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Social Cohesion and Inequalities in Italy: Does Social Exclusion Affect Social Cohesion?

ABSTRACT

In this paper my aim is the analysis of the relationship between social cohesion and social inequality. In the scientific debate there are two main positions: the first one affirms the existence of a direct negative association between economic inequality and social cohesion. According to this position, the risk associated with poverty is due to its relationship with social exclusion. In fact, the lack of economic resources could lead to a deficiency on the capability to acquire a set of functioning like the taking part in the community life. The second one is related to relative deprivation. Indeed, low levels of social cohesion could be connected to the expectations generated by society. In this paper, the topic of expectations is dealt with reference to the opportunity structure, that is shaped by class, generation and geographic area.

I have performed the analysis using individual data and following the structural position thesis. According to this view, people differ in their attitudes subject to their social position. More precisely, I suppose a situational mechanism by which the configuration of individuals' opportunity – influenced by social structure – defines the process of expectations and beliefs' formation following the reference group theory. Secondly, according to a behavioural mechanism, the shift from individual expectations and beliefs to attitudes and behaviours connected with social cohesion occurs in according to the mechanism of adaptive formation of the preferences.

Using this theoretical approach as a background, I have answered to the following research questions: Which is the impact exerted by the levels of economic inequalities on social cohesion? How does the relationship vary between economic inequalities and social cohesion considering the individual structural position?

In this paper I have operationalised the concept of social cohesion by a set of items about attitudes toward taxation. More precisely, I have chosen the fiscal sphere, because I suppose that it is related to the formation of public goods. As a consequence, a negative attitude towards taxation could be interpreted as a lack in the will of cooperation in the process of public goods' building.

Data from "Survey of Italian Households' Income and Wealth 2004" have been analysed applying Mokken scale analysis in order to measure social cohesion, then by means of latent class analysis to measure economic inequality. Finally I have performed a linear regression model to assess the effect of economic inequality and social structure on the levels of social cohesion.

Results of the analysis show that even though social structure is not able to fully mediated the relationship between social cohesion and economic inequality, it is possible to affirm that the individual position in the social structure plays a more important role than economic inequality in explaining the levels of social cohesion.

Key words: Social cohesion, economic vulnerability, latent class analysis, operationalization.

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[Work in progress. Comments are welcome.]

1. Introduction

The social cohesion theme raises a couple of difficulties. The first one is conceptual, the second one is related to the empirical factor.

Albeit scholars like Goldthorpe (2000) and Ultee (2006) claim that sociology has to deal with problems. In the case of social cohesion, the conceptual problem is central. In fact, the debate about the social cohesion is at risk of becoming a tower of Babel of definitions and indicators with a consequent problem of fragmentation and communication between scholars.

In this introductory section, the aim is to set some conceptual coordinates in order to locate our empirical contribution in the scientific debate.

From a conceptual point of view, we have to define what social cohesion is. This task is not straightforward. In fact, in scientific literature we find a wide heterogeneity. In the social psychology (Moreno and Jennings 1937; Festinger 1950), social cohesion is like a force holding the individuals within the groupings in which they are. The governmental research centers define social cohesion as a process of developing a community of shared values that help instill in individuals the sense of belonging to the same community and the feeling that they are recognized as members of that community (Canadian Heritage 1995).

Others scholar consider social cohesion as a property of the network of social relationships (Moody and White 2003 and Friedkin 2004). More precisely, Wilkinson (1996) sees it as involvement in public life, Lockwood (1992) defines it at the level of community primary networks. At the same time, social cohesion has been defined as solidarity (Kawachi and Berkman 2000) and as willingness to cooperate (Jeannotte *et alii* 2002). Finally, there is a group of scholars that recognizes the multidimensional nature of social cohesion and conceptualize it on even more levels and dimensions (Jenson 1998; Berger-Schmitt 2000; Chiesi 2004; Chan *et alii* 2006; Whelan and Maître 2005b). Moreover, we can distinguish between objective and perceived factors. Following Bollen and Hoyle (1990), whose approach is based on the small group theory, the objective factor looks at the relationships within the social groups, while the perceived factor considers the sense of belonging to a particular group. Extending these arguments to the whole of society, the objective level refers to the individual's behavior and relationships. The problem is about "who does what with who?" (Ultee 2006). This means that a society, in which social interactions occur only between people belonging to the same group, will not be a cohesive society. The perceived or subjective factor could be analyzed through the individual attitudes towards the different spheres of social life. Considering now the concept from an empirical point of view, it can be analyzed from two different positions. The first one is characterized by the use of aggregated measures, which mainly consist in criminality rates, unemployment rates, levels of education, individuals' proportion with racist attitudes, indexes of income inequality, diffusion of social benefits, voting participation, newspaper readership or number of cultural voluntary associations (Wilkinson 1996; Berger-Schmitt 2000; Rajulton *et alii* 2007). The second one, on the other hand, considers individual data, measuring social cohesion by taking into account the participants' attitudes towards various spheres of life (Whelan and Maître 2005b; Chan *et alii* 2006), or considering the various social interactions (Sampson 1991; Lee 200 and Villarreal; Silva 2006).

In this paper, our point of reference will be a multidimensional view of social cohesion that will be measured using individual data¹.

In the next paragraph, we will outline the theoretical background from which arise the research hypotheses. While in sections three and four, we will operationalize the concepts that will be used in the empirical analysis. The last paragraph will be reserved for some conclusive comments.

¹ This point will be analyzed in more depth in the third section.

2. Research hypotheses

The empirical part of this paper deals with the relationship between social cohesion and social inequalities in Italy.

The debate on social inequalities is also a complex issue. In general, it involves two main research hypotheses: fragmentation versus crystallization. The first one asserts that in contemporary societies (given the high functional differentiation) the institutional assets cause the independence and the increase of situations that result in different forms of discrimination. As a consequence, the life conditions are fragmented at the individual level (Dahrendorf 1959, Beck 1986). The second hypotheses states that the main forms of social inequality are crystallized around few factors, such as social classes (Erikson and Goldthorpe 1992, Breen 2005b)². Besides social class, we can identify other factors around which inequalities are structured, such as gender and generation (Crompton 1998). More precisely, social class and generation are crucial factors in the definition of the individual's life opportunities. Social class influences opportunities through the position in the division of labor, while generation has an impact due to the control that the older generations have on resources, or by the different structural conditions that characterized the different historical periods. To summarize, individuals in similar positions could have the experience of diverse social conditions because of the different historical period in which they are born.

The first hypothesis is related to the question: Which factor of inequality, social class or economic vulnerability, plays the major role in structuring social cohesion? This question locates our work in the scientific debate that is based on two main positions: The first claims that there is a direct negative association between inequality and social cohesion. The second states that this connection is mediated by certain factors, such as the individual's position in the stratification system. More precisely, the first position is connected to the thought of scholars like Atkinson (1998b), Esping-Andersen (1999) and Berger-Schmitt (2000) who consider the growing level of economic inequalities a threat to social cohesion. Following this view, the inequalities could lead to a reduction in the trust towards the well-functioning whole of society. The risk connected to poverty is due to its relationship with social exclusion (Sen 1992; Atkinson 1998a).

Indeed for Sen (1992), the lack of economic resources, that is a deprivation in the income space, could lead to deprivation in the capability space. In other words, being deficient in resources exerts an impact on the capability to acquire a set of functionings as the take part in the community social life.³

The second hypothesis refers to the relative deprivation theory (Runciman 1966). In this case social cohesion is affected by the expectations generated by society. This argument will be examined by looking at the role played by the opportunity structure, set up by class, generation and geographical area of residence.

We believe that the formation of expectations is influenced by the individual's location in the social structure. As a consequence, we suppose that living in a given region and belonging to a particular generation could have an impact on the level of social cohesion. For instance, individuals who live in deprived areas or during historical periods of economic depression will be more likely to show a negative attitude towards how society is run as a whole. These negative expectations arise from the processes of social comparison, by which individuals contrast their own situations with the state of affairs of people who live in better structural conditions⁴.

² Reference for the Italian case, Schizzerotto (2002).

³ Following Sen (1992, cap. 3) functionings are connected to the individuals' acquisitions that vary from nourishment to being able to take part in community life. Capability represents the various combinations of functionings (well-being and accomplishments) that the person can achieve. Capability is, thus, a set of vectors of functionings, reflecting the person's freedom to lead one type of life or another. As a consequence, the lack of economic resources implies a weakening in the capabilities set that affects the functionings of an individual.

⁴ The formation of expectations follows the reference group theory (Merton 1957).

In conclusion, we believe that the generation factor will show a reverse U-shaped trend, where the oldest and youngest generations will display the lowest levels of social cohesion because of the adverse structural conditions. Indeed, the oldest generation lived during the years of Great Depression and experienced the Second World War. While the youngest generation is feeling the weight of the labor market flexibilization and seems to have fewer opportunities compared to the previous cohort⁵.

In summary, this paper is based on two main research questions: The first considers the relationships between social cohesion and social inequality, while the second regards the role played by the opportunity's structure in the formation of attitudes towards the performance of society.

Our theoretical model is a modified version of the DBO (desires, beliefs, and opportunities) theory illustrated in Elster (1989) and in Hedström (2005), with the difference being that I consider attitudes as the output, instead of actions. More precisely, the hypothesized mechanism is known as sour grapes mechanism, developed by Elster (1983) in terms of adaptive formations of preferences. Following this mechanism the participant desires only what he/she believes as possible. However, the beliefs about what is and what is not possible are shaped by the opportunity structure.

In conclusion, the two hypotheses introduced here can be insights into the individual structural position thesis; according to which, the individuals differ in their attitudes in relationship to their social position (Hadler 2005).

3. Data, Methods and Variables

In this paper, I use data from the “Survey of Italian Households’ Income and Wealth 2004” (SIHIW) which was conducted by the Italian Central Bank. The survey involves 8,012 households and 20,581 respondents. The SIHIW was designed to collect information on income and on the economic situation of these households. Moreover, another series of items was included based on attitudes regarding public spirit and taxation. This information is relevant to the analysis made in this paper. In order to evaluate the research hypotheses outlined in the previous paragraph, I need to operationalize the concepts of social cohesion, economic vulnerability and social class.

3.1. Social cohesion.

Within the multidimensional definitions of social cohesion the more convincing proposals originate from the works of Whelan and Maître (2005b) and from Chan et alii (2006). In the first case, social cohesion is broken down in three components (Whelan and Maître 2005b, 230-231):

1. *The micro-level*: degree of interpersonal trust, strength of primary ties within families and friends, risk of social isolation.
2. *The meso-level*: strength and nature of relationships within secondary groups, neighborhoods, work groups and ethnic groups.
3. *The macro-level*: extent to which the relational practices and beliefs in a society involve a common sense of belonging to the society, tolerance of inter-group differences, structures of support in times of adversity and the legitimating of political practices.

On the other hand, Chan *et alii* (2006, 290) defines social cohesion as “[...] a state of affairs concerning both the vertical and the horizontal interactions among members of society as

⁵ To be accurate, we have to distinguish three effects: age, cohort or generation and period. The first one takes in account the age at which a particular event occurs; the second one considers institutional change, while the third refers to stage of economic development or depression (Bernardi e Pisati 2002). In this paper, I treat period and cohort effects as synonymous.

characterized by a series of attitudes and norms that include trust, a sense of belonging and the willingness to participate and help, as well as their behavioral manifestations”.

The authors distinguish two dimensions: horizontal and vertical. The first factor represents the cohesion within civil society, while the second considers the cohesion on a national level. Each of which is comprised of two components—subjective and objective. The subjective component is represented by attitudes, while the objective points out the behavioral demonstration. In conclusion, they identify four spheres that portray social cohesion and for every area the authors suggest some indicators:

1. *Horizontal-subjective*: general trust and willingness to cooperate;
2. *Horizontal-objective*: social participation and voluntarism;
3. *Vertical-subjective*: trust in institutions and in public figures;
4. *Vertical-objective*: level of political participation.

In order to operationalize the concept of social cohesion, we will use a set of data on attitudes towards taxation. I propose that the payment of taxes is the direct contribution of individuals for the functioning of institutions and of society as a whole. Then we can connect the taxation’s sphere with the thematic of collective goods. In fact, the main use of taxes concerns the financing of public goods such as the cleaning of roads or police protection.

With the term public good Samuelson (1954) had in mind goods whose consumption by one individual does not reduce the amount of the goods available for consumption (non-rivalness) by others; and no one can be effectively excluded from using this good (non-excludability).

Collective goods are a category of public goods that could be furnished by private corporations but instead are distributed by the state and they are financed through taxes. In this way, negative attitudes towards taxes can be considered an indicator of a negative judgment towards the society that is manifested by a limited desire to cooperate in the production of public goods.

Table 1. Item about tax system.

1. The more someone earns, the more (in percentage) he/she should contribute to Government spending.
 2. The Government should impose higher taxes on income (personal and company) and lower taxes on consumption (VAT).
 3. Paying taxes is one of the basic duties of a citizen.
 4. Not paying taxes is one of the worst crimes a person can commit because it harms the whole community.
 5. People try to avoid paying taxes because they know the Government spends the money in a wrong way.
 6. It is right not to pay taxes if you think they are unfair.
 7. In Italy, always the same groups of people pay taxes.
 8. Even if someone thinks a tax is unfair, he/she should pay it first and then complain if necessary.
 9. Some people are pushed to evade taxes in order for their business to survive.
 10. Some people do not pay taxes because the system is too complicated.
 11. It is right to pay taxes because it helps the weak.
 12. People are happy to pay taxes if the state functions properly.
 13. If everyone paid taxes, in the end we would all pay a little less.
 14. The revenue from taxation should be spent where it was collected.
 15. People will be more willing to pay taxes if they know everyone else does.
 16. Some people do not pay tax because the rate (%) is too high.
 17. Some people do not pay tax because the risk of being caught is low.
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On the other hand, a positive attitude could be interpreted as a sense of confidence towards the workings of society. This confidence could be seen as a willingness to cooperate. In conclusion, using the attitudes toward the fiscal sphere as a measure of social cohesion, we succeed in gathering common elements to both the approaches outlined above. In particular, we are able to consider simultaneously the macro-dimension suggested by Whelan and Maître (2005b) and the horizontal-

subjective dimension proposed by Chan et alii (2006). The data pertaining to the attitudes towards taxation has been analyzed in relation to the Mokken scale (Mokken 1971; Sijtsma and Molenaar 2002). The number of statements about the Italian tax system is arrived at based on seventeen items (tab. 1).⁶

Table 2. Mokken Analysis, three dimensions solution.

Item	Public Spirit			
	Observed Guttman errors	Expected Guttman errors	Loevinger's H	Z Test
It is right to pay taxes because it helps the weak	14493	21332,18	0,321	43,400*
The more someone earns, the more (in percentage) he/she should contribute to Government spending	14855	22039,94	0,326	45,384*
People are happy to pay taxes if the state functions properly	11643	20012,36	0,418	58,505*
People will be more willing to pay taxes if they know everyone else does	12083	20337,51	0,406	56,431*
Paying taxes is one of the basic duties of a citizen	10547	18819,27	0,440	61,268*
Not paying taxes is one of the worst crimes a person can commit because it harms the whole community	12838	21310,74	0,398	54,927*
If everyone paid taxes, in the end we would all pay a little less	10711	19353,60	0,447	61,082*
Scale	43585	71602,80	0,391	101,034*

* = $p < 0.001$ (two tailed test)

Item	Justification of Evasion (efficiency)			
	Observed Guttman errors	Expected Guttman errors	Loevinger's H	Z Test
People try to avoid paying taxes because they know the Government spends the money in a wrong way	3265	5045,68	0,353	19,878*
It is right not to pay taxes if you think they are unfair	3265	5045,68	0,353	19,878*
Scale	3265	5045,68	0,353	19,878*

* = $p < 0.001$ (two tailed test)

Item	Justification of Evasion (necessity)			
	Observed Guttman errors	Expected Guttman errors	Loevinger's H	Z Test
Some people are pushed to evade taxes in order for their business to survive	6128	9908,02	0,382	31,081*
Some people do not pay tax because the rate (%) is too high	6577	9943,72	0,339	27,668*
Some people do not pay tax because the rate (%) is too high	6419	9960,80	0,356	28,401*
Scale	9562	14906,27	0,359	35,570*

* = $p < 0.001$ (two tailed test)

⁶ The question asked is: "Here are a number of statements (show card R2.9) that some interviewees made about Italy's tax system. To what extent do you agree with each of them: not at all, barely, maybe, definitely, most definitely?".

Mokken scaling is a probabilistic and non-parametric generalization of the traditional Guttman scalogram (van Schuur 2003). Its use is appropriate when the analyst has at his/her disposition available data that is theoretically interpretable as measures of some underlying tendency or ability. The usefulness of the scales can be evaluated by Loevinger's H coefficient. This statistic is analogous to the Cronbach's alpha in the reliability analysis. The H coefficient can be used to characterize each item as well as the entire scale, and is one minus the proportion of observed Guttman errors to the expected number of Guttman errors that would result by chance alone⁷. The scale is created following a bottom-up procedure⁸. The first step consists of the identification of the biggest H_{ij} coefficients, that has to exceed a threshold (usually 0.3). Afterwards, others items are added until the H_i is greater than the threshold. Substantially, we are applying a hierarchical grouping procedure, using the coefficient of Loevinger as grouping criterion.

In the end, in order to obtain a valid scale the H and the H_i coefficients have to be greater or equal to 0.3. A standard rule of thumb is that a strong scale shows values greater than 0.5, a moderate one has values from 0.4 to 0.5 and a weak one from 0.3 to 0.4.

Based on the Mokken analysis⁹ (tab. 2) we discover three scales. The first combines a set of entries that identify a latent trait that we can call Public Spirit. The second and third scales are specifications of the Justification of Evasion factor. In one case, the motivations of justification are connected to the inefficiency of the State; while in the other case, evasion is defended because the contribution is perceived as much too onerous. From these scales, three indexes are calculated as the normalized summation of the items:

$$Index = \frac{\sum_{j=1}^J X_j - \sum_{j=1}^J \min(X_j)}{\sum_{j=1}^J \max(X_j) - \sum_{j=1}^J \min(X_j)}$$

X_j indicates the value of the items, while $\min(X_j)$ and $\max(X_j)$ are respectively the minimum value of the item and the maximum one. In this way, the range of the two indexes will be between 0 and 1, making easier the interpretations of the results. Moreover, I have multiplied the indexes by 10, in order to obtain a range from 0 to 10.

3.2. Economic vulnerability.

In order to operationalize the concept of economic vulnerability, I will follow the path drawn by Whelan *et alii* (2001) and Fahey *et alii* (2005), considering economic vulnerability as a latent concept and using latent class analysis in order to measure it. I have therefore considered three key indicators: life-style deprivation, income quartile position and the exposure to economic strain.

Unfortunately, with the data available we cannot totally follow this approach. In fact, these authors define material deprivation considering the consumptions in a more detailed way. They make reference to ownership. Besides, if the respondent does not own a particular good we will know if it

⁷ The homogeneity of a couple of items: $H_{ij} = \frac{E(\text{obs})}{E(\text{exp})}$; of the entire scale: $H = 1 - \frac{\sum_{i=j+1}^k \sum_{j=1}^{k-1} E(\text{obs})_{ij}}{\sum_{i=j+1}^k \sum_{j=1}^{k-1} E(\text{exp})_{ij}}$. And, for a

single item it is: $H_i = 1 - \frac{\sum_{j=1, j \neq i}^k E(\text{obs})_{ij}}{\sum_{j=1, j \neq i}^k E(\text{exp})_{ij}}$.

⁸ The top-down approach is used in factor analysis and in Rasch modeling (van Schuur 2003).

⁹ For this analysis we use the implementation of the Mokken procedure available in the "MSP" Stata routine written by Jean-Benoit Hardouin and available free of charge at: <http://econpapers.repec.org/software/bocbocode/s439402.htm>.

was desired. In this way, it is possible to define life-style deprivation. But, we do not have this kind of information available. As a consequence, we shift from deprivation to the level of consumption. It is based on items about the expenditure on precious objects, means of transport, furniture and on the estimated value of a house.¹⁰ As a result, we have an estimate of the resources invested by the individuals in durable goods. This means that we cannot properly consider our measure a proxy of relative deprivation, because it is entirely objective.

To measure low income I will consider the household total net equivalent income using the modified OECD equivalence scale. This scale, first proposed by Haagenars *et alii* (1994), assigns a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each child.¹¹ In this way, I am able to allocate an income quartile position to each household.

Economic strain is a subjective measure of the perceived economic condition, more precisely it is based on the following question: Is your household's disposable income enough for you to get through the month?¹²

Now we can perform a latent class analysis using these indicators as manifest variables. We use this technique in order "to develop a measurement model that enables us to understand the manner in which our indicators are related to the latent concept" (Whelan and Maître 2005a, 425).

"With latent class analysis it is possible to assume that each observation is a member of one and only one of t latent (unobservable) classes and that local independence exists between the manifest variable" (Magidson and Vermunt 2004, 175). Local independence refers to the condition that exists when the observed associations are equal to zero within the categories of the latent variable (McCutcheon 1987, McCutcheon and Mills 1998). In other words, the relationship between two variables will be spurious if we consider a third latent variable. Generally speaking, within a specific class t of the latent nominal variable X ($X=t$), the probability of a specific combination of responses (e.g., $A=i$, $B=j$ and $C=k$) can be written as the product of the probability of a respondent belonging to Class t of X , times the product of the conditional probabilities of responding i to item A , j to item B , and k to item C , given that the respondent belongs to Class t ¹³:

$$(1) \quad \pi_{ijk}^{XABC} = \pi_t^X \pi_{it}^{A|X} \pi_{jt}^{B|X} \pi_{kt}^{C|X}$$

where π_t^X denotes the probability of being in latent class $t = 1, 2, \dots, T$ of latent variable X ; $\pi_{it}^{A|X}$ denotes the conditional probability of obtaining the i th response to item A , from members of class t , $i = 1, 2, \dots, I$; and, $\pi_{jt}^{B|X}, \pi_{kt}^{C|X}$, $j = 1, 2, \dots, J$, $k = 1, 2, \dots, K$, denote the corresponding probabilities for items B and C respectively. In particular, the model is estimated using the LEM programme (Vermunt 1997).

In the analysis, economic strain is treated as dichotomous, the level of consumption as a four categories variable, while income includes the four quartiles. Using LEM notation "I" represents income with $i=1,2,3,4$; "C" consumption with $j=1,2,3,4$; "E" economic strain with $k=1,2$ and X is the latent member, whose identification and the size's estimation will be the goal of the analysis.

After the manifest variables' specification the (1) becomes:

$$(2) \quad \pi_{ijk}^{XICE} = \pi_t^X \pi_{it}^{I|X} \pi_{jt}^{C|X} \pi_{kt}^{E|X}$$

¹⁰ To be more precise, I will use the quartile position of the household on the sum of the position on these four items. The reliability analysis performed shows a Cronbach's alpha of 0.708. At this point we have build an additive index that has been divided in quartiles. The location on the first quartile means a low expense, whereas on the fourth, it reflects a high expenditure.

¹¹ An individual will be considered an adult if his age is greater than 14.

¹² The respondents have six choices: with a great deal of difficulty; with difficulty; not easily; fairly easily; easily; very easily. They will have economic problem if they answer: with great difficulty or with difficulty.

¹³ Quoted from professor van Schuur's lecture held at the Essex Summer School in Social Science Data Analysis and Collection, 2006.

Table 3 shows the fit of the models. I have taken the independence model as a standard point of reference, and I will use it as a baseline in order to calculate the proportional reduction in the likelihood ratio, that I will interpret as the increase in explained variance. The model that demonstrates the best fit is the third one: The homogeneous model with a latent variable that consists of three categories. It increases the explained variance by 98.68 percent, misclassifies only 0.03 percent of cases, and the BIC's value is the lowest¹⁴.

Table 3. Latent Class Models fits.

	L^2	d.f.	expl. var. (%)	Δ (%)	BIC
1. Independence	1,915.14	22		0.26	1,733.81
2. Homogeneous LC Model (X=2) (X, I X, E X, C X)	255.37	16	86.67	0.11	123.50
3. Homogeneous LC Model (X=3) (X, I X, E X, C X)	25.29	8	98.68	0.03	-40.65

L^2 =likelihood ratio; d.f. = degree of freedom; expl. var. = $2,337.63-L^2/2,337.63 \times 100$
 Δ = dissimilarity index (% of cases misclassified); BIC (bayesian information criterion) = $L^2-(d.f.) \times (\ln N)$.

Using the latent class analysis, I am able to identify the number and the size of different classes (tab. 4) more precisely. I have found three classes: vulnerable, non-vulnerable and medians. The first group is characterized by a low position in the income quartile distribution, by the experience of economic strain and by a low level of consumption. The respondents who belong to the second group have a high position in the income distribution; they do not experience economic strain and they show a high level of consumption. The last class falls in the middle between the vulnerable and the non-vulnerable classes. These individuals have a good position in the income distribution, but at the same time, they have some difficulties in getting through the month, and demonstrate a medium level of consumption.

Table 4. Results of latent class analysis.

	Vulnerable	Not vulnerable	Medians
<i>Cluster size</i>	0,2115	0,2986	0,4899
<i>Income</i>			
1st quartile	0,7747	0,0084	0,0995
2nd quartile	0,2246	0,0491	0,3950
3rd quartile	0,0000	0,2204	0,4026
4th quartile	0,0006	0,7221	0,1030
<i>Level of consumption</i>			
Low	0,6515	0,0000	0,3077
Medium-low	0,2516	0,1668	0,4126
Medium-high	0,0711	0,2844	0,1894
High	0,0258	0,5487	0,0903
<i>Economic strain</i>			
Yes	0,6808	0,0093	0,1889
No	0,3192	0,9907	0,8111

¹⁴ BIC statistics allow me to control that the decrease in the likelihood ratio does not happen to the detriment of the model's parsimony, represented by the number of the degree of freedom. The greater the number of the degree of freedom, the smaller will be the number of the used parameters, and, as a consequence, more parsimonious will be the model.

2.3. Social class.

Social class will be operationalized according to the neo-weberian tradition of Erikson-Goldthorpe-Portocarero (EGP) class schema (Erikson and Goldthorpe 1992, Ch. 2). In order to build a class schema from the occupational positions, it is crucial to consider two factors: the market situation and the work situation (Lockwood 1958). The first one is related to the rewards associated with a given occupation, such as income, career prospects and degree of economic security. The second factor regards employment's relationships such as authority and autonomy at work. Moreover, I found it necessary to consider the difference between owners, employers and employees; between firms with more or less than 14 employees; and between manual and non-manual occupations. In this paper, I will use a slightly different version of the original EGP model (table 5), used in the Italian studies (Cobalti and Schizzerotto 1994; Schizzerotto 2002).

Table 5. Class schema.

Bourgeoisie	Owner of middle or big firms, managers and members of the arts or professions.
White collar class	Non-manual workers of middle or middle-high qualification.
Urban petit Bourgeoisie	Self-employed in the secondary and tertiary sector.
Agrarian petit Bourgeoisie	Self-employed in the primary sector.
Urban working class	Low level non-manual workers and manual workers in the secondary and tertiary sector.
Agrarian working class	Manual workers employed in the primary sector.

The other variables utilized in the analysis presented in the next paragraph are: gender; level of education; birth cohort and geographical area of residence (table 6).

The level of education variable has been classified as: Primary School (which includes degree from primary school and no degree), Lower Secondary School (which includes 2-3 year degrees), Upper Secondary School (which refers to 5 years diploma) and University Degree.

The variable that represents birth cohort has been classified in six categories: (a) Until 1927, (b) from 1928 to 1937, (c) from 1938 to 1947, (d) from 1948 to 1957, (e) from 1958 to 1967 and (f) from 1968 to 1985. The reason for using these categories is to divide the respondents into generations that have common life experiences. The first cohort represents individuals who have experienced the recession of the 1930's and the Second World War. The people of the second and third cohort lived in the years of reconstruction and of economic miracle, respectively. People included in the fourth cohort had the opportunity to take advantage of the educational reforms of the 1960's. Individuals in the fifth cohort lived in a period characterized by a growing employment rate, while the youngest cohort is from a period distinguished by high uncertainty.

The geographical area of residence takes into account four categories: (a) North–West, comprising of Valle d'Aosta, Piemonte, Lombardia and Liguria; (b) North-East, including Trentino-Alto Adige, Friuli-Venezia Giulia and Veneto (c) Middle, comprising of Emilia–Romagna, Toscana, Umbria and Marche and (d) South and Islands, includes the remaining regions.

Table 6. Descriptive statistics for the variables used in the analysis.

Dependent variables:					
	(N)	Mean	Standard Deviation	Minimum Value	Maximum Value
<i>Public Spirit</i>	(3,796)	5.943	1.961	7	35
<i>Justification of Evasion (efficiency)</i>	(3,796)	8.870	2.654	2	10
<i>Justification of Evasion (necessity)</i>	(3,796)	27.885	4.653	3	15

Independent variables:			
	%		%
<i>Gender¹⁵</i>		<i>Education</i>	
Male	61.30	Until Primary	35.83
Female	38.70	Low. Secondary	32.94
Total	100.00	Up. secondary	22.85
(N)	(3,798)	Degree ^a	8.37
		Total	100.00
<i>Economic vulnerability</i>		(N)	(3,798)
Medians	51.29		
Vulnerable	19.64	<i>Birth cohort</i>	
Not Vulnerable ^a	29.07	Until 1927	12.82
Total	100.00	1928-1937	19.93
(N)	(3,798)	1938-1947	20.17
		1948-1957	19.38
<i>Social class</i>		1958-1967	17.54
Bourgeoisie	9.13	Over 1968 ^a	10.16
White collar	31.28	Total	100.00
Urban petit bourgeoisie	13.25	(N)	(3,798)
Agriculture petit bourgeoisie	3.19		
Agriculture working class	36.74		
Urban work class ^a	6.42		
Total	100.00		
(N)	(3,133)		
<i>Geographic area</i>			
North-West	24.70		
North-East	20.38		
Middle	22.20		
South-Islands ^a	32.73		
Total	100.00		
(N)	(3,798)		

¹⁵ Men are over represented, because the analysis are based only on the head of family.

4. Results.

Table 7. Multiple regression results (standardized coefficients).

	Model 1 Public spirit	Model 2 Evasion (efficiency)	Model 3 Evasion (necessity)
	β^*	β^*	β^*
<i>Economic vulnerability</i>			
Vulnerable	-0.032	-0.032	-0.006
Medians	0.298**	0.025	-0.011
Not Vulnerable ^a	0	0	0
<i>Social class</i>			
Bourgeoisie	0.003	-0.026	-0.001
White collar	0.055	-0.093**	-0.031
Urb. petit bourgeoisie	-0.049	0.053	0.120***
Agr. petit bourgeoisie.	-0.006	0.040	0.075**
Agr. work class	0.113	-0.096	0.055
Urb. work class ^a	0	0	0
<i>Birth cohort</i>			
Until 1927	0.112***	-0.058**	-0.061**
1928-1937	0.162***	-0.103***	-0.063**
1938-1947	0.141***	-0.069**	-0.069**
1948-1957	0.106***	-0.070**	-0.072***
1958-1967	0.052*	-0.015	-0.061**
Over 1968 ^a	0	0	0
<i>Geographic area</i>			
North-West	0.005	-0.009	-0.145***
North-East	0.089***	-0.044**	-0.164***
Middle	0.092***	-0.036*	-0.120***
South-Islands ^a	0	0	0
<i>Gender</i>			
Male	0.056***	0.042**	0.002
Female ^a	0	0	0
<i>Education</i>			
Until Primary	-0.017	0.158**	0.143**
Low. secondary	0.039	0.066	0.098**
Up. secondary	0.023	0.010	0.019
Degree ^a	0	0	0
<i>Vulnerability*Societal class</i>			
Medians*Bourgeoisie	-0.006	-0.022	-0.032
Medians*White collar	-0.052	0.015	-0.019
Medians*Urb. pet. bou	0.003	0.015	-0.060*
Medians*Agr. pet. bou	-0.010	0.012	0.009
Medians*Agr. wrk cass	-0.139**	0.056	-0.043
Vulnerable*Bourgeoisie	0.003	0.014	-0.018
Vulnerable*White collar	-0.007	-0.002	-0.025*
Vulnerable*Urb. pet. bou	0.033	-0.006	-0.034
Vulnerable*Agr. pet. bou	0.006	-0.030	-0.049
Vulnerable*Agr. wrk cass	-0.111**	0.088*	-0.017

Table 7 (continue). Multiple regression results (standardized coefficients).

<i>Vulnerability*Education</i>			
Medians*Primary	0.006	0.039	0.008
Medians*Low secondary	0.067	0.014	0.029
Medians*Up secondary	0.027	0.016	-0.008
Vulnerable*Primary	-0.254**	-0.020	-0.008
Vulnerable *Low secondary	-0.247***	0.061	0.063
Vulnerable *Up secondary	-0.111**	0.013	0.021
	R ² = 0.048	R ² = 0.058	R ² = 0.066
	R ² adj = 0.038	R ² adj = 0.048	R ² adj = 0.055
	N = 3,132	N = 3,132	N = 3,132
a: reference category; * = p < 0.10; ** = p < 0.05; *** = p < 0.01			

In this section we will try to give an answer to the research hypotheses discussed in the second paragraph. We are going to use as dependent variables, the components obtained through the Mokken analysis: “Public spirit”; “Justification of evasion (efficiency)” and “Justification of evasion (efficiency)”¹⁶. Looking at the first model (table 7) it can be seen that the social cohesion is affected by the level of inequality; indeed it is possible to observe a decreasing value in the social cohesion going from the median to the non-vulnerable group. On the other hand, looking at model 2 and model 3 it is possible to observe how the impact exerted by the economic vulnerability is null considering the control variables. This result indicates that the level of inequality does not play a crucial role in the formation of the attitude towards the “Public spirit” and “Justification of evasion (necessity)” factors of social cohesion. In other words, the level of social cohesion does not depend on the level of inequality measured in terms of economic vulnerability. As a result, a first evaluation of the relationship between social cohesion and social inequality can, indeed, be offered. Basically, it does not agree with the statement, already discussed in the first paragraph, of a direct negative association between social cohesion and inequality; however, there is evidence that confirms the crucial role played by other factors.

We have just noted that the first position does not surpass the empirical test. I will now evaluate the second position. Looking at social class, there is no evidence that the individual position in the stratification system could be a relevant factor in the structuring of social cohesion.

Eventually, the hypothesis of the crucial role played by the opportunities structure seems to be corroborated by the data. The findings support the hypothesis regarding the geographical area of residence. We can see how people who live in the more depressed areas of the country (south and Islands) manifest the lowest level of social cohesion. Looking at the economic development, we expect to find the same levels of social cohesion in the North-East and Middle Italy, that are the area of the country known as Third Italy (Bagnasco 1977). Our supposition is confirmed in model 1 and 2, but not in the third.

By examining the data on the birth cohort, I can see by comparing the different generations that the lowest level of social cohesion exists in the youngest generation. At this point, in order to evaluate the non-linear effects, we have reviewed additional models, substituting the birth cohort with the age of respondents¹⁷. We can see, from figure 1, that the youngest and the oldest people show lower

¹⁶ Where there are high levels of “Public spirit” there are corresponding high levels of social cohesion and, the opposite is true, if we consider the second and third factors, that are related to the “Justification of Evasion”.

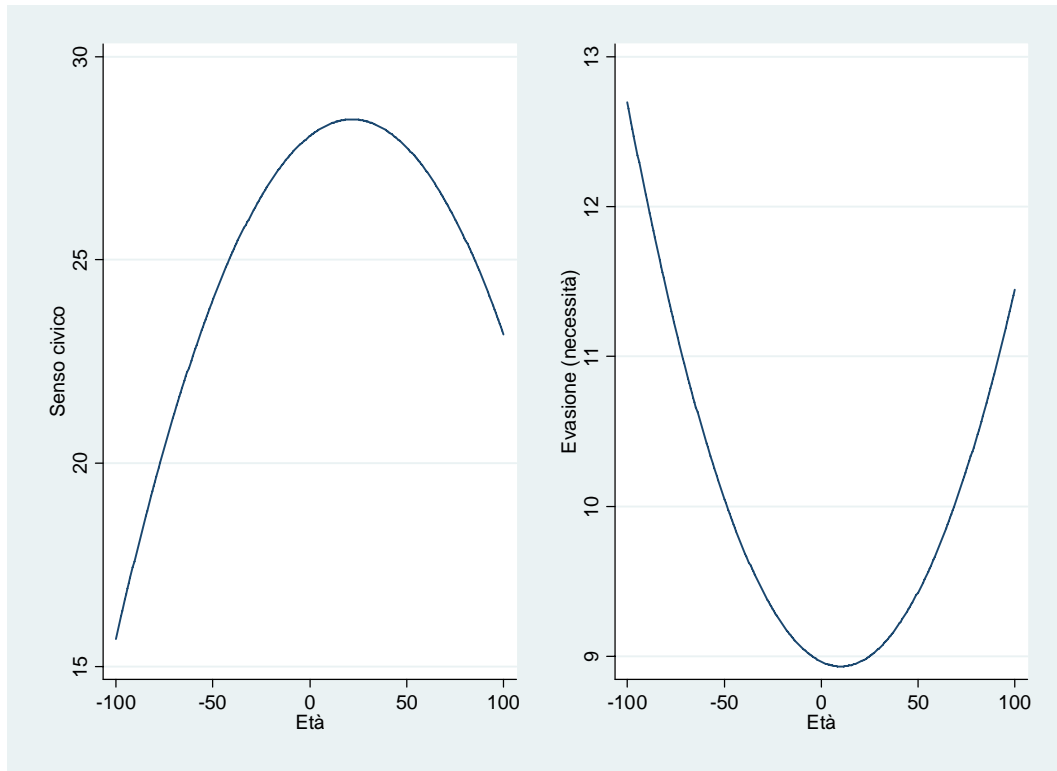
¹⁷ More precisely, in order to model the non-linear effects I considered age and age-square. Moreover, the age variable is centered around its mean, this means that an age equal to zero indicates the average age, while a negative value indicates young people and positive values correspond to older people. Our analysis shows significant results for “Public spirit” (p<0.01) and for the “Justification of evasion (necessity)” (p<0.10). The parameters are as follow:

Public spirit: $\beta_{etd} = 0.0374$ (0.0641); $\beta_{etd^2} = -0.0009$ (0.0003)

Evasion (necessity): $\beta_{etd} = -0.0062$ (0.0037); $\beta_{etd^2} = 0.0003$ (0.0002)

levels of social cohesion than individuals born in middle cohorts. More precisely, the highest social cohesion could be found near the average age, which is about 57. These persons came into adulthood in favorable structural conditions.

Figure 1. Age effects on social cohesion.



5. Conclusions.

In this paper, we have tried to evaluate the relationship between social cohesion and social inequality, considering both the level of inequality and the individual's position in the stratification system.

To perform this analysis, we first operationalized the different concepts used. More precisely, we have considered social cohesion in its multidimensional form, and we have chosen a set of indicators by which we are able to consider the principal characteristic of the approaches of Whelan and Maître (2005b) and of Chan *et alii* (2006). We later operationalized the concept of social cohesion and of economic vulnerability. Firstly, using the Mokken scaling we have identified three factors: "Public spirit", "Justification of evasion (inefficiency)" and "Justification of evasion (necessity)". Secondly, using *latent class analysis*, we have identified three groups: vulnerable, non-vulnerable and medians.

The last section of this work dealt with the empirical test of the research questions regarding the relationships between social cohesion and social inequalities. The results give us a non-conclusive view, indeed we are not able to determine in an incontestable manner the existence of a dimension of inequality that is able to play a major role towards social cohesion. Nevertheless, it seems possible to affirm that the individual position in the social structure plays a more important role than economic inequality in explaining the levels of social cohesion.

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