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**Giuseppina Guagnano\*, Elisabetta Santarelli\*\*,  
Isabella Santini\*\***

# **THE ROLE OF SOCIAL CAPITAL IN SELF-PERCEPTION OF POVERTY AND THE IMPLICATIONS FOR PUBLIC POLICY. AN EXPLORATORY ANALYSIS\*\*\***

*Abstract:* This paper aims at showing to what extent self-perceived poverty in Europe is associated with specific household socioeconomic characteristics and particular aspects of household/community social capital endowment, in order to disclose the primary risk factors of family poverty status. Such evidence would help central and local governments to define those economic and social goals which should receive more attention by policies aiming at poverty eradication. In particular, the paper focuses on the associations between a proxy of subjective poverty (ability to make ends meet) and two sets of variables describing, respectively, the household socioeconomic characteristics and the household/community social capital endowment. In order to pursue this aim, a multiple correspondence analysis is carried out. The empirical analysis is based on the 2009 EU-SILC survey and the Eurostat statistics database. The results show a relevant association between self-perceived poverty and both household socioeconomic characteristics and social capital. Implications for public policies are also discussed.

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\* Dipartimento MEMOTEF - Sapienza - University of Rome.

\*\* Phd in Demography - Sapienza University of Rome.

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*Keywords:* subjective poverty, social capital, public policies, EU-SILC, multiple correspondence analysis.

## **1. Introduction**

Measuring poverty and understanding why it occurs represent, nowadays, a core task for both researchers and policy-makers in advancing towards the eradication of poverty. Poverty is a concept lacking a universally acceptable definition and often faced with competing interpretations: poverty is difficult to define, but it is even harder to measure. Since many years, both researchers and policy-makers have shown an increasing interest towards the subjective (Goedhart et al., 1977; Van Praag et al., 1980) and multidimensional (Massoumi, 1986; Case, Deaton, 2002; Deutsch, Silber, 2005; Van Praag, Ferrer-i-Carbonell, 2005) aspects of poverty, arguing that poverty is not an objective status based exclusively on the level of income necessary to satisfy needs, but depends on people's perceptions and feelings, on the resources essential for full participation/inclusion in society and on environmental aspects (Tomlinson, Walker, Williams, 2007; Van Praag, Ferrer-i-Carbonell, 2005).

Social capital plays a crucial role here. According to the most widely accepted definition suggested by the World Bank Social Capital Initiative Program research group, *social capital includes the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development* (Grootaert, van Bastelaer, 2002). This definition synthesizes the different points of view expressed by Putnam et al. (1993), Coleman (1990), Olson (1982) and North (1990) and implies that living in a society characterized by moral and cooperative behaviour, and where trust replaces suspicion and fear, can have a systematic positive effect on individuals' perception of poverty, as their socioeconomic vulnerability is reduced as well as the resources they need to deal with risk and to avert major losses (Helliwell, 2001).

Several empirical studies have shown how and to what extent in Europe self-perceived poverty is associated with household size and type, with available household resources (Van Praag, Van der Sar, 1988; Ravayllon, Lokshin, 2002; Castilla, 2010), with indi-

vidual and household socioeconomic characteristics (i.e. gender, age, employment status, education, tenure status, the residence area) (Ravaillon, Lokshin, 2002; Stanovnik, Verbic, 2004; ISTAT, 2008; ISAE, 2009). Limited attention has been, instead, devoted to the analysis of the relationships with household and community social capital endowment. This occurred despite its growing importance as a major determinant of economic well-being<sup>1</sup> at micro and macro level that has increased its implications in social policy as a tool to achieve better outcomes of traditional public policies for poverty reduction. The mechanism through which social capital is said to reduce poverty can be summarized as follows:

1. 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; Fernandez et al., 2000) and credit market access or credit limitations – thus reducing the vulnerability of households to poverty (Knack, 1999);

2. at the macro level, social engagement and civic responsibility can also strengthen democratic governance (Almond, Verba, 1963), a mix of norms and sanctions can control defection and dishonesty (Bebbington, Perreault, 1999) and improve the efficiency and honesty of public administration (Putnam et al., 1993; Fukuyama, 1995) and economic policies (Easterly, 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 useful benefits for attaining many other different goals (Knack, Keefer, 1997) [i.e. human capital accumulation (Gallor, Zeira 1993; Coleman, 1988), social efficient outcomes such as social cohesion (Reimer, 2002; Green et al., 2003), social capability (Abramovitz, 1986; Abramovitz, David, 1996) and so on]<sup>2</sup>.

Taking into account these observations, this paper aims to show through a cross-country comparative analysis to what ex-

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<sup>1</sup> In this paper the term *economic well-being* is used as a synonymous for *economic conditions*.

<sup>2</sup> However, it is worth noting that implications of social capital are not always the same everywhere. Actually, as Krishna and Shrader (1999) pointed out: “What is social capital in one context may be *unsocial* capital in another [...]”.

tent self-perceived poverty in European countries is associated with specific household socioeconomic characteristics and particular aspects of household/community social capital endowment in order to disclose the primary risk factors of family poverty status. Such evidence would help central and local governments to define those economic and social goals which should receive more attention by poverty reduction policies.

In order to pursue this aim a multiple correspondence analysis (MCA) is carried out; as a matter of fact, MCA allows to analyze the pattern of relationships of several categorical variables and to extract a reduced number of latent variables (factors) which we can interpret as poverty risk factors. The empirical analysis is based on the 2009 EU-SILC survey and the Eurostat statistics database.

The paper is organized as follows: section 2 describes the data and the methodology used, section 3 presents the results and section 4 provides some concluding remarks and future research prospects.

## **2. Data and methodology**

In order to study associations between subjective poverty and household socioeconomic characteristics and social capital, we carry out a multiple correspondence analysis (MCA) on data from the 2009 cross-sectional EU-SILC survey and Eurostat statistics database<sup>3</sup>.

The household subjective poverty is expressed by the proxy categorical variable *ability to make ends meet*. Its categories are: with great difficulty; with difficulty; with some difficulty; fairly easily; easily; very easily.

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<sup>3</sup> EU-SILC is the Eurostat project on Income and Living Conditions which involves all the 27 European countries. EU-SILC is the reference source for comparative studies on income distribution, poverty and social exclusion at European level (Santini, De Pascale, 2012a,b) with the purpose of monitoring household economic and social conditions for aware planning of economic and social policies (Clemenceau et al., 2006). EU-SILC provides two types of data, cross-sectional and longitudinal over a four year period (EU-SILC uses a four-years rotational design). These data were made available under the Eurostat research contract EU-SILC/2011/18.

The multiple correspondence analysis (MCA) is carried out on 216.252 sample units (households) so as to depict the main associations between the household subjective poverty proxy (set as supplementary variable together with the variable *country*) and two sets of active variables (67 in all with 229 categories) describing, respectively,

1) the respondent/household socioeconomic characteristics<sup>4</sup>: age, gender, marital status, education, employment status, work intensity status, branch of activity, at risk of poverty and social exclusion, general health, house/flat size, tenure status, dwelling type, household type, equivalized disposable income, poverty and deprivation indicator, financial burden of housing cost, debts, family/children social exclusion, housing, cash and alimonies received. To take into account the high degree of heterogeneity in socio-economic well-being across the 27 European country, the following indicators are also included: GDP per capita in PPS, unemployment rate, at risk of poverty rate, percentage of population at risk of poverty, social exclusion or deprivation, percentage of persons aged 25 or over with upper secondary or tertiary education attainment.

2) the household/community social capital endowment<sup>5</sup>. The proxy variables selected are indicators of the level of:

- *social behaviour* (SB), population socioeconomic characteristics that facilitate/hinder the development of social and economic cooperative behaviour;
- *social relationships* (SR), measures of the potential and actual degree of social relationships;
- some specific *territorial and environmental characteristics*

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<sup>4</sup> Respondent's socioeconomic characteristics are included as active variables to take into account the features of the person who answers, on behalf of the whole family, to the household questionnaire and, in particular, to the question on *ability to make ends meet*.

<sup>5</sup> Despite some shortcomings, the EU-SILC cross-sectional survey and the Eurostat statistics 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 all the 27 European countries (see, for further details, Santini, De Pascale, 2012a,b). Social capital indicators, when available, are measured both at household and societal level in order to take into account both the families' status and that of the community they belong to; here, due to the lack of more detailed information, community stands for the country where families live.



which are significant determinants of social capital formation.

A complete list of all variables is provided in the Appendix (Table A1, A2.1-A2.3 and A3).

### 3. Results

The variability explained by the first three factorial axes of MCA is 56,8% (computed with the correction formula due to Benzécri, 1979). The interpretation of the results will be limited to the first, second and third factorial axis as they seem to give answer to the questions this paper aims to investigate. The detailed description of each factorial axis is provided by Tables 1, 2 and 3 and a synthetic view of the results is presented in Figures 1, 2 and 3.

Subjective poverty is the respondent's assessment of own household economic well-being and aims to capture the inherent subjectivity and multidimensionality of poverty. Actually, the results of the MCA show that in Europe households subjective poverty is associated with at least three aspects:

- a. *the household economic conditions;*
- b. *the degree of family and social distress;*
- c. *the level of community social capital endowment.*

In particular:

a) the **household economic conditions** go through different variables such as household disposable income, deprivation, tenure and work intensity status, size and type, some respondent's socioeconomic characteristics (i.e. age, education, employment, health and marital status), and those household/community social capital endowment indicators strongly associated with household economic well-being, as clearly shown by the first factorial axis (see Table 1 and Figure 1). As a matter of fact, difficulties in making ends meet prevails in severely deprived households with low equalized disposable income, whose respondent is mostly 65 years or over, widowed, low educated, retired, at risk of poverty and reporting bad health. Moreover, difficulty in making ends meet is associated with modest conditions of the house<sup>6</sup>, generally provided free, as well as scarce availability of devices which

<sup>6</sup> Specifically, small houses (the size is measured by number of rooms and sqm), without hot water.

Tab. 1 - Multiple correspondence analysis: categories in ascending order according to their coordinates on the first factorial axis (F1).

Variable name	Category	Variable name	Category
Phone	No	COUNTRY	Portugal
Hot water	No	COUNTRY	Slovakia
COUNTRY	Romania	COUNTRY	Italy
COUNTRY	Bulgaria	ABILITY TO MAKE ENDS MEET	Some difficulty
HOUSING COST	No cost	COUNTRY	Czech Republic
COUNTRY	Lithuania	<b>BARYCENTER</b>	
DEPRIVATION_H	Yes	COUNTRY	Spain
DEPRIVATION_C	High	COUNTRY	Malta
AT RISK OF POVERTY_H	Only deprived	COUNTRY	Slovenia
HEALTH STATUS	Very bad	COUNTRY	Ireland
COUNTRY	Latvia	COUNTRY	Cyprus
AGE	80+	ABILITY TO MAKE ENDS MEET	Fairly easily
EQUIVALIZED DISPOSABLE INCOME	1st quintile	COUNTRY	France
MARITAL STATUS	Widow	COUNTRY	Germany
AT RISK OF POVERTY_H	Other at risk	COUNTRY	Belgium
HEALTH STATUS	Bad	EMPLOYMENT STATUS	Working
ROOMS	1 room	COUNTRY	Austria
Overcrowding rate	High	ABILITY TO MAKE ENDS MEET	Easily
PC	No	BRANCH	Education
Size of dwelling	<=50_sqm	AT RISK OF POVERTY_C	Low
COUNTRY	Hungary	BRANCH	PA
AT RISK OF POVERTY_C	High	COUNTRY	United Kingdom
EMPLOYMENT STATUS	Retired	HOUSEHOLD TYPE	Single parent & dc
AGE	65-79	Size of dwelling	>120_sqm
Internet connection	No	Housing deprivation rate (H1C)	Low
ABILITY TO MAKE ENDS MEET	Great difficulty	DEPRIVATION_C	Low
ROOMS	2 rooms	HOUSEHOLD TYPE	2 adults& 1dc
HOUSEHOLD TYPE	2 adults, atleast one>65	BRANCH	Real estate activities
HOUSEHOLD TYPE	Oneperson	ROOMS	6 + rooms
POVERTY_H	Yes	HEALTH STATUS	Very good
Get-together with friends	No	AGE	30-34
COUNTRY	Poland	ALIMONIES	Yes
GDP	Low	Crime rate	High
BRANCH	Not working	DEPRIVATION_C	Low
Crime rate	Low	EQUIVALIZED DISPOSABLE INCOME	5th quintile
Family workers	Low	BRANCH	Health
Housing deprivation rate (H1C)	High	AGE	40-44
POVERTY_C	High	COUNTRY	Sweden
Leisure activities	No	GDP	High
WORK INTENSITY STATUS	0	ABILITY TO MAKE ENDS MEET	Very easily
Tvc	No	BRANCH	Communications
Exposure to air pollution by particulate matter	High	BRANCH	Finance
AT RISK OF POVERTY_H	Only poverty	FAMILY ALLOWANCES	Yes
LWI	Yes	AGE	35-39
EDUCATION	Low	COUNTRY	Finland
HEALTH STATUS	Fairly	COUNTRY	Luxembourg
ABILITY TO MAKE ENDS MEET	Difficulty	COUNTRY	Netherlands
Size of dwelling	50 -  70_sqm	HOUSEHOLD TYPE	2adults & 2dc
Tenure status	Free	COUNTRY	Denmark
COUNTRY	Estonia	HOUSEHOLD TYPE	2adults & 3dc
COUNTRY	Greece		

Tab. 2 - Multiple correspondence analysis: categories in ascending order according to their coordinates on the second factorial axis (F2).

Variable name	Category	Variable name	Category
COUNTRY	Denmark	ABILITY TO MAKE ENDS MEET	Difficulty
COUNTRY	Netherlands	COUNTRY	Slovakia
ABILITY TO MAKE ENDS MEET	Very easily	EMPLOYMENT STATUS	Unemployed
COUNTRY	Finland	AGE	30-34
Crimerate	High	Crime rate	Low
GDP	High	HOUSEHOLD TYPE	Other_type
COUNTRY	Austria	Phone	No
COUNTRY	Sweden	HOUSEHOLD TYPE	2 adults & 1dc
COUNTRY	United Kingdom	DWELLING CHANGE	Eviction
HOUSEHOLD TYPE	2 adults, at least one>65	INTER-HOUSEHOLD CASH TRANSFER	Yes
EQUIVALIZED DISPOSABLE INCOME	5th quintile	GDP	Low
ABILITY TO MAKE ENDS MEET	Easily	AGE	40-44
DEPRIVATION_P	Low	ABILITY TO MAKE ENDS MEET	Great difficulty
HOUSING COST	No_burden	Shortage of space in dwelling	Yes
COUNTRY	Germany	HOUSING COST	No cost
HOUSEHOLD TYPE	2 adults< 65	AT RISK OF POVERTY_H	Other at risk
Housing deprivation rate (H1C)	Low	COUNTRY	Estonia
AGE	80+	BRANCH	Agriculture
AT RISK OF POVERTY_C	Low	AGE	35-39
COUNTRY	Belgium	FAMILY ALLOWANCES	Yes
Family workers	High	AT RISK OF POVERTY_C	High
AGE	65-79	INCOME BY<16	Yes
UNEMPLG	Low	ALIMONIES	Yes
AGE	60-64	AT RISK OF POVERTY_H	Only deprived
EMPLOYMENT STATUS	Retired	HOUSEHOLD TYPE	Single parent & dc
HOUSEHOLD TYPE	One person	HOUSEHOLD TYPE	2 adults & 2dc
COUNTRY	Luxembourg	EQUIVALIZED DISPOSABLE INCOME	1st quintile
Housing deprivation rate (H2C)	Low	COUNTRY	Hungaria
Greenhouse gas emission	Medium	HOUSEHOLD TYPE	Other& dc
EQUIVALIZED DISPOSABLE INCOME	4th quintile	DEPRIVATION_H	Yes
Overcrowding rate	Low	Greenhouse gas emission	Low
COUNTRY	France	COUNTRY	Poland
GDP	Medium	Overcrowding rate	High
ABILITY TO MAKE ENDS MEET	Fairly easily	Hot water	No
COUNTRY	Spain	Overcrowded household	Yes
COUNTRY	Italy	Family workers	Medium
COUNTRY	Malta	DEPRIVATION_C	High
COUNTRY	Ireland	HOUSEHOLD TYPE	2 adults & 3dc
COUNTRY	Czech Republic	COUNTRY	Lithuania
COUNTRY	Cyprus	Child care	Medium
COUNTRY	Portugal	COUNTRY	Latvia
<b>BARYCENTER</b>		COUNTRY	Romania
COUNTRY	Greece	COUNTRY	Bulgaria
COUNTRY	Slovenia	Child care	High
ABILITY TO MAKE ENDS MEET	Some difficulty		

Tab. 3 - Multiple correspondence analysis: categories in ascending order according to their coordinates on the third factorial axis (F3).

Variable name	Category	Variable name	Category
COUNTRY	Spain	ABILITY TO MAKE ENDS MEET	Some_difficulty
COUNTRY	Italy	AGE	35-39
EDUCATION LEVEL	Low	ABILITY TO MAKE ENDS MEET	Difficulty
Exposure to air pollution by ozone	High	ABILITY TO MAKE ENDS MEET	Great difficulty
COUNTRY	Greece	COUNTRY	Estonia
COUNTRY	Portugal	<b>BARYCENTER</b>	
Greenhouse gas emission	High	ABILITY TO MAKE ENDS MEET	Fairly_easily
Crime rate	Medium	COUNTRY	Germany
UNEMPLG	High	COUNTRY	Slovakia
POVERTY_C	High	HOUSEHOLD TYPE	One person
AT RISK OF POVERTY_C	Medium	COUNTRY	Austria
DWELLING CHANGE	Absence of contract	HOUSEHOLD TYPE	2 adults, at least one >65
Crime_C	Medium	ABILITY TO MAKE ENDS MEET	Easily
COUNTRY	France	COUNTRY	Czech Republic
Exposure to air pollution by particulate matter	High	COUNTRY	Slovenia
Size of dwelling	90- 120_sqm	COUNTRY	Ireland
Size of dwelling	70- 90_sqm	COUNTRY	Luxembourg
Enviroment of the dwelling (H4C)	Medium	COUNTRY	Lithuania
GDP	Medium	COUNTRY	Hungaria
COUNTRY	Belgium	EQUIVALIZED DISPOSABLE INCOME	1st quintile
Environment of the dwelling (H3C)	High	INCOME BY <16	Yes
UNEMPLT	High	Housing deprivation rate (H2C)	Low
Dwelling type	Flats < 10	AGE	<= 24
COUNTRY	Cyprus	HOUSING COST	No cost
EDUCATION	Low	Greenhouse gas emission	Low
Housing deprivation rate (H2C)	Medium	COUNTRY	Romania
DEPRIVATION_P	Medium	GDP	High
EQUIVALIZED DISPOSABLE INCOME	3rd quintile	Environment of the dwelling (H3C)	Low
Size of dwelling	>120_sqm	ROOMS	1 room
Housing deprivation rate (H1C)	High	ABILITY TO MAKE ENDS MEET	Very_easily
HOUSEHOLD TYPE	Other_without_dc	AT RISK OF POVERTY_P	Low
HOUSING COST	Heavy_burden	COUNTRY	Netherlands
BRANCH	Hotels and restaurants	COUNTRY	United Kingdom
Environment of the dwelling	Medium	COUNTRY	Bulgaria
ROOMS	5 rooms	Exposure to air pollution by ozone	Low
BRANCH	Other services	Enviroment of the dwelling (H4C)	Low
HOUSEHOLD TYPE	2 adults & 2dc	COUNTRY	Poland
AT RISK OF POVERTY_H	Only poverty	Exposure to air pollution by particular matter	Low
ROOMS	4 rooms	COUNTRY	Latvia
Exposure to air pollution by particulate matter	Medium	Housing deprivation rate (H1C)	Low
COUNTRY	Malta	COUNTRY	Sweden
EQUIVALIZED DISPOSABLE INCOME	4th quintile	COUNTRY	Denmark
EMPLOYMENT STATUS	Inactive	COUNTRY	Finland
AGE	80+		

Fig. 1 - Multiple correspondence analysis: projection of supplementary variables on F1 and F2.

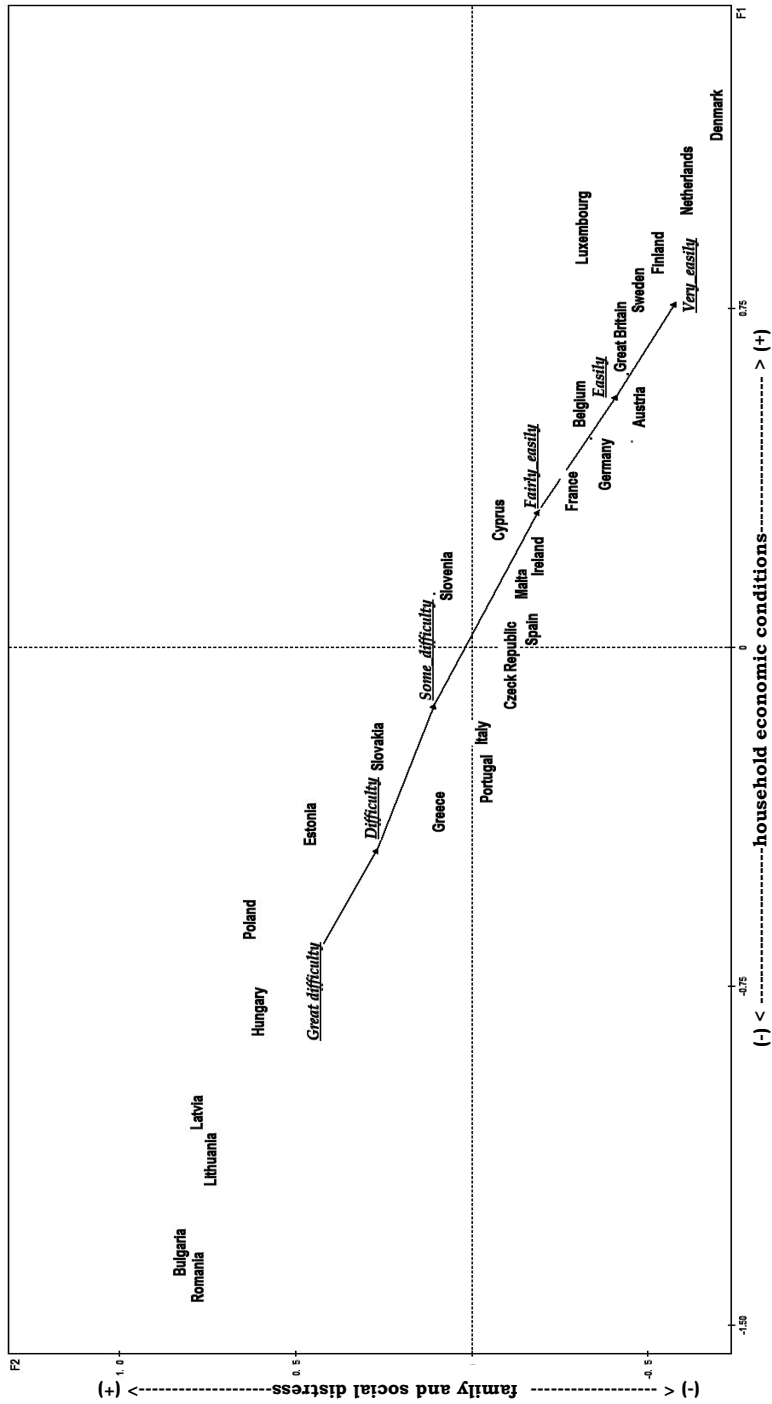


Fig. 2 -Multiple correspondence analysis: projection of supplementary variables on F1 and F3.

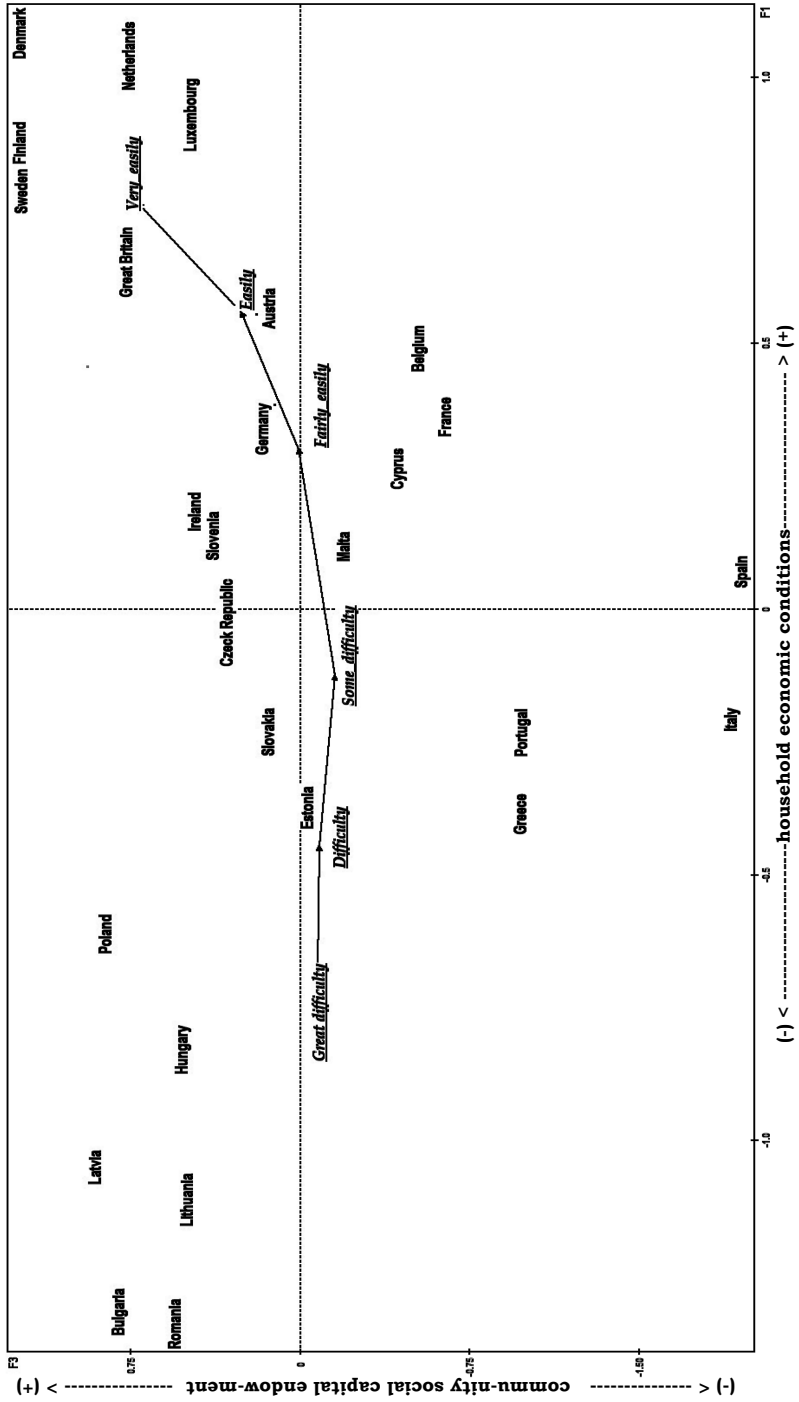
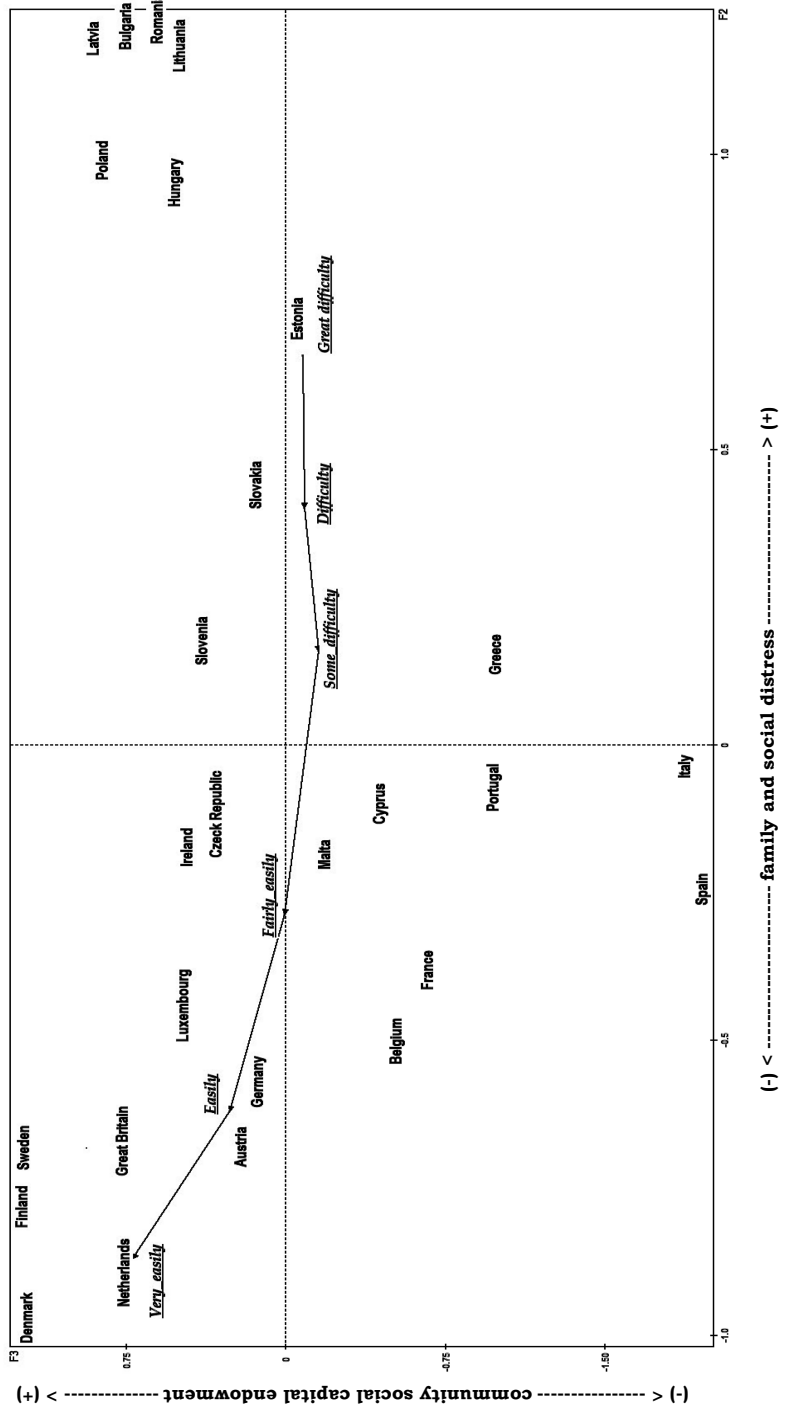


Fig. 3 - Multiple correspondence analysis: projection of supplementary variables on F2 and F3.



helps to keep alive both real and virtual relationships<sup>7</sup>, absence of social life (i.e. participation in leisure activities and get-together with friends) and low environmental quality<sup>8</sup>. The results are consistent with those obtained in previous empirical studies. In fact, one of the most common results found in the literature is the strong association between household poverty and income (Easterlin, 2001) and, as extensively proved by a recent research (Eurostat, 2010), between poverty and poor housing and environmental conditions, concepts which should be used together to analyze different aspects of households' and individuals' economic well-being.

The association observed on the first factorial axis between self perceived poverty and low levels of crime confirms the results of Fraser (2011) which analyses the relationships between crime and poverty status in the 27 European countries. Actually, contrary to expectations and trends observed in the past, poverty is *not* linked to higher crime rates and it may even suggest the opposite: that is, the poorest countries, those with higher wealth inequality and not completely developed in terms of important services, have *less* crime than the wealthier countries. However, if on one side higher crime rates in wealthier countries seem to depend on the major interest of transnational organized crime towards these countries (UNODOC, 2010), on the other side they can also depend on the greater propensity of the population living in developed countries to denounce criminal events to the authorities of jurisdiction.

b) The *degree of family and social distress* goes through numerous variables such as household disposable income, type and size, housing conditions, entitlement to family allowances, some respondent's socioeconomic characteristics (i.e. age and employment status) and some components of household social capital endowment, such as the support for child care which represent an important resource available to poor people who are often described as *deficient* along other vectors (Grootaert, van Bastelaer, 2001; Woolcock, 2002). This aspect is well summarized by the

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<sup>7</sup> Possession of colour tv, phone (also mobile), personal computer and internet connection.

<sup>8</sup> Low environmental quality stands for high overcrowding and 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) and urban population exposure to air pollution by particulate matter.



second factorial axis (see Table 2 and Figure 1): difficulty in making ends meet prevails in low income (1<sup>st</sup> quintile), large size and overcrowded households with dependent children, severely materially deprived, entitled to family allowances, receiving alimonies and income by household members under 16 years old, and relying on support for child care<sup>9</sup>, thus compensating their socioeconomic vulnerability. The respondent is generally between 30 and 44 years old and unemployed.

c) The **level of community social capital endowment** goes especially through those territorial and environmental characteristics which are significant determinants of social capital formation. This aspect is well summarized by the third factorial axis (see Table 3 and Figures 2 and 3): actually, self-perception of poverty tends to improve in medium size households with very low income (1<sup>st</sup> quintile) if they live in areas characterized by those environmental conditions which can exert a strong positive effect on the quality of family and community relationships. Among these, for example: good housing conditions<sup>10</sup>, environment of the dwelling<sup>11</sup>, low greenhouse gas emission and urban population exposure to air pollution by particulate matter and by ozone<sup>12</sup>.

The above results can help to identify suitable poverty reduction strategies. As a matter of fact, policies aiming at poverty reduction in countries characterized, on average, by poor economic conditions (on the left side of Figure 2) should move along two different directions. In particular, in countries such as, for example, Romania, Bulgaria, Lithuania, Latvia, Hungary, Poland, Estonia, Slovakia and Czech Republic where low levels of economic well-being and high social capital endowment prevail (left upper

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<sup>9</sup> Support for child care is expressed by the 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).

<sup>10</sup> Housing conditions: % of total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames of floor; % of total population considering their dwelling as too dark.

<sup>11</sup> Environment of the dwelling: % of total population suffering from pollution, grime or other environmental problems and % of total population suffering noise from neighbors or from the street.

<sup>12</sup> Greenhouse gas emission (in CO<sub>2</sub> equivalent); urban population exposure to air pollution by particulate matter (micrograms per cubic meter).

quadrant), traditional welfare programs based on income support mechanism are recommended. In countries such as, for example, Portugal, Greece and Italy characterized by poor household economic well-being but also by low social capital endowment (left lower quadrant), poverty reduction policies can be effective if they reconcile traditional income support programs with measures facilitating the development of desirable forms of social capital, in particular those which strengthen mutual trust and foster model behaviour (i.e. reducing criminality and improving housing and environmental conditions).

Actually, living in a society characterized by economic and social cooperative behaviour, and where trust replaces suspicion and fear, can have a systematic positive effect on households' economic well-being as their socio-economic vulnerability is reduced, as well as the resources they need to deal with risk and avert major losses.

#### **4. Conclusions**

This paper aims to show to what extent self-perceived poverty in European countries is associated with household socioeconomic characteristics and household/community social capital endowment in order to disclose the primary risk factors of family poverty.

The results of the multiple correspondence analysis show that subjective poverty is associated at least with three aspects:

- a. *the household economic conditions;*
- b. *the degree of family and social distress;*
- c. *the level of community social capital endowment.*

The analysis proves not only one of the most well-established results found in empirical literature (i.e. the strong link between household poverty status and income), but also a significant association between social capital and self-perception of poverty.

As a consequence, poverty reduction policies should enhance household economic well-being not only through traditional income support measures, but also facilitating the development of desirable forms of social capital which strengthen mutual trust and foster model behaviour (i.e. reducing criminality and improving housing and environmental conditions). In other words, soci-

ety characterized by economic and social cooperative behaviour can improve households' economic well-being.

If the EU-SILC survey and Eurostat statistics database would provide more social capital indicators with a greater territorial detail, associations between social capital and household poverty could be entirely described, thus helping considerably policy-makers to promote suitable poverty reduction strategies.

As a matter of fact, in EU countries almost 84 million people live at risk of poverty, facing, depending on the country, a variety of problems from not having enough money to spend on food and clothes to suffering poor housing conditions and even homelessness; from having to cope with limited lifestyle choices that may lead to social exclusion to living in areas where social capital is deteriorating. The European Union has joined forces with its Member States supporting numerous initiatives among which the *2010 European Year For Combating Poverty and Social Exclusion*: its objective was to raise public awareness about these issues and renew the political commitment of the EU and its Member States to combat poverty and social exclusion.

From the statistical point of view, further research will be directed to measure the effect of social capital on household subjective-poverty through the specification and the estimation of an appropriate model.

## APPENDIX

*Tab. A1 - Respondent and household socio-economic characteristics.*

Label	Variable name	Categories
<b>AGE</b>	Age	< 24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65-79 80+
<b>GEN</b>	Gender	Male Female
<b>MST</b>	Marital status	Never married Married Separated or divorced Widowed
<b>EDU</b>	Educational qualification (*)	Low Medium High
<b>EMP</b>	Employment status	Working Unemployed Retired Inactive
<b>LWI</b>	Low work intensity status	No LWI LWI
<b>BRA</b>	Branch of activity	Agriculture Industry Construction Wholesale retail Transport and storage Hotels and restaurants Information and communication

(\*) *Low*: Never in education, Pre-primary school, Primary school and Lower secondary school; *Medium*: Secondary school and Post-secondary school; *High*: Tertiary education (1st and 2nd stage).

<b>Label</b>	<b>Variable name</b>	<b>Categories</b>
		Financial and insurance activities Real estate; renting and business activities Public administration; defense; social security Education Health and social work Other Not working
<b>RISK</b>	At risk of poverty/social exclusion	Not at risk At risk of poverty LWI Severely materially deprived Other
<b>HTH</b>	General health	Very good Good Fair Bad Very bad
<b>ROO</b>	House/flat: number of rooms	1 room 2 rooms 3 rooms 4 rooms 5 rooms 6+ rooms
<b>TST</b>	Tenure status	Owner Paying rent at prevailing/market rate Paying rent at a reduced rate Accommodation is provided free
<b>DTY</b>	Dwelling type	Detached house Semi-detached or terraced house Apartment or flat < 10 Apartment or flat with 10 or more
<b>RCA</b>	Reason for changing dwelling	No change Forced to leave: end of the contract Forced to leave: absence of contract Forced to leave: eviction/distrain Forced to leave: financial diff For a family-related reason For an employment-related reason For some other reason

<b>Label</b>	<b>Variable name</b>	<b>Categories</b>
<b>TYPE</b>	Household type	One person household 2 adults both adults < 65 years 2 adults at least one adult ≥65 year Other without dependent children Single parent and ≥ 1 dep chi 2 adults one dependent child 2 adults two dependent children 2 adults and ≥ 3 dep children Other households + dep children Other type
<b>HDI</b>	Equivalized disposable income	1st quintile 2nd quintile 3rd quintile 4th quintile 5th quintile
<b>POI</b>	Poverty indicator	Not at risk of poverty At risk of poverty
<b>SMD</b>	Severely materially deprived Household	Not severely deprived Severely deprived
<b>HCO</b>	Financial burden total housing cost	No housing cost A heavy burden Somewhat a burden Not burden at all
<b>DEB</b>	Debts for hire purchases or loans	No Debts Debts
<b>WIS</b>	Work intensity status	WI = 0 0 < WI < 0.5 0.5 ≤ WI < 1 WI = 1
<b>FAL</b>	Family/children related allowances	No Yes
<b>AAL</b>	Other allowances	No Yes
<b>HAL</b>	Housing allowances	No Yes
<b>ICT</b>	Regular inter-household cash received	No Yes
<b>ALI</b>	Alimonies received	No Yes
<b>I16</b>	Income received by people < 16	No Yes

Source: EU-SILC 2009.

Tab. A2.1 - Social capital indicators: social behaviour.

Label	Variable name	Categories	Type	Source
<b>CRH</b>	In your local area are there any problems of crime, violence or vandalism?	Yes No	Household (respondent)	EU-SILC
<b>CRC</b>	% of total population suffering from problems of crime, violence or vandalism	High Medium Low	Community	Eurostat
<b>CRR</b>	Crime recorded by the police: number of crimes per 100 inhabitants	High Medium Low	Community	Eurostat
<b>LTH</b>	Litter lying around the neighbourhood	Very frequently Frequently Sometimes Rarely/never	Household (respondent)	EU-SILC
<b>DMH</b>	Damaged public amenities in the neighbourhood	Very frequently Frequently Sometimes Rarely/never	Household (respondent)	EU-SILC

Source: Eurostat and EU-SILC 2009.

Tab. A2.2 - Social capital indicators: social relationships.

Label	Variable name	Categories	Type	Source
<i>Social relationships</i>				
<b>PHO</b>	Do you have a phone? (including mobile)	No Yes	Household (respondent)	EU-SILC
<b>TVC</b>	Do you have a colour tv?	No Yes	Household (respondent)	EU-SILC
<b>PC</b>	Do you have a computer?	No Yes	Household (respondent)	EU-SILC
<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).	None Low Medium High	Household (respondent)	EU-SILC

<b>Label</b>	<b>Variable name</b>	<b>Categories</b>	<b>Type</b>	<b>Source</b>
<b>FAW</b>	Are there “family workers” in your family business? (number)	None 1 FAW 2 or more FAW	Household (respondent)	EU-SILC
<b>INTC</b>	Do you have an internet connection?	No Yes	Household (respondent)	EU-SILC
<b>MEA</b>	Get-together with friends/relatives for a drink/a meal at least once a month	No Yes	Household (respondent)	EU-SILC
<b>LES</b>	Regularly participate in a leisure activity such as sport, cinema, concert	No Yes	Household (respondent)	EU-SILC
<b>L16</b>	Do your children under 16 participate in a regular leisure activity (swimming, playing an instrument, youth organizations, etc.)?	No Yes	Household (respondent)	EU-SILC
<b>C16</b>	Do your children under 16 have celebrations on special occasions (birthdays, name days, religious events)?	No Yes	Household (respondent)	EU-SILC
<b>I16</b>	Do your children under 16 invite friends round to play and eat from time to time?	No Yes	Household (respondent)	EU-SILC
<b>E16</b>	Do your children under 16 participate in school trips and school events that cost money?	No Yes	Household (respondent)	EU-SILC
<b>O16</b>	Do your children under 16 have an outdoor space in the neighbourhood where they can play safely ?	No Yes	Household (respondent)	EU-SILC

Source: Eurostat and EU-SILC 2009.

Tab. A2.3 - Social capital indicators: territorial characteristics.

<b>Label</b>	<b>Variable name</b>	<b>Categories</b>	<b>Type</b>	<b>Source</b>
<b>OCH</b>	Overcrowded household	Yes No	Household (respondent)	EU-SILC
<b>OCC</b>	Overcrowding rate	High Medium Low	Community	Eurostat



<b>Label</b>	<b>Variable name</b>	<b>Categories</b>	<b>Type</b>	<b>Source</b>
<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)	Yes No	Household (respondent)	EU-SILC
<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.	High Medium Low	Community	Eurostat
<b>H2H</b>	Is your dwelling too dark, meaning is there not enough day-light coming through the windows?	Yes No	Household (respondent)	EU-SILC
<b>H2C</b>	Housing deprivation rate: % of total population considering their dwelling too dark	High Medium Low	Community	Eurostat
<b>H3H</b>	Do you have too much noise in your dwelling from neighbors or from outside (traffic, business, factory)?	Yes No	Household (respondent)	EU-SILC
<b>H3C</b>	Environment of the dwelling: % of total population suffering noise from neighbors or from the street	High Medium Low	Community	Eurostat
<b>H4H</b>	Pollution, grime or other environmental problems in the local area such as smoke, dust, unpleasant smells or polluted water	Yes No	Household (respondent)	EU-SILC
<b>H4C</b>	Environment of the dwelling: % of total population suffering from pollution, grime or other environmental problems	High Medium Low	Community	Eurostat
<b>HOT</b>	Place to live with hot running water	No Yes	Household (respondent)	EU-SILC
<b>SHO</b>	Shortage of space in the dwelling	Yes No	Household (respondent)	EU-SILC

<b>Label</b>	<b>Variable name</b>	<b>Categories</b>	<b>Type</b>	<b>Source</b>
<b>SQMTS</b>	Size of dwelling in sq metres	<=50 50-   70 70-   90 90-   120 >120	Household (respondent)	EU-SILC
<b>AP1</b>	Greenhouse gas emission (in CO <sub>2</sub> equivalent)	High Medium Low	Community	Eurostat
<b>AP2</b>	Urban population exposure to air pollution by ozone (micrograms per cubic meter)	High Medium Low	Community	Eurostat
<b>AP3</b>	Urban population exposure to air pollution by particulate matter (mgrams cubic mt)	High Medium Low	Community	Eurostat

Source: Eurostat and EU-SILC 2009.

Tab. A3 - Economic and well-being indicators.

<b>Label</b>	<b>Variablename</b>	<b>Categories</b>
<b>GDP</b>	GDP per capita in PPS [Index: EU27=100]	Low Medium High
<b>UNEMPLT</b>	Total unemployment rate - annual average %	Low Medium High
<b>UNEMPLG</b>	Less than 25 years old unemployment rate - annual average %	Low Medium High
<b>POV</b>	At risk of poverty: % of total population	Low Medium High
<b>EXS</b>	People at risk of poverty or social exclusion: % of total population	Low Medium High
<b>SEVM</b>	Severely materially deprived people: % of total population	Low Medium High
<b>UPE</b>	Persons aged 25 or over with upper secondary or tertiary education attainment (%)	Low Medium High

Source: Eurostat 2009.

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*Résumé:* Le travail étudie dans quelle mesure la pauvreté subjective en Europe est associée à des caractéristiques socio-économiques individuelles et familiales spécifiques et au capital social, afin d'identifier les facteurs de risque de pauvreté. L'identification de ces associations permettrait aux policy makers de préciser les objectifs économiques et sociaux qui devraient faire l'objet d'une plus grande attention des politiques destinées à la réduction de la pauvreté. A cette fin, a été réalisée une analyse des correspondances multiples à partir de données issues de l'enquête EU-SILC 2009 et de la base de données Eurostat. Les résultats montrent une association importante entre la pauvreté subjective, les caractéristiques socio-économiques des familles et, ce qui est particulièrement intéressant, la dotation de capital social. Leurs implications sur les politiques publiques sont ensuite analysées.

*Riassunto:* Il presente lavoro si propone di evidenziare se ed in che misura in Europa la povertà soggettiva sia associata a specifiche caratteristiche socio-economiche individuali/familiari e alla dotazione di capitale sociale, al fine di individuare i fattori di rischio dello stato di povertà delle famiglie. Tale evidenza consentirebbe ai policy makers di definire quegli obiettivi economici e sociali che dovrebbero ricevere maggiore attenzione da politiche volte ad eliminare la povertà. Al tal fine è stata condotta un'analisi delle corrispondenze multiple sui dati tratti dall'indagine EU-SILC 2009 e dal database Eurostat. I risultati mostrano una rilevante associazione tra povertà soggettiva, caratteristiche socio-economiche delle famiglie e dotazione di capitale sociale. Vengono, quindi, discusse le più importanti implicazioni per le politiche pubbliche.