norms to develop. Olson and North's point of view includes horizontal and vertical associations as well as the most formalised

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<sup>5</sup> The first systematic contemporary analysis of social capital characteristics was produced by Pierre Bourdieu (1980) who, however, did not get the recognition he deserved (Portes,1998).

<sup>6</sup> Hanifan (1916) defines social capital as *those intangible substances (that) count for most in the daily lives of people: namely good will, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit [...]*.

<sup>7</sup> For a detailed literature review see Woolcock (1998, 2000), Woolcock and Narayan (2000), Grootaert and van Bastelaer (2001), Ponthieux (2003, 2004), Micucci and Nuzzo (2003) and Sabatini (2004).

institutional relationships and structures such as political regimes, the rule of law, the court system and civic and political liberties. The focus on institutions, laws and government activity encouraged some authors (North, 1990; Hall and Jones, 1996, 1997, 1999) to interpret social capital as a special infrastructural endowment of a nation with the characteristic of a public good.

The three points of view have several common features (Serageldin and Grootaert, 2000). They share the belief that social and economic networks, formal and informal relationships, represent a resource of the community. It helps the members to act effectively in order to pursue common goals such as better economic outcomes and standard of living. In other words, as underlined by Parts (2008), *backward and transforming societies cannot build their development plans solely on increasing human and physical capital stock, but should also assure sound institutional environment and support co-operative attitudes and practices.*

The definition of social capital suggested by the World Bank Social Capital Initiative research group rightly synthesizes the three different points of view mentioned above:

*The social capital [...] includes the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development* (Grootaert and van Bastelaer, 2001, 2002).

While there is a widespread consensus on this integrated view of social capital, the same cannot be said for its measurement criteria. In a critique of Fukuyama (1995) Solow (1995) argues that *if social capital is to be more than a "buzzword" its stock should somehow be measurable even inexactly but measurement seems very far away.* In fact, any effort to measure concepts such as those of community, network and organizations is rather complex so that, for empirical purposes, the use of proxy indicators is necessary (Grootaert and van Bastelaer, 2001): in particular, measurement should account for social capital's multidimensionality and incorporate different levels and units of analysis.

There is still lack of agreement in the literature on the appropriate number and type of proxy indicators to use in order to measure social capital while the level and the units of analysis to consider strongly depend on the research aims and on the statistical significance of the databases currently available.

Even Putnam's work is inconsistent: as a matter of fact, his Italian social capital index is based on three indicators (Putnam et al., 1993)<sup>8</sup> whereas

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<sup>8</sup>Putnam et al.(1993) use the following regional indicators: **1.Civic community.** This index measures what the author defines as the degree of civic community . It has been obtained through factor analysis of four variables: i) participation in the referendum which took place between 1974 and 1987;ii) the presence of sports and cultural associations in 1982; iii) the number of newspaper readers in 1975 and iv) the percentage of voters who expressed a preference in the elections held between 1953 and 1979.**2.Institutional**

his American one includes a higher number of variables (Putnam, 2000)<sup>9</sup>. Moreover, available data may vary from country to country and implications of social capital are not the same everywhere, as Krishna and Shrader (1999) pointed out: "What is social capital in one context may be unsocial capital in another [...]. Unions that may promote coordination and cooperation with the State in a corporatist context can wage bitter confrontation in another context."

Differing implications of social capital in different contexts are also pointed out by Social Capital Initiative Studies (Grootaert and van Bastelaer, 2001). For instance, measures of membership in associations were found to be a relevant indicator in Indonesia, Kenya and countries of the Andean region but not in India and Russia- where informal networks are more important.

The possible solution to these problems is to focus on the underlying concepts of social capital and to develop appropriate empirical measures that capture these concepts within each specific territorial context.

Therefore, in order to reflect both the concepts associated to Coleman (1988, 1990), Putnam et al. (1993) and Olson (1982) and North (1990) it seems reasonable to assume that the proxy variables to be selected are

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**Performance.** This index is represented by a composite measure of performance of the regional governments obtained through factor analysis of twelve variables: i) statistical information services in 1981;ii) legislative reforms in the period between 1978 and 1984;iii) the number of childcare per 1000 inhabitants in 1983;iv) the number of regional governments between 1975 and 1985;v), the number of family planning clinics per 1,000,000 inhabitants in 1978;vi) the days of delay in the presentation of the regional budget between 1979 and 1985;vii) the industrial policy instruments of 1984;viii) the bureaucratic efficiency in the year 1983;ix) the spending capacity of local health units in 1983;x) the spending power in agriculture in the period between 1978 and 1980;xi) the introduction of innovative legislation between 1978 and 1983 and xii) spending in the construction industry between 1979 and 1987.**3.Citizen Satisfaction.** This indicator measures the degree of public satisfaction and it has been obtained through the principal component analysis of the mean regional satisfaction of citizens on the activities performed by the regional government .The data are taken from surveys conducted in 1977, 1979, 1981, 1982, 1987, 1988.

<sup>9</sup> In order to measure social capital in the U.S.A. Putnam (2000) combines fourteen indicators of formal and informal community networks and social trust: - **Measures of community organizational life:** 1. Percentage of individuals who served on a committee of a local organization in the last year; 2. Percentage of individuals who served as an officer of some club or organization in the last year; 3. Civic and social organizations per 1000 inhabitants; 4. Mean number of club meetings attended in the last year; 5. Mean number of group memberships . - **Measures of engagement in public affairs:** 6. Turnout in presidential elections (1988-1992); 7. Percentage of individuals who attended public meetings on town or school affairs in the last year. - **Measures of community volunteerism:** 8. Number of nonprofit organizations per 1000 inhabitants; 9. Mean number of times worked on community projects in the last year ; 10. Mean number of times did volunteer work last year. - **Measures of informal sociability :** 11. Percentage of individuals who agree that 'I spend a lot of time visiting friends'; 12. Mean number of times entertained at home in the last year. - **Measures of social trust :** 13. Percentage of individuals who agree that 'most people can be trusted'; 14 . Percentage of individuals who agree that 'most people are honest' .

indicators of the level of <sup>10</sup>

- Social Behaviour (SB)
- Social Relationships (SR)
- Social Engagement (SE)
- Civic Responsibility (CR)
- some specific characteristics of the territorial context analyzed.

In particular :

- *SOCIAL BEHAVIOR* (SB) includes all indicators that directly and indirectly measure the degree of people moral behavior. Social capital involves networks and relationships but only those characterized by trust. Trust is supposed to increase the efficiency of economic processes and strengthen community spirit among citizens (Fukuyama 1995; Knack and Keefer 1997; Putnam et al. 1993) but the mechanism linking interpersonal trust with economic and social outcomes refers implicitly to honesty and civic morality. Civic morality is an ethical habit forming the basis of most theories of civic virtue and it refers to the sense of civic responsibility for the common good, and thus entails obedience to the rules, and honest and responsible behavior. Unlike *private morality* which is derived from the religious or privately held values, civic morality (Letki, 2005):

- is rooted in community membership and implies accepting duties as given by society and owed to all of its members or society in general;
- deters individuals from engaging in crime, corruption and illegal activities of any other sort, therefore diminishing the amount of resources that need to be employed to provide order and rule of law.

- *SOCIAL RELATIONSHIPS* (SR) includes all indicators that directly and indirectly measure the degree of informal socializing which refers (Bourdieu, 1986) *to the actual or potential resources linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition [...]*. Moreover Bourdieu (1986) asserts that *the network of relationships is the product of investment strategies, individual or collective, consciously or unconsciously aimed at establishing or reproducing social relationships that are directly usable in the short or long term i.e. transforming contingent relations such as those of neighborhood, the workplace or even kinship into relationships that are at once necessary and elective, implying durable obligations subjectively felt (feeling of gratitude, respect, friendship and so on .) or institutionally guaranteed (rights)*, thus reducing people social exclusion<sup>11</sup> which

<sup>10</sup> This classification largely agrees with those suggested by Putnam (2000) and by Crowther, Tett and Edwards (2008).

<sup>11</sup> Social exclusion is a broader concept than poverty: it is about processes that lead to non-participation in societies' activities, it is multidimensional and it embraces concepts of vulnerability to poverty. The term "social exclusion" is of relatively recent origin. René



represents a significant nonmaterial dimension of poverty (Sen, 2000).

A particular attention is required when selecting the appropriate proxy variables as the concept of informal socializing can be ambiguous representing, in some cases, social interactions that might tend to instill habits of cooperation as Putnam et al. (1993) hypothesize but may sometimes have no effects or even negative effects depending on the characteristics of these social ties. As a matter of fact, Bourdieu (1986) underlined that social capital is decomposable into two elements: the social relationship itself that allows individuals to claim access to resources possessed by their associates and the amount and quality of those resources. Various studies have identified at least four negative consequences of social capital. Portes (1998) summarizes them :

- EXCLUSION OF OUTSIDERS. *Waldinger (1995, p. 557) pointed out that the same social relations that [...] enhance the ease and efficiency of economic exchanges among community members implicitly restrict outsiders. As a matter of fact limited groups based on kinship, ethnic, or special interest ties can have potentially large negative effects on economic performance. In particular Waldinger describes i) the tight control exercised by white ethnics, descendants of Italian, Irish, and Polish immigrants, over the construction trades and the fire and police unions of New York ; ii) the growing control of the business by Korean immigrants in several East Coast cities; iii) the traditional monopoly of Jewish merchants over the New York diamond trade, and iv) the dominance of Cubans over numerous sectors of the Miami economy. In each instance, social capital generated by bounded solidarity and trust are at the core of the group's economic advance*<sup>12</sup>;

- EXCESS CLAIMS ON GROUP MEMBERS. *Group or community closure may, under certain circumstances, prevent the success of business initiatives by their members. For example, in his study of the rise of commercial enterprises in Bali, Geertz (1963) observed how successful entrepreneurs were constantly assaulted by job and loan-seeking kinsmen. These claims*

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Lenoir (1974), Secrétaire d'Etat à l'Action Sociale of the French Government, writing about a quarter of a century ago, is given credit of authorship of the expression. As Silver (1995) notes, the list of "a few of the things the literature says people may be excluded from" must include the following: a livelihood; secure, permanent employment; earnings; property, credit, or land; housing; minimal or prevailing consumption levels; education, skills, and cultural capital; the welfare state; citizenship and legal equality; democratic participation; public goods; the nation or the dominant race; family and sociability; humanity, respect, fulfilment and understanding.

<sup>12</sup> Olson [1982] , as well, 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. They may have positive effects on economic performance by establishing ethical codes and standards or by reducing transactions costs, i.e. by spreading information about the identity of cheaters.

*were buttressed by strong norms enjoining mutual assistance within the extended family and among community members in general. The result was to turn promising enterprises into welfare hotels, checking their economic expansion;*

- RESTRICTIONS ON INDIVIDUAL FREEDOMS. *Community or group participation necessarily creates demands for conformity. In a small town or village, all neighbors know each other, one can get supplies on credit at the corner store, and children play freely in the streets under the watchful eyes of other adults. The level of social control in such settings is strong and also quite restrictive of personal freedoms, which is the reason why the young and the more independent-minded have always left. Boissevain (1974) reports such a situation in his study of village life in the island of Malta. Dense, "multiplex" networks tying inhabitants together created the ground for an intense community life and strong enforcement of local norms. The privacy and autonomy of individuals were reduced accordingly;*

- DOWNWARD LEVELING NORMS . *There are situations in which group solidarity is cemented by a common experience of adversity and opposition to mainstream society examples are reported by Stepick (1992) in his study of Haitian- American youth in Miami and by Suarez-Orozco (1987) and Matute-Bianchi (1986, 1991) among Mexican-American teenagers in Southern California. In each instance, the emergence of downward leveling norms has been preceded by lengthy periods, often lasting generations, in which the mobility of a particular group has been blocked by outside discrimination.*

The negative and positive aspects of relationships and group connections can be well synthesized by the distinction between *power over* and *power to*: *power over* implies the ability to limit what others can do and is generally seen in negative terms whereas *power to* is about enhancing the resources and capacity of individuals and groups and has positive connotations (Crowther et al., 2008).

Therefore the value of social capital cannot be assessed merely from looking at the volume or type <sup>13</sup> of links and contacts because all of these

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<sup>13</sup> Reimer (2002) following an approach to human relations rooted in anthropological literature (Fiske, 1991) identifies four fundamental modes of social relations: market relations, bureaucratic relations, associative relations, and communal relations. Market relations are those based on the exchange of goods and services within a relatively free and information-rich context, as governed by the classical economic assumptions of demand and supply, price adjustment, free information flow, and factor and product mobility. Bureaucratic relations are the type of impersonal and formal relationships based on a rationalized division of labor, the structuring of authority and positions through formal principles and rules, and the explicit or implicit allocation of rights and entitlements based on assigned positions and statuses. Associative relations are those primarily based on shared interests and characterized by focused objectives, informal

contacts do not have the same value (Coleman 1990; Degenne and Forsé, 1994). This then raises the question as to which links might be useful and which ones are not, and we also have to make a clear distinction between the network of links that are *used* and those that are *usable*. In the first case, we are talking about more visible links, including family, friends, and colleagues, which are regularly used in some fashion or other (Schneider and Stevenson, 1999). These immediately visible links are first-degree links (i.e., there is a direct relationship between an individual and their contact). At the same time, for access to certain resources, for instance when looking for work, it is possible that the value of a link is a function of the social network in which the contact is embedded (Degenne and Forsé, 1994; Lemieux, 2000; Lemieux and Ouimet, 2004). A neighbor's ability to help with the job search may be related to his or her being part of the labour market, and his or her own network provides useful information that can be passed on. The presence – and in some situations the importance – of such second degree links has prompted some researchers to suggest that to have a better idea of the resources that can be accessed through social networks, it is important to consider all the potential resources contained in a social network, that is, all of the potentially usable links, rather than only the regularly used first-degree links (Montgomery, 1992; Lemieux, 2000). It is thus in considering all of these links that one may determine the value of the social capital available to an individual (Levesque, 2005).

- *SOCIAL ENGAGEMENT* (SE) includes all indicators that directly and indirectly measure the degree of solidarity in small homogenous groups. The role of associational activity is a subject of greater contention. Putnam et al. (1993) claimed that associations instill in its members habit of cooperation and solidarity. 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 (Knack and Keefer, 1997). Moreover the negative consequences of associations shown by Portes (1998) apply also in the case when they have cooperative

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structures, and short-term life span. They are most often found in voluntary associations, clubs, and informal groups where people meet to play, learn, share, or protest. Finally, communal relations are those founded on strongly shared identity, in which rights and obligations of members are largely determined by custom, and distribution of goods and services is done according to need rather than status or ability to pay. These are most likely to be found within family, clan, or close friendship networks. All four types of social capital are found in most circumstances, but the particular balance and relationships between them will vary. In some contexts they reinforce one another as illustrated by the merging of market and bureaucratic relations within the modern corporation. In other contexts, they create contradictions that undermine economic objectives.

purposes . Cooperation and solidarity are represented institutionally by those volunteering activities which, as highlighted by E.U. Citizenship Report 2010, create social capital. It is a pathway to integration and employment and a key factor for improving social cohesion. Above all, volunteering translates the fundamental values of justice, solidarity, inclusion helping to shape society;

- *CIVIC RESPONSIBILITY* (CR) includes all indicators that directly and indirectly represent measures of people's civic-minded behavior stemming from the application of the civic norms which act as constraints on narrow self-interest, leading individuals to contribute to the provision of public goods of various kinds. Civic Responsibility can be defined as the "responsibility of a citizen". It is comprised of actions and attitudes associated with democratic governance and social participation. Civic responsibility can include participation in government, and actions of civic responsibility can be displayed in advocacy for various causes, such as political, economic, civil, environmental or quality of life issues.

It is worth noting that the definition suggested by the World Bank Initiative Group and which well synthesizes the points of view of Putnam, Coleman Olson and North recognizes social capital both as a collective and as an individual resource (Degli Antoni, 2006). In the first case social capital is regarded as a collective attribute of communities or societies and the analysis of its origin and effects is made at community level . The social capital indicators refer to a community with its networks of relationships and social norms and the impact they have on economic well-being. Putnam et al. (1993) have significantly furthered the development of this approach. They define social capital as those networks of trust and civic associations as well as the norms which regulate the life of a community, improving the efficiency of social structures through the promotion of social initiatives taken by mutual agreement. In this definition the collective dimension of social capital is clearly overriding. The focus is not so much on the characteristics of individuals but of the communities they belong to. Therefore for Putnam et al. (1993), social capital is clearly a community resource so that their discussion is at societal level and the empirical evidence they present is based on aggregate level data.

The same approach is shared, among others, by:

- Baker (1990) who defines social capital as a *resource that actors derive from specific social structures*;
- Fukuyama (1995) who defines social capital as a *resource that arises from the prevalence of trust in a society* and trust as *the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly shared norms on the part of other members of that community* ;
- Narayan and Pritchett (1999) who identify social capital in the

*quantity and quality of associational life and the related social norms.*

Furthermore, Reimer (2002) made an important distinction between availability and effective use of social capital. As a matter of fact the availability of social capital within a community (or social system) it is not equivalent to its use. The availability of social capital refers to its mere presence and potential accessibility within community organizations whereas its use relates to how and the extent to which it is actually used. An important aspect of this perspective is social capacity, which refers to the ability of people to organize and use their social capital and other assets through various social structures and processes to achieve valued economic objectives.

If social capital is regarded as an individual resource the perspective of analysis shifts from the community to each single person, his behavior, his sense of civic responsibility, his social commitment and the quantity and quality of relationships that he establishes with others. Individual social capital endowment is regarded as a resource each person can use to reach specific goals. Bourdieu (1986) recognize social capital as an individual resource as he defines it as *the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words, to membership in a group*. Therefore Bourdieu focuses on the benefits accruing to individuals by virtue of participation in groups and on the deliberate construction of sociability for the purpose of creating this resource. He identifies social capital with the size of the networks an agent can effectively mobilize and on the volume of the capital possessed in his own right by each of those to whom is connected. The same approach is shared by Coleman (1988,1990) and Portes (1998). According to Coleman social capital would be due to the complex of social relations that the individual can mobilize in order to achieve his goals. From this perspective, agents partly inherit social capital, for example in terms of family ties and partly they actively generate it weaving networks of interpersonal relationships. Portes (1998) highlights that social capital is an individual asset although the source of social capital is the relationship among a group of individuals.

Then, what is the appropriate unit of analysis of social capital when measuring its impact on economic well-being—the individual/household or the collective? Spatial analyses always require a collective approach (Morris, 1998; Robison and Siles, 1999 ; Robison et al, 2000; Rupasingha and Goetz, 2007) but what is the strategy commonly followed when the unit of analysis is the individual or the household?

Table 1 summarizes the strategies followed in recent empirical literature. The table presents the aims of each research, the dataset used, the unit of analysis , the proxies for social capital and the poverty and economic-wellbeing variables with which they have been related , the main results.

According with the aims of this paper, the focus will be only on those empirical studies which aimed at identifying the effect of social capital on individual/household economic well-being. Much empirical research has, so far, specifically concentrated attention on the links between self-assessment of life satisfaction and individual/household or community-based social capital variables (Helliwell and Putnam , 2004; Herrera et al., 2006; Yip et. al. , 2007; Bjørnskov et. al. , 2008; Hooghe and Vanhoutte, 2009 ; Helliwell et. al., 2009). The issues discussed are part of a broad category of phenomena that includes people's emotional responses, domain satisfaction and global judgments of life satisfaction (Diener et al.,1999).The term "economics of happiness" is used to refer to these studies which are not discussed here. In particular, Table 1 shows that :

1. The empirical research carried out so far reveals the positive impact of social capital (both at individual/household and at community level) on household economic well-being.
2. Many different instruments and indicators have been used to measure social capital, and various statistical methods have been applied to collect and synthesize information in order to develop appropriate social capital indicators.
3. Different approaches have been used to investigate whether social capital exerts its effects on individual/household economic well-being :
  - some authors believe that individual/household economic well-being is affected both by individual/household and community social capital endowment (Narayan and Pritchett, 1999; Maluccio et al , 2000; Tiepoh and Reimer, 2004; Aker, 2007) even if the empirical evidence shows contrasting results. In particular, Narayan and Pritchett (1999) show that as far as rural Tanzania is concerned household economic well-being is affected only by community-based social capital indicators while Maluccio et al (2000) for South Africa , Tiepoh and Reimer (2004) for Canada and Aker (2007) for Tanzania, prove that household economic well-being is influenced only by family social capital endowment.
  - Finally, for others (Grootaert, 1999; Rose, 1999; Robison et al , 2000; Hu and Jones, 2004; Wetterberg, 2007; Yusuf , 2008; Roslan, Russayani, Nor Azam , 2010) household economic well-being is influenced only by family social capital endowment and the empirical evidence, except for Hu and Jones, confirms this hypothesis.

The above analysis provides empirical evidence on the different strategies used to select appropriate measures of social capital and the difficulty in drawing generalized conclusions on how social capital affect household economic well-being as in the case of Narayan and Pritchett (1999) and Aker (2007). Therefore assessing the effects of social capital on household economic well-being lacks of a unified framework and in most of these

cases the studies appear to be constrained by data availability so that the results depend strongly on the indicators used. Lack or reduced data availability is also the reason why empirical research designed to test the effect of social capital on household economic well-being in Europe are almost rare. Many efforts have been made to design proper surveys in order to collect useful information that allow evaluation of the main determinants of E.U. citizens well-being. The next section explores the currently available surveys and database at European level in order to define the appropriate proxies for social capital and evaluate the relative methodological issues.





TABLE 1. – *Empirical studies assessing the effects of social capital on individual/household economic well-being.*

1) <b>Morris M. (1998). Social Capital and Poverty in India. IDS Working Paper 61- Institute of Development Studies, University of Sussex, Brighton.</b>	
<b>Aims</b>	Evaluation of social capital impact on poverty
<b>Data</b>	National sample consumption survey (NSS) 1957-58 and 1990-91
<b>Unit level</b>	15 Indian states – Community-based social capital variables
<b>Dependent variable (*)</b>	1. Mean consumption; 2. Headcount index ; 3. Poverty gap index;4.Squared poverty gap index
<b>Social capital indicators</b>	<p>1. <b>Press</b> : i) number of newspaper per state ;ii) circulation of newspapers ( hundreds of thousands) ; iii) average circulation of newspapers .</p> <p>2. <b>Local organizations</b> : i) the average number of youth clubs functioning per block ; ii) membership of youth clubs functioning per block ; iii) average number of membership in youth clubs functioning per 100 youths; iv) the average number of Mahila Samitas (women’s groups) functioning per block ; v) average membership of Mahila Samitas per block ; vi) average number of Balwadis/nurseries functioning per block vii) average membership of Balwadis/nurseries per block.</p> <p>3. <b>Social demographic</b> : i) the endogamy rate (the percentage of births in rural areas occurring at the child’s mother’s village); ii) the marriage distance; iii) the percentage of the rural population widowed, divorced or separated .</p> <p>4. <b>Rural-Rural linkages</b>: i) net female rural to rural migration ; ii) net male rural to rural migration.</p> <p>5. <b>Voting patterns</b>: i) the turnout at the general election as a percentage of the electorate ; ii) the number of spoilt papers as a percentage of the total electorate ; iii) the number of candidates per seat.</p>
<b>Results</b>	Those states which were initially well endowed with social capital, were also more successful at reducing poverty
<b>Notes</b>	(*) The headcount index measures the incidence of poverty, the poverty gap index measures the depth of poverty and the squared poverty gap index measures the severity of poverty.

TABLE 1. – (continued)

2) **Narayan D., Pritchett L. (1999). Cents and sociability : household income and social capital in rural Tanzania, *Economic Development and Cultural Change*, University of Chicago Press, vol. 47(4), pages 871-97.**

<b>Aims</b>	Evaluation of social capital impact on household income
<b>Data</b>	Social Capital and Poverty Survey (1995) and Human resource development survey (1993)
<b>Unit level</b>	Households - Community and household social capital indicators
<b>Dependent variable</b>	Household per capita expenditure
<b>Social capital indicators</b>	The multiplicative social capital index at household and village level is based on the following questions (*) 1. <i>Number of groups</i> : How many groups [from a prompted enumeration of groups in the village (**)] are you a member of ? 2. <i>Kin heterogeneity</i> : Who are the group's members? Are they the same kin or the same clan? 3. <i>Income heterogeneity</i> : i) Are all members from the same economic group , do they all make a living in the same way ? ii) Do the leaders or group officials earn their living in the same way as the members or in different way ? 4. <i>Group functioning</i> : i) Overall, how would you rate the group functioning ? ii) If there is a fee what happens if a member does not pay the fee ?
<b>Results</b>	Village social capital is as important in determining household income as many of the household's own characteristics (i.e. education, assets, gender of household head). All of the effect is due to the village social capital and none is due to the household's own measured social capital. The Authors use instrumental variables estimation to argue that the association between village social capital and household income is due to higher social capital leading to higher incomes and not because higher incomes lead to greater social capital. (The instrument sets are a: trust in strangers, tribesman, cell leader, village chairman – government-, district officials, central government ).
<b>Notes</b>	(*) To combine the questions into a single numerical index various strong (and arbitrary) assumptions were necessary about the weights and the aggregation. Since the variables are on different discrete scales, all the variables are first rescaled under the assumption that the observed indicator divided up evenly some underlying uniformly distributed continuous variable ranging from 0 to 100 into N categories. The numerical value to being the $k^{\text{th}}$ of the $N_i$ categories for the $l^{\text{st}}$ indicator is: $V_{k,l} = (100/N_i) * k - 100/(N_i * 2)$ . As long as the value assigned to each category is the mean of the observations in that category this procedure will not induce inconsistency in the resulting estimates. Second, the authors assume that the contribution to social capital of being a member of each group was greater if the group was more heterogenous across kinship groups, more inclusive and horizontal, and better functioning. Hence the contribution of each group to social capital is an equally weighted sub-index of these three characteristics. The village level social capital index is the product of the average number of groups with the average characteristics of those groups. Since the absolute scale for this index is arbitrary the authors re-normalize the index to have mean zero and standard deviation one. This is done using the mean and standard deviation for 87 clusters which correspond roughly to villages in rural areas. Therefore the sample used may not have exactly mean zero/standard deviation one. (**) Church ,political party, burial society women group, muslim group, farmers group, youth group, primary society, cooperatives, rotating credit society, dairy cattle, other.

TABLE 1. – (continued)

3) Grootaert C.. (1999). Social Capital , household welfare and poverty in Indonesia. <i>Local Level Institutions Working Paper No. 6 , The World Bank Social Development Family Environmentally and Socially Sustainable Development Network, April.(+)</i>	
<b>Aims</b>	1. Evaluation of social capital impact on household economic well-being and on the incidence of poverty ; 2. Investigation of the differential returns to social capital between the poor and the non-poor
<b>Data</b>	Local Level Institutions (LLI) Study 1995
<b>Unit level</b>	Household - Household social capital indicators
<b>Dependent variable</b>	Household per capita expenditure
<b>Social capital indicators</b>	Household social capital index based on the following indicators (*) : <b>1. Density of membership</b> : number of memberships of associations ; <b>2. Heterogeneity index</b> : the questionnaire identifies the three most important associations for each household. For those associations, a number of supplementary questions were asked including about the internal homogeneity of the group. This was rated according to eight criteria: neighborhood, kin group, occupation, economic status, religion, gender, age, and level of education (**); <b>3. Meeting attendance</b> : the average number of times someone from the household attended group meetings, normalized for the number of memberships of each household ; <b>4. Decision making index</b> : as it has been argued that associations which follow a democratic pattern of decision making are more effective than others, the questionnaire asked association members to evaluate subjectively whether they were "very active" "somewhat active" or "not very active" in the group's decision making.(***); <b>5. Membership dues</b> : amount of fees (Rupiahs per month) paid for memberships in the three most important groups;  <b>6. Work contribution</b> : number of days worked per year as membership contribution in the three most important groups ; <b>7. Community orientation</b> : percentage of memberships in organizations which are community initiated.
<b>Results</b>	The basic data indicated a positive correlation between social capital and household economic well-being. The author introduces in the model the following instrumental variables to argue that the association between social capital and incomes of households is due to higher social capital leading to higher incomes and not because higher incomes lead to greater social capital endowment. The instruments are : 1. in Grootaert (1999) an index of ethnic and religious diversity, the number of existing associations in the village, the percent of institutions deemed effective, and indexes of community involvement in the provision of health and education services, water supply, road maintenance and irrigation; 2. in Grootaert and Narayan (2000) an index of ethnic and religious diversity, the number of existing associations in the village, an index capturing whether leaders of the three most important associations are elected democratically, and an index capturing whether the three most important associations were originated by the community; 3.in Grootaert, Oh and Swamy (1999) i) a measure of trust: this is an index derived from questions whether people perceive others to make fair contributions to village collective activities and whether they think they could get emergency help from villagers other than relatives and close friends. Such "generalized trust" (i.e. trust not tied to specific known individuals, such as friends) is built over time and is a function of village cohesion and norms. It is independent of the income level of a specific household. Measures of generalized trust have been used in other studies also as instruments for social capital (Narayan and Pritchett, 1999); ii) Length of residency in the village: It takes time to build a social network and hence the longer a household resides in a village, the greater the potential for building social capital through associational activities. iii) Trend in membership in associations: Households were asked whether they are now members of more, the same or fewer associations than five years ago. The retroactive nature of this information makes it an ideal instrument since it clearly cannot be influenced by current income. At the village level, the authors used the same three instruments averaged at the village level. In addition, they added three variables which were collected at the village level (from key informants, such as , for example, village leaders, teachers, health professionals) and which are independent of the household level data :) Traditional authority: this is a binary variable that indicates whether a traditional authority (e.g. council of village elders) is still operating in the village. li) Organizational strength: this is an index derived from assessments by the key informants of the extent to which village organizations operate effectively. When associations are perceived to be effective, the likelihood that households join and are active in associations can be expected to increase. lii) Associations created by the community: this is a count of the number of local associations that were set up by the community.
<b>Notes</b>	(+) The same project has also involved Bolivia and Burkina-Faso . The results for Bolivia are in Grootaert and Narayan (2000) who used in their analysis the indicators 1,2,3,4,6 and 7.The authors introduce also a multiplicative social capital that is the product of the number of memberships, the heterogeneity index and the participation index, rescaled 0 to100 and an additive social capital index that is the arithmetic average of the number of memberships, meeting attendance, the contribution index and the community orientation index. The results for Burkina-Faso are in Grootaert, Oh and Swamy (1999) who used in their analysis the indicators 1,2,3,4,5, 7 and 8 <i>Mode of Organization</i> . The effectiveness of a local organization can be influenced by whether it is organized formally or informally. Formal organizations may have a higher threshold of participation, but a more rigid adherence to rules and procedures may also make them more effective. In Burkina Faso, about two thirds of local associations are formally organized. The authors calculate multiplicative social capital index based on the following variables : the number of active memberships, the heterogeneity index, and the active participation index, renormalized to a maximum value of 100. (*)The author selected the number of memberships and the index of active participation in decision making to construct (with equal weights) an additive social capital index. An alternative additive index based on all seven, equally weighted, social capital dimensions yielded similar results. (**)The author constructed a score ranging from 0 to 8 for each of the three associations (a value of one on each criterion indicated that members of the association were "mostly from different" kin groups, economic status, etc.). The score of the three associations was averaged for each household and the resulting index was re-scaled from 0 to 100 (whereby 100 corresponds to the highest possible value of the index). The author also considered alternative weighting schemes: (i) weights based on a principal component analysis of the heterogeneity criteria; and (ii) giving larger weights to the economic criteria (occupation, economic status, education) on the assumption that an association of people with e.g. different occupations presents greater opportunities for information sharing than e.g. a group with different ages. The empirical results on the importance of the heterogeneity index were not altered substantively by changing the weights. (***)The response was scaled from 2 to 0 respectively, and averaged across the three most important groups in each household. The resulting index was re-scaled from 0 to 100.

TABLE 1. – (continued)

4) <b>Robison, L. J. , Siles M. E.(1999). Social Capital and Household Income Distributions in the United States: 1980, 1990, <i>Journal of Socio-Economics</i>, 28, 43-93.</b>	
<b>Aims</b>	Evaluation of the impact of changes in social capital on the the level and disparity of household income in the U.S.A.
<b>Data</b>	U.S.A. Bureau of the Census reports, Statistical Abstract of the U.S.A., the Economic Report to the President, and other publications. Public Use Microdata Sample (PUMS) 1980 – 1990.
<b>Unit level</b>	US state with states social capital endowment
<b>Dependent variable</b>	Income inequality among U.S.A households measured using the coefficient of variation (CVs) of household income
<b>Social capital indicators</b>	<ol style="list-style-type: none"> <li>1. <b>Family integrity:</b> i) percentages of households headed by a single female with children, ii) birth rates of single teens, iii) infant mortality rates;</li> <li>2. <b>Educational achievements :</b>i)high school graduation rates, ii) percentages of teens not in school;</li> <li>3. <b>Crime:</b> i) litigation rates ; ii) violent death rates for teens;</li> <li>4. <b>Labour force participation and poverty :</b> i) labour force participation rates; ii) childhood poverty rates.</li> </ol>
<b>Results</b>	The findings of this report support the conclusion that changes in social capital have a significant effect on the disparity and level of household income
<b>Notes</b>	5)

TABLE 1. – (continued)

5) <b>Rose R. (1999), What does social capital add to individual welfare? An empirical analysis of Russia . <i>Social Capital Initiative Working Paper No. 15.</i>The World Bank, Washington.</b>	
<b>Aims</b>	Evaluation of the extent to which different forms of social capital do (or do not) add to the basic component of welfare getting enough food
<b>Data</b>	Russian Centre for Public Opinion Research survey 1998
<b>Unit level</b>	Individual level data - Individual social capital indicators
<b>Dependent variable</b>	Doing without food (Often-Never)
<b>Social capital indicators</b>	<ol style="list-style-type: none"> <li>1. <b>Social integration</b> : Communist Party member in family ;Churchgoer ;Lives in village ;Belongs to a formal organization ; Trusts most people ; Friends are good source of information ; Opinion leader ; Relies on government, public agencies for helping with problem ;Able to control own life;</li> <li>2. <b>Generic social capital</b> : Frequency of using market networks for housing repair, personal safety, bank borrowing, retirement, getting a flat, using private doctors and hospital, private tutors; frequency of using informal networks for housing repair, personal safety, precautions against theft, social benefit, retirement resources, getting a flat, getting to see doctor, hospital treatment, getting into university; frequency of using anti-modern networks for housing repair, getting flat, personal safety, theft, portfolio, social benefit, permit, getting to see doctor, hospital treatment, getting into university.</li> </ol>
<b>Results</b>	A portfolio of resources, combining socio-economic advantages and social networks, is the best way to secure welfare, so that a person who may lack one resource for welfare, whether socio-economic or networking, may have another that can provide an equivalent level of well-being
<b>Notes</b>	6)

TABLE 1. – (continued)

<p>6) <b>Maluccio J., Haddad L., May J. (2000). Social capital and Household Welfare in South Africa 1993-98, <i>Journal of Development Studies</i>, 36 (6).</b></p>	
<b>Aims</b>	Evaluation of the nature of the casual relationship , if any, between social capital and household welfare in South Africa
<b>Data</b>	Kwazulu-natal Income dynamic study Balanced panel data 1993-1998
<b>Unit level</b>	Household - Household and community social capital indicators
<b>Dependent variable</b>	Household per capita expenditure
<b>Social capital indicators</b>	<ol style="list-style-type: none"> <li>1. Household group membership index (*);</li> <li>2. Community group membership index (**).</li> </ol>
<b>Results</b>	Social capital is significant only at household level. The authors use instrumental variable to to argue that the association between social capital and incomes of households is due to higher social capital leading to higher incomes and not because higher incomes lead to greater social capital endowment. The instruments are the total number of groups in the community in 1993 and 1998, the average performance of the most important groups in the community in 1993 and 1998 and the average age and age squared of the most important groups in the community in 1998 .
<b>Notes</b>	<p>(*) The index is constructed in order to capture aspects of both the quantity and quality of group membership and includes formal and informal groups of all types. It is composed of three components : i. <i>density</i>- the number of group memberships per household ; ii. <i>performance</i> – the average reported performance of the most important groups in the household; iii. <i>participation</i> – the average reported frequency of meeting attendance for the most important groups in the household. After normalizing the performance and participation scores (dividing then by their mid-points) the index is computed by multiplying the three components for each year. The Authors treat one or more individuals in a household being in the same group as a single group membership at the household level. This implicitly assumes that having more than one member in a group does not increase social capital. In terms of networks, it suggests that any household member belonging to the group opens up that group’s network and additional members do not extend it further. It represents a conservative or lower bound measure of social capital. The questionnaire lists nearly 20 different types of groups or associations identified through pre-testing. These fall into several general categories including financial (for example saving clubs, burial societies and so on) , production (i.e. farmers, informal traders) sports and music, community service (i.e. school, water and development committees) religious and political. Given the sensitive nature of politics in KwaZulu-Natal questions regarding political organizations were kept rather general to avoid jeopardizing the interview. These groups appear to be under reported in the data</p> <p>(**) The community group membership index has been computed using the methodology applied to identify the household group membership index . As a matter of fact analogues to the household-level questions were asked in 69 community-level surveys which were completed by interviewing key informants in the community.</p>

TABLE 1. – (continued)

<p>7) <b>Robison L.J., Siles M.E., Bokemeier J.L.,Beveridge D.,Fimmen M., Grummon P.T. , Fimmen C. (2000). Social Capital and Household Income Distributions: evidence from Michigan and Illinois, <i>Agricultural Economics Report No. 605 Social Capital Initiative Research Report No. 12</i> , Department of Agricultural Economics MICHIGAN STATE UNIVERSITY East Lansing, MI December .</b></p>	
<b>Aims</b>	Evaluation of impact of changes in social capital on household income
<b>Data</b>	Data collected in counties situated in the states of Michigan and Illinois- 1998
<b>Unit level</b>	Household - Household social capital indicators.
<b>Dependent variable</b>	<ol style="list-style-type: none"> <li>1. Income inequality among households measured using coefficient of variation (CVs) of household income</li> <li>2. Income levels</li> </ol>
<b>Social capital indicators</b>	<ol style="list-style-type: none"> <li>1. How often do you get together with family members other than those living in your home?</li> <li>2. How long have you lived in your community ?</li> <li>3. How often do you meet with other members of your community in social activities?</li> <li>4. Age; gender and educational achievements.</li> </ol>
<b>Results</b>	<p>This study intended to examine two hypotheses. The first one was that connections between social capital distributions and household income distributions are present at the county level. This hypothesis was supported. The second hypothesis was that trade-offs are made in communities between socio-emotional and economic goods and between investments in bonding and bridging social capital. Again, the hypothesis was generally supported. Those who are less mobile and get together with friends and family members more frequently are generally less satisfied with their communities, earn less income, and attain lower levels of education than those who are more mobile and participate more with other community members, are more educated, and earn higher incomes.</p>
<b>Notes</b>	

TABLE 1. – (continued)

<p>8) <b>Tiepoh M.G.N., Reimer B. (2004). Social Capital , information flows and income creation in rural Canada: a cross-community analysis, <i>Journal of Socio-Economics</i> , 33, 427-448.</b></p>	
<b>Aims</b>	Evaluation of how social capacity , defined in terms of the availability and effective use of social capital, influences the level of household income
<b>Data</b>	Surveys in 20 fields sites and households within those sites - 1995
<b>Unit level</b>	Household and Community Household and Community social capital indicators
<b>Dependent variable</b>	<ol style="list-style-type: none"> <li>1. Median household income</li> <li>2. Average household income at each community site.</li> </ol>
<b>Social capital indicators</b>	Market- bureaucratic-associative- and communal- based uses or availabilities of social capital at the household (uses) or community (availability) level (see for details Appendix A.1)(*)
<b>Results</b>	All types of social capital use (except bureaucratic-based use) are positive determinants of household income.
<b>Notes</b>	(*) The Authors estimate the equations at both the household and community levels. When estimating them at the community level, all social capital-related variables are indicated by the <i>availability</i> of social capital and, when estimating them at household level, they are indicated by the <i>use</i> of social capital.



TABLE 1. – (continued)

9) <b>Hu C., Jones B. (2004). <i>An Investigation into the Relationship between Household Welfare and Social Capital in Eastern Uganda, SAGA- Strategies Analysis for Growth and Access, Competitive Grants program, Final Report, Cornell and Clark- Atlanta University.</i></b>	
<b>Aims</b>	Evaluation of the relationship between social capital and household welfare.
<b>Data</b>	Ad-hoc household survey and village organizations survey - 2004
<b>Unit level</b>	Household - Household social capital indicators
<b>Dependent variable</b>	Household per capita expenditure
<b>Social capital indicators</b>	Seven dimensions of social capital are summarized into a multiplicative social capital index using the principal component analysis. The seven household social capital indicators are: 1. <i>density of membership</i> (how many organizations you belong to); 2. <i>meeting attendance</i> (whether you actively participate in the organization); 3. <i>decision-making</i> (whether you have a say in the affairs of the organization); 4. <i>heterogeneity</i> (whether you belong to an organization which has very different members); 5. <i>effectiveness</i> (whether you think the organization does a good job); 6. <i>benefits</i> (whether you think that you and your community have benefited from the activities of the organization); 7. <i>contributions</i> (the extent to which you contribute to the organization, in money or in kind).
<b>Results</b>	In the villages of eastern Uganda the relationship between “organizational social capital” and household welfare is not significant
<b>Notes</b>	

TABLE 1. – (continued)

<b>10) Aker J.C. (2007) <i>Social Networks and Household Welfare in Tanzania: Working Together to Get out of Poverty</i>, Paper presented at CSAE Conference: Economic Development in Africa, 18th- 20th March 2007, St Catherine's College, Oxford</b>	
<b>Aims</b>	Empirical analysis of the effect of social capital on the welfare of rural households in Tanzania.
<b>Data</b>	Meatu, Tanzania Living Standards (MTLS) dataset. Data were collected at the household and community level in 2001 and 2002, with a longitudinal panel for a subset of households.
<b>Unit level</b>	Household – household and community social capital indicators.
<b>Dependent variable</b>	Household per capita expenditure
<b>Social capital indicators</b>	Household indicator : <i>Membership in a community organization ( 1=yes )</i> ; Community indicator : <i>Proportion of the village population attending village council meetings</i> . In order to address the joint endogeneity problem associated with social capital and expenditures, the author proposes unique and context-specific household- and village-level instruments. The instrumental variables are : the household's length of residency in the village, a binary variable indicating whether the household had contributed to charity in the past year, and a binary variable indicating whether the household was a member of a religious group. The proposed instruments for village-level social capital include a binary variable for the village's participation in Tanzania's forced villagization program and the ethno-linguistic fractionalization (ELF) of the village.
<b>Results</b>	There is strong evidence that household-level social capital is associated with percentage increases in household expenditures.
<b>Notes</b>	

TABLE 1. – (continued)

<b>11) Rupasingha A., Goetz S.J. (2007). Social and political forces as determinants of poverty : a spatial analysis , <i>The Journal of Socio-Economics</i> 36, 650–671.</b>	
<b>Aims</b>	The study contributes to basic knowledge of the structural determinants of poverty , namely factors related to economic, social (social capital), and political influence
<b>Data</b>	1, US Bureau of the Census; 2, Beale codes; 3, Regional Economics Information System (BEA); 4, USA Counties; 5, County-to-County Migration Files; 6, County Business Patterns; 7, National Center for Charitable Statistics (1990)
<b>Unit level</b>	USA counties
<b>Dependent variable</b>	Family poverty rate – Community social capital indicators
<b>Social capital indicators</b>	<p>The social capital index has been obtained summarizing four dimensions of social capital using the principal component analysis:</p> <ol style="list-style-type: none"> <li>1. Associational density ( per capita ) :a) bowling centres; b) public golf courses ; c) membership sports and recreation clubs; d) fitness centres ; e) civic and social associations (f) religious organizations; (g) labour organizations; (h) business associations; (i) professional organizations; and (j) political organizations;</li> <li>2. The percentage of eligible voters who voted in presidential elections ;</li> <li>3. The county-level response rate to the Census Bureau decennial census ;</li> <li>4. The number of tax-exempt non-profit organizations, compiled by the National Centre for Charitable Statistics.</li> </ol>
<b>Results</b>	The counties that are rich in social capital have lower family poverty rates, with the exception of metro areas where the effect of social capital was not statistically distinguishable from zero
<b>Notes</b>	

TABLE 1. – (continued)

<b>12) Wetterberg A.(2007). Crisis, Connections, and Class: How Social Ties Affect Household Welfare, <i>World Development</i> , Vol. 35, No. 4, pp. 585–606.</b>	
<b><i>Aims</i></b>	Analysis of the effects of different types of social ties on the welfare of Indonesian households
<b><i>Data</i></b>	Local Level Institutions (LLI) project - a longitudinal study of social capital, problem-solving capacity, and government quality carried out in forty villages located in three Indonesian provinces (Jambi, Central Java, and East Nusa Tenggara) in 1996 and in a subsequent round in 2000–01.
<b><i>Unit level</i></b>	Household - Household social capital indicators
<b><i>Dependent variable</i></b>	Household per capita expenditure
<b><i>Social capital indicators</i></b>	Social ties (networks, organizations, and government-mandated organizations) and a measure of external connectedness.
<b><i>Results</i></b>	Social ties can indeed be a sort of capital for poor households who, lacking other types of capital, are able to use their relationships as a way of improving well-being. Organizational ties, which were the most beneficial links in terms of household consumption, were by far most common in the poorest quintile and this socio-economic group gained the most from these connections
<b><i>Notes</i></b>	

TABLE 1. – (continued)

<b>13) Yusuf S.A. (2008). Social Capital and Household Welfare in Kwara State, Nigeria J. Hum. Ecol., 23(3): 219-229</b>	
<b>Aims</b>	Analysis of the effects of social capital on household welfare in Kwara State, Nigeria
<b>Data</b>	2005 ad hoc survey
<b>Unit level</b>	Household - Household social capital indicators
<b>Dependent variable</b>	Household per capita expenditure
<b>Social capital indicators</b>	<ol style="list-style-type: none"> <li><b>1. Density of membership:</b> the total number of associations to which each household belongs.</li> <li><b>2. Heterogeneity Index:</b> this is an aggregation of the responses of each household to the questions on the diversity of members of the three most important institutions to the households (*).</li> <li><b>3. Meeting Attendance Index:</b> this is obtained by summing up the attendance of household members at meetings and relating it to the number of scheduled meetings of the associations they belong to. This value was then multiplied by 100.</li> <li><b>4. Cash Contribution:</b> the total cash contributed to the various associations which the household belongs.</li> <li><b>5. Labour Contribution:</b> the number of days that household members claimed to have worked for their institutions (total number of days worked by household members in a year).</li> <li><b>6. Decision Making Index:</b> households rating on the participation in the decision making of the three most important institutions. The responses were averaged across the three groups and multiplied by 100 for each household.</li> </ol> <p><b>Aggregate Social Capital Index:</b> this was obtained by the multiplication of density of membership, heterogeneity index and decision making index, and renormalizing the result to the maximum value of 100.</p>
<b>Results</b>	The social capital index and its disaggregation into six dimensions influence household per capita expenditure. The study tested for the existence of bidirectional causality using as instruments the trust indicators as in Narayan and Prichett (1997).
<b>Notes</b>	(* ) On each of the three associations, each household answered questions on whether members live in same neighbourhood, are same kin group, same occupation, are of same economic status, are of same religion, same gender, same age group and same occupation. Hence, for each of the factors a yes response is coded 0 while no response is coded 1. A maximum score of 10 for each association represents the highest level of heterogeneity. The scores are then divided by the maximum score of 30 and renormalized to the maximum value of 100 (a zero value represents complete homogeneity while 100 represents complete heterogeneity).

TABLE 1. – (continued)

<p>14) Roslan A., Nor Azam A. Russayani I.(2010). Does Social Capital Reduce Poverty? A Case Study of Rural Households in Terengganu, Malaysia, <i>European Journal of Social Sciences</i> , 14 (4).</p>	
<b>Aims</b>	The paper aims to measure the impact of social capital on the standard of living
<b>Data</b>	The data used in this study is a primary data set gathered through a survey carried out between April 15 and May 18 2009 in Terengganu, Malaysia
<b>Unit level</b>	Household - Household social capital indicators
<b>Dependent variable</b>	Household income
<b>Social capital indicators</b>	<p>Social capital is viewed to constitute six dimensions or components. These six components are (*):</p> <ol style="list-style-type: none"> <li>1. <b>Groups and networks</b> : (i) Membership in formal or informal organization or association. (ii) Ability to get support from those other than family members and relatives in case of hardship.</li> <li>2. <b>Trust and solidarity</b> (i) Most people in the community can be trusted (ii) Most people in the community often help each other.</li> <li>3. <b>Collective action and cooperation</b> : (i) More than half of the community contribute time or money towards common development goals. (ii) High likelihood that people in the community to cooperate to solve common problem.</li> <li>4. <b>Information and communication</b>: (i) Frequently listen to radio. (ii) Frequently read newspapers. (iii) Frequently watch television.</li> <li>5. <b>social cohesion and inclusion</b> : (i) Strong feeling of togetherness within the community. (ii) Feeling safe from crime and violence when alone at home.</li> <li>6. <b>Empowerment and political action</b>: (i) Have control in making decisions that affect everyday activities. (ii) Vote in the last general election (2008).</li> </ol>
<b>Results</b>	Social capital significantly explains household income
<b>Notes</b>	(* ) All of the items representing each domain are in the form of "yes" or "no" answer. A value of 1 is designated to "yes" answer, while the value of 0 is given to "no" answer. In order to derive the social capital index for each individual household, the Authors calculated the percentage of "yes" answer. Then they transformed this percentage into a scale of 1 to 10 by applying a linear transformation, as: $Y = h(x) = 1 + (9/100)*x$ where, x is the raw score (percentage of "yes" answer) and Y is the (social capital) index score.

TABLE 1. – (continued)

<b>15) Santini I. (2011). Perception of poverty. Individual, household and social environmental determinants, <i>Statistica &amp; Applicazioni</i> , Vol. IX, n. 2, pp. 207-223.</b>	
<b>Aims</b>	This paper aims to show to what extent self-perception of poverty is affected by respondent/household socio-economic characteristics and by social capital endowment of household place of residence in order to disclose the primary risk factors of family poverty status
<b>Data</b>	2008 Survey on Household Income and Wealth (SHIW) of the Bank of Italy
<b>Unit level</b>	Household – household social capital indicators
<b>Dependent variable</b>	Considering your monthly disposable income, is your household able to make ends meet: (1) with great difficulty, (2) with difficulty, (3) with some difficulty, (4) without difficulty, (5) with ease, (6) with great ease?
<b>Social capital indicators</b>	<p>Social capital index based on the geometric mean of the following components :</p> <ol style="list-style-type: none"> <li><b>1. Social behavior</b> : i)Organized crime (number of crimes per 10.000 inhabitants);ii) Mafia association (number of crimes per 10.000 inhabitants);iii) Criminal association (number of crimes per 10.000 inhabitants) ; iv) Common crime (as a percent of all crimes) ; v) Violent crime (number of crimes per 10.000 inhabitants) ;vi) Fraud (number of crimes per 10.000 inhabitants);vii) Number of protests per 10.000 inhabitants .</li> <li><b>2. Social Relationships</b> : i) Number of suicides and of suicides attempts per 100.000 inhabitants ; ii) Number of performances per 100.000 inhabitants ; iii) Number of days of cinema shows per 100.000 inhabitants .</li> <li><b>3. Social Engagement</b> : i) Number of workers in non-profit institutions as a percent of all workers ; ii) Number of non-profit institutions per 10.000 inhabitants , iii) Number of voluntary workers in non-profit institutions per 10.000 inhabitants .</li> <li><b>4. Civic Responsibility</b> : i)Chamber of Deputies and Senate of Italian Republic : percentage of voters ; ii) Regional elections : percentage of voters ; iii) Referendum : percentage of voters ; iv) Number of television subscriptions per 100 families .</li> <li><b>5. Territorial characteristics</b> : i)Percentage of regional population in communes in more than 100.000 inhabitants ; ii) Percentage of resident population that moved out the region ; iii)Percentage of resident population that moved into the region ; iv)Resident population in the capital of the region/Resident population outside the capital of the region.</li> </ol>
<b>Results</b>	The results show a relevant effect of social capital, especially social networks and relationships of trust, on self-perception of poverty.
<b>Notes</b>	

### 3. INDICATORS OF SOCIAL CAPITAL IN E.U.

As far as European Union is concerned, the numerous attempts made so far to measure social capital have been based on the European Values Survey (EVS -<http://www.europeanvaluesstudy.eu/>) and the European Social Survey (ESS -<http://www.europeansocialsurvey.org/>) since they provide a wide range of possible indicators to measure alternative dimensions of social capital for almost all European countries (Raiser et al., 2001; van Schaik, 2002; Anheier et al, 2004; Beugelsdijk and van Schaik, 2006; van Oorschot et al., 2006; Adam, 2008; Meulemann, 2008; Parts, 2008; Semih and, Bas, 2008; Huijts and [Kraaykamp](#), 2012). However, EVS and ESS do not allow the creation of comparable time series for all the European countries because different countries may use different survey designs, different strategies in building survey questions, and often different scales.

Moreover, EVS and ESS do not fulfill the objectives of this study as detailed information about household economic well-being is not provided. For these reasons, interest in a more recent data source, the European Union Statistics on Income and Living Conditions (EU-SILC), has been growing rapidly. EU-SILC has become the EU reference source for comparative studies on income distribution and social exclusion at European level. It provides two types of annual data:

- Cross-sectional data relating to one year include variables on income, poverty, social exclusion and living conditions,  
and
- Longitudinal data, limited to income information and a restricted set of critical qualitative, non-monetary variables of deprivation, aim at identifying the incidence and dynamic processes of persistence of poverty and social exclusion among subgroups in the population. The longitudinal component is also more limited in sample size compared to the primary cross-sectional component. Furthermore, for any given set of individuals, microlevel changes are followed up only for a limited period of four years.

As far as social capital indicators are concerned, 2008 EU-SILC survey includes questions to assess the following components: Social Behaviour, Social Relationships, and specific characteristics of the territorial context (see Section 2 for details on social capital components). Further information on community social capital endowment can be obtained from Eurostat statistic database. Limited information is available for longitudinal comparative analysis.

The indicators are summarized in Table 2.



TABLE 2 SOCIAL CAPITAL INDICATORS

N°	Label	Name	Type of indicator	Year	Source <sup>14</sup>	Type of data
<b>Social behavior (SB)</b>						
1	<b>CRh</b>	In your local area are there any problems of crime, violence or vandalism? <sup>(i)</sup> [ 0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional
2	<b>CRc</b>	Crime recorded by the police: total crime <sup>(ii)</sup> [Number of crimes per 100 inhabitants].	Community : country	several	Eurostat statistic database	Cross-sectional Longitudinal
<b>Social relationships (SR)</b>						
3	<b>PHO</b>	Do you have a phone? (including mobile) [ 0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional Longitudinal
4	<b>TVC</b>	Do you have a colour tv? [ 0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional Longitudinal
5	<b>PC</b>	Do you have a computer? <sup>(iii)</sup> [ 0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional Longitudinal
6	<b>CHI</b>	Number of hours of child care by grandparents, others household members (outside parents), other relatives, friends or neighbors (free of charge) [per household member if less than 12 years old].	Individual	2008	EU-SILC	Cross-sectional
7	<b>FAW</b>	Are there “family workers” in your family business? [Number] <sup>(iv)</sup> .	Individual	2008	EU-SILC	Cross-sectional Longitudinal
8	<b>BOR</b>	Household can borrow from family or friends <sup>(v)</sup> [ 0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional
<b>Territorial context (TC)</b>						
9	<b>DUR</b>	Degree of urbanization [1: densely populated area;2 intermediate area; 3: thinly populated area] <sup>(vi)</sup> .	Household (respondent)	2008	EU-SILC	Cross-sectional Longitudinal
10	<b>Och</b>	Overcrowded household [0: not overcrowded; 1:overcrowded].	Household (respondent)	2008	EU-SILC	Cross-sectional Longitudinal
	<b>Occ</b>	Overcrowding rate <sup>(vii)</sup> .	Community: country	several	Eurostat statistic database	Cross-sectional Longitudinal
11	<b>H1h</b>	Do you have any of the following problems related to the place where you live? (Leaking roof, Dump walls/floors/foundation, rot in windows frames or floor) [ 0 : NO; 1:YES]	Household (respondent)	2008	EU-SILC	Cross-sectional
	<b>H1c</b>	Housing deprivation rate: % of total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames of floor.	Community : country	2008	Eurostat statistic database	Cross-sectional

<sup>14</sup> 2008 EU-SILC survey does not include the data for Malta which can be found from the 2009 wave onwards, however, not yet available at the time the paper was written.

12	H2h	Is your dwelling too dark, meaning is there not enough day-light coming through the windows? [ 0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional
	H2c	Housing deprivation rate: % of total population considering their dwelling as too dark .	Community : country	2008	Eurostat statistic database	Cross-sectional
13	H3h	Do you have too much noise in your dwelling from neighbours or from outside (traffic, business, factory)? [0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional
	H3c	Environment of the dwelling : % of total population suffering noise from neighbors or from the street.	Community : country	several	Eurostat statistic database	Cross-sectional Longitudinal
14	H4h	Pollution, grime or other environmental problems in the local area such as smoke, dust, unpleasant smells or polluted water [ 0 : NO; 1:YES].	Household (respondent)	2008	EU-SILC	Cross-sectional
	H4c	Environment of the dwelling : % of total population suffering from pollution, grime or other environmental problems.	Community : country	several	Eurostat statistic database	Cross-sectional Longitudinal
15	AP1	Greenhouse gas emission (in CO <sub>2</sub> equivalent).	Community : country	several	Eurostat statistic database	Cross-sectional Longitudinal
16	AP2	Urban population exposure to air pollution by ozone (micrograms per cubic meter day).	Community : country	several	Eurostat statistic database	Cross-sectional Longitudinal
17	AP3	Urban population exposure to air pollution by particulate matter (micrograms per cubic meter).	Community : country	several	Eurostat statistic database	Cross-sectional Longitudinal

(i) Crime is defined as a deviant behavior that violates prevailing norms and cultural standards prescribing how individuals ought to behave normally. (ii)The indicator includes homicides, violent crime, robbery, domestic burglary, motor vehicle theft and drug trafficking.(iii)The indicator includes portable and desktop computers . **Machines dedicated to video games but without any broader functionality** and **computers** provided only for work purposes are excluded. (iv) A *family worker* is anyone who helps a family member in agriculture or other activity, provided they are not considered employees. Persons working in a family business or in a family farm without being paid should be living in the same household as the owner of the business or farm, or in a slightly broader interpretation, in a house located on the same plot of land and with common household interests. Such people frequently receive remuneration in the form of fringe benefits and payments in kind. This category includes:- a son or daughter working in the parents' business or on the parents' farm without being paid;- a wife who assists her husband in his business, e.g. a haulage contractor, without receiving any formal pay. (v) 2008 EU-SILC module on *Over indebtedness and financial exclusion*. (vi) The degree of urbanization is classified into three categories: - *densely populated area* : this is a contiguous set of local areas, each of which has a density superior to 500 inhabitants per square kilometer, where the total population for the set is at least 50,000 inhabitants; - *intermediate area* : this is a contiguous set of local areas , not belonging to a densely-populated area, each of which has a density superior to 100 inhabitants per square kilometer, and either with a total population for the set of at least 50,000 inhabitants or adjacent to a densely-populated area; - *thinly-populated area* : this is a contiguous set of local areas belonging neither to a densely-populated nor to an intermediate area. (vii).The overcrowding rate describes the proportion of people living in an overcrowded dwelling as defined by the number of rooms available to the household, the household's size, as well as its members' ages and family situation. A person is considered as living in an overcrowded dwelling if the household does not have at its disposal a minimum number of rooms equal to one room for the household, one room per couple in the household, one room for each single person aged 18 or more, one room per pair of single people of the same gender between 12 -17 years of age, one room for each single person between 12 - 17 years of age not included in the previous category and one room per pair of children <12 years of age.

In particular:

1. Perceived crime, violence and vandalism as well as rate of crime are proxy indicators of those characteristics of the territorial context which hinder the development of economic and social cooperative behaviour. In particular local crime and perceived crime may promote fear and suspicion of neighbors that inhibit socializing and building long-term relationships. Nevertheless, the indicators have some shortcomings. The statistics about crime are drawn from administrative database and are suitable instrument to measure only the so-called apparent crime that is the crime reported to police and courts. On the other end, the reliability of the indicators of perception is unknown. As a matter of fact, individuals directly involved in acts of crime may be led to minimize the phenomenon, despite the anonymity of the survey. Moreover, persons who are not directly involved in acts of crime may have inaccurate information on the phenomenon, and simply speak from hearsay.
2. As far as social relationships indicators are concerned, a distinction has been made between real and virtual relationships. Real relationships are those based on face-to-face formal or informal socializing which can be transformed in durable networks that provide access to resources, information or assistance and from which one can derive market and non-market benefits (*i.e. better social status, better educational and professional achievement*). Virtual relationships provide the same benefits of real relationships but are based on networks of heterogeneous contacts generated via-computer over the internet.

The following variables from EU-SILC seem relevant to virtual and real relationships :

- the variable *Do you have a computer?* detects the availability of the technological instrument which facilitates the creation of virtual networks , while the variable *Do you have a phone? (including mobile phone)* detects the availability of a device which help to keep alive both real and virtual relationships. The variable *Do you have a tv?* measures a negative feature of social relationships. Some authors have empirically verified (Olken, 2006) that more time spent watching television is associated with substantially lower levels of participation in social activities and with lower self-reported measures of trust. Even, Putnam in a series of books and articles, famously argued that social capital in the United States has been declining over the past 40 years – and that the rise of television is a major factor behind this decline (Putnam 1995, 2000).

However, the above mentioned indicators measure only partly the phenomenon as they do not take into account the intensity with which each device is used.

- as far as real relationships are concerned EU-SILC provides three proxy variables : i) *Child care by grandparents, others household members (outside parents), other relatives, friends or neighbours* ; ii) *Are there "family workers"*<sup>15</sup>

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<sup>15</sup> A *family worker* is anyone who helps a family member in agriculture or other activity, provided they are not considered employees. Persons working in a family business or in a family farm without being paid should be living in the same household as the owner of the business or farm, or in a slightly broader interpretation, in a house located on the same plot of land and with common household

*in your family business?; iii) Household can borrow from family or friends ?* which capture the existence of support relationships which the individual can use to cope with child care, management of family firms , financial needs .

A relevant shortcoming of these indicators is that they do not measure the intensity with which individuals rely on family support networks .

3. Finally, a set of territorial and environmental indicators have been selected as they are significant determinants of social capital formation (Loopmans, 2001; Glaeser et al., 2002). A higher urbanization rate<sup>16</sup> should encourage social and economic networking although, in large urban centers, people' behavior seems, more and more, individualistic ; finally, a higher rate of overcrowding in dwelling should be a symptom of poor living conditions which could have a negative effect on the quality of family relationships . This aspect is further emphasized by the introduction of additional variables on housing and environmental conditions such as features of the house or the dwelling, relationships with neighbors, greenhouse gas emission (in CO<sub>2</sub> equivalent)

#### 4. CONCLUSION

This paper aimed to address the core issues related to the measurement of social capital relevant when the objective is to assess its effects on the process towards the eradication of poverty. These issues have been discussed in the frame of European Union because of its strong commitment in the fight against poverty (Bruxelles, 13.10.2011- COM(2011) 637 final - Increasing the impact of EU Development Policy: an Agenda for Change) . In particular, the paper presents a short review of the concept of social capital and of the main proxy indicators proposed so far to measure it with the aim to evaluate its impact in alleviating poverty; then it turns to issues in measurement and specifically to explore the currently available databases at European level in order to identify the appropriate proxy indicators of social capital. Specific attention has been devoted to the European Union Statistics on Income and Living Conditions (EU-SILC) and to the Eurostat statistic database, as regards respectively individual/household and community social capital endowment.

Different strategies and statistical methods have been used so far to define appropriate measures of social capital so that assessing its effects on household economic well-being lacks of a unified and a systematic methodological approach ; moreover, in most of these cases the studies appear to be constrained by data availability and the results depend strongly on the indicators used. Lack or reduced data availability is also the reason why empirical research designed to test the effect of

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interests. Such people frequently receive remuneration in the form of fringe benefits and payments in kind. This category includes:- a son or daughter working in the parents' business or on the parents' farm without being paid;- a wife who assists her husband in his business, e.g. a haulage contractor, without receiving any formal pay.

<sup>16</sup> In EU-SILC the degree of urbanization is classified into three categories: i) *densely populated area* - this is a contiguous set of local areas, each of which has a density superior to 500 inhabitants per square kilometre, where the total population for the set is at least 50,000 inhabitants; ii) *intermediate area* - this is a contiguous set of local areas, not belonging to a densely-populated area, each of which has a density superior to 100 inhabitants per square kilometre, and either with a total population for the set of at least 50,000 inhabitants or adjacent to a densely-populated area; iii) *thinly-populated area* - this is a contiguous set of local areas belonging neither to a densely-populated nor to an intermediate area.

social capital on household economic well-being in Europe are almost rare.

As a matter of fact, as far as European Union is concerned, the attempts made so far to measure social capital have been based on the European Values Survey (EVS) and the European Social Survey (ESS) since they contain comparable social capital indicators for almost all European countries. However, EVS and ESS do not allow the creation of comparable time series for all the European countries because different countries may use different survey designs. Moreover, EVS and ESS do not fulfill the objectives of this study as detailed information about household economic well-being is not provided. For these reasons, interest in a more recent data source, the European Union Statistics on Income and Living Conditions (EU-SILC), has been growing rapidly as it has become the EU reference source for comparative studies on income distribution and social exclusion at European level.

As far as social capital indicators are concerned, the 2008 EU-SILC survey and the Eurostat statistic database include indicators to assess individual/household and community social capital endowment for the following components: Social Behaviour, Social Relationships and specific characteristics of the territorial context. On the contrary, limited information is available for longitudinal comparative analysis.

Despite some shortcomings mainly due to the impossibility of measuring all components of social capital and of carrying on comparative longitudinal studies, EU-SILC cross-sectional survey and the Eurostat statistic database represent an important reference source for comparative studies aiming at measuring the effect of social capital on household economic well-being especially because they provide comparable and high quality cross-sectional indicators for 27 countries. This is the reason why they represent also an improvement over the European Values Survey (EVS) and the European Social Survey (ESS) used so far. More social capital indicators with a greater level of territorial detail would certainly make the EU-SILC survey and the Eurostat statistic database an irreplaceable decision-making tool to assess suitable policies aiming at poverty reduction in Europe.

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#### APPENDIX

##### A.1

Indicators of the use of social capital—four types of relations

	<i>N</i>	Minimum	Maximum	Mean	Standard deviation
<b>Market-based use</b>					
Access to market relations—employ someone or own business	1995	0	14	2.12	2.01
Use internet for market relations (e.g., employment, on-line purchases)	1995	0	4	0.47	0.88
Market public services used (e.g., gas, bank, financial advisor)	1995	0	12	5.65	1.22
Number of market participation groups (e.g., employment group)	1995	0	4	0.08	0.31
Income from market sources (e.g., wages, self-employment, farm)	1995	0	4	1.40	0.98
Total market supports	1995	0	4	0.19	0.49
Summary indicator for market-based use	1995	0	27	9.77	3.79
<b>Bureaucratic-based use</b>					
Use internet for bureaucratic relations (e.g., government information)	1995	0	6	0.53	1.09
Bureaucratic public services used (e.g., hospital, legal, library)	1995	0	14	5.37	2.16
Number of bureaucratic actions taken (e.g., letter to government rep.)	1995	0	1	0.13	0.34
Income from bureaucratic sources (e.g., government pension, EI, welfare)	1995	0	7	1.38	1.15
Total bureaucratic supports	1995	0	7	0.49	0.80
Summary indicator for bureaucratic-based use	1995	0	21	7.90	3.07
<b>Associative-based use</b>					
Use internet for associative relations (e.g., volunteer work)	1995	0	1	0.06	0.24
Associative public services used (e.g., meal programs)	1995	0	2	0.29	0.46
Number of associative participation groups (e.g., recreation, environment, religious, service)	1995	0	21	2.24	2.88
Number of associative actions taken (e.g., give money, sign petition)	1995	0	5	1.37	1.16
Total associative supports	1995	0	4	0.12	0.38
Summary indicator for associative-based use	1995	0	26	4.07	3.66
<b>Communal-based use</b>					
Use internet for communal relations (e.g., contacting family, friends)	1995	0	2	0.50	0.73
Total types of sharing from family and friends (e.g., food, auto repair, home care)	1995	0	11	2.34	1.93
Total communal supports	1995	0	8	1.00	1.47
Summary indicator for communal-based use	1995	0	15	3.84	2.67
<b>Total of four types of use</b>	1995	4	59	25.58	9.03

Indicators of the availability of social capital—four types of relations

	<i>N</i>	Minimum	Maximum	Mean	Standard deviation
<b>Market relations</b>					
Number of businesses within 30 min of site	17	4	350	77.53	104.09
No. of market-based services within 30 min of site (e.g., banks, ATM machines, insurance office)	19	0	5	1.74	1.76
No. of market communication services (e.g., cable, internet, national newspaper)	19	1	8	6.00	1.73
Commercial shopping code from iwg survey (Stabler et al., 1992)	19	0	3	1.16	0.90
Total of business and market services for site	19	5	359	78.26	102.48
Density of enterprises and market services	19	0.30	30.07	7.09	6.68
<b>Bureaucratic relations</b>					
No. of bureaucratic services within 30 min of site (e.g., schools, hospital, employment office)	19	0	32	9.37	8.82
No. of bureaucratic communication services (e.g., internet, national newspaper)	19	1	3	2.68	0.75
No. of bureaucratic access services within 30 min (e.g., school, hospital, employment office)	19	2	35	12.05	9.04
Density of bureaucratic services	19	0.10	7.01	1.93	2.09
<b>Associative relations</b>					
No. of associative-based services within 30 min of site (e.g., food bank, rink, community center)	19	0	18	6.68	5.20
No. of associative communication services (e.g., community newspaper, local radio station)	19	1	11	7.58	2.55
No. of associative access services within 30 min	19	3	28	14.26	6.78
Density of associative services	19	0.19	12.74	2.52	3.02
<b>Communal-based relations</b>					
Average of number of people in census families	20	3	4	3.07	0.32
No. of communal-based services in site (e.g., daycare, retirement home)	19	4	12	5.63	1.98
Index of communal relations—basic	20	4	14.9	8.40	2.13
Density of communal index	20	70.83	97.56	88.85	6.67
Density of four types of social capital	20	0.10	33.2	12.40	10.40

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