IN THE MOOD FOR REDISTRIBUTION. AN EMPIRICAL ANALYSIS OF INDIVIDUAL PREFERENCES FOR REDISTRIBUTION IN ITALY

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In the mood for redistribution. An empirical analysis of individual preferences for redistribution in Italy

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Abstract During the past few years the determinants of individual preferences for income equality and redistributive policies have been studied by many scholars. In this paper, using data from the World Values Survey (WVS), we specifically focus on the preferences expressed by the Italian people. We control for a number of factors usually found to impact individual attitude for equality and redistribution, and demonstrate that self-interest evaluations, together with the personal system of beliefs, do influence personal attitudes. The results also seem to suggest that living in a specific regional context may play a significant role in conditioning personal attitudes.

Keywords: inequality, redistribution, individual preferences
JEL Classifications: D31, H23, H31

1. Introduction

What explains people's attitude towards redistributive policies? During the past few years a great number of papers tried to answer this question with empirical analyses based on micro data collected in international survey programmes such as World Values Survey (WVS) and European Social Survey (ESS). The main contributions in the literature focus on several potential determinants: on one hand, it seems clear that being more or less inclined to redistribution depends on personal economic factors (income, risk propensity, expectations of social mobility, etc.), on the other hand, some papers argue that there is a strong impact of personal beliefs (religiosity, work ethics, political orientation, etc.). Given that most of this literature is based on international comparisons, scholars also demonstrate that, in addition to individual characteristics,

institutional, economic and cultural cross country differences do play a significant role in influencing personal attitudes. The effect of context on personal attitudes may also be relevant when analyzing the preferences expressed by the citizens of a single country where an high degree of inter-regional disomogeneity exists. In this paper we restrict our analysis to the WVS data collected in Italy; controlling for a number of factors usually found to impact individual attitude for equality and redistribution, we demonstrate that self-interest evaluations, together with the personal system of beliefs, do influence personal attitudes. While further refinement of the empirical analysis is still required, the preliminary results also seem to suggest that living in a specific regional or macro regional (north west, north east, centre, south) context may play a significant role in conditioning personal attitudes.
The paper is organized as follows: in section 2 we briefly recall previous literature and its main results; in section 3 we present data and methodology applied in this study; section 4 presents the results of the empirical analysis while the last section in dedicated to final comments.

2. Background

The issue of the formation of individual preferences for income equality and redistributive policies has been recently deeply exploited in the economic literature. During the last ten years a large number of papers was devoted to the theoretical discussion and the empirical testing of hypotheses about the determinants of individual support for redistribution.
The main part of the literature focuses on the so-called *self interest* hypothesis (or *homo oeconomicus effect*, Corneo and Gruner, 2001); it assumes that individuals act as selfish utility maximizers and choose to support policies only if they may obtain net economic benefits from them. Individual preferences for redistribution are, therefore, mainly determined by the personal economic condition. On one hand, the actual income position is relevant: when it is lower than the mean registered in the society, people assume themselves to be beneficiaries of the redistribution process and so give their support to it (Meltzer and Richard, 1981); otherwise, they oppose it. On the other hand, even people with low present income may decide to support inequality if they have strong expectations for upward mobility in the future (Prospect Of Upward Mobility, POUM; Benabou and Ok, 2001)[1]. This expectations may be influenced by personal and familiar history of social mobility (Piketty, 1995) or simple observation of the social success experienced by the others (the so-called *tunnel effect*, Hirschmann 1973). Strong support for these hypotheses is provided by Alesina and La Ferrara (2005) who study

[1] It must be noted that the existence of a link between perceived social mobility and preferences for inequality was highlighted by De Tocqueville (1835) when explaining the differences between the americans' and the europeans' attitudes towards redistribution

the attitudes for redistribution in the american "land of opportunities", and Ravallion and Lokshin (1999), who explain the high preference for inequality registered in Russia during the 1990s. As noted by Kaltenthaler *et al.* (2008), even education may have a positive impact on these expectation because people with high levels of human capital may perceive themselves as having a high potential and so be less supportive for redistributive policies.

Finally, the self interest hypothesis includes factors such as risk aversion and perception of short-term social risks (i.e. risk of income loss or reduction in income) that may have a positive influence on the demand for redistribution.

The second major theoretical explanation is based on the idea that support for welfare and redistribution depends on non-economic ideological/behavioral motivations. Following this perspective, some authors (Alesina and La Ferrara, 2005) remark that preferences for redistribution may result as the consequence of a sense of altruism or as the effect of personal sensibility for the more general theme of equality in opportunity. Corneo and Gruner (2001) argue that, apart from the *homo oeconomicus effect*, people tend to be influenced by their relative position in the society (*social rivalry effect*) and by their individual beliefs about success factors (*public values effect).* Fong (2001) demonstrates that personal beliefs about the role of effort and luck in self-determination are strong predictors of support for welfare policies while economic motivations have only a secondary role.

More in general, the literature considers political values as causal predictors of individual support for welfare state (Kaltenthaler *et al.*, 2008): thinking of oneself as right/ left wing oriented may influence the personal attitude towards welfare state policies and determine low/high support for income equality and redistribution. However, treating subjective political measures as causal predictors of welfare support may be source of theoretical and empirical problems (how can we be sure about the direction of the causal link simply using cross-sectional data?), even if, using longitudinal data and an instrumental variables approach, Jaeger (2006, 2008) demonstrates that the predicted causal effect actually exists.

Adopting this kind of perspective, few authors (Scheve and Stasavage, 2006; Stegmuller *et al.,* 2011) study the role of religious orientation (denomination and participation) and conclude that religiosity negatively affects individual preferences for redistribution probably because of the historical conflict between the State and the Church on welfare provision.

Other papers (Alesina *et al.*, 2001) focus on the issue of racial orientations, arguing that the high preferences for inequality registered in the U.S.A. may also depend on the fact that the U.S. welfare spending mainly benefits discriminated minorities.

While it is clear that country characteristics also affect individual preferences (see also the results of the experimental study by Farina and Grimalda, 2010), it is very difficult to distinguish the effects on individual attitudes determined by i) the institutional context ii)

the national culture and iii) the economic context[2]. Focusing on the institutional determinants, Svallfors (1997) remarks that preferences for welfare policies may be influenced by the welfare regimes typologies. Using German data collected after the reunification and adopting a more sophisticated empirical approach, Alesina and Fuchs-Schündeln (2007) analyze the impact of political regimes on individual preferences. Their results show the existence of significant differences between the preferences of the citizens that lived under the Communist regime and the ones of people that where in West-Germany, with the former being more in favor of welfare policies and redistribution. Anyway a convergence towards the preferences of western people is registered few years after the fall of the Berlin wall. Luttmer and Singhal (2011) convincingly focus on the effect of "culture", demonstrating that redistributive preferences of immigrants' are linked to the ones recorded in their birth countries. This results extend the ones obtained by a previous work by Alesina and Giuliano (2010) who study the preferences expressed by U.S. immigrants.
While all the quoted papers analyze preferences for redistribution from a multi-country perspective, less attention has been devoted to understand how regional conditions may influence them. Nevertheless, especially in countries characterized by high inter regional economic disparities and cultural differences, understanding the impact of regional conditions on personal attitudes may lead to interesting results. To the best of our knowledge, just few papers carry out a study that focuses on differences in regional preferences for redistribution: one is by García-Valiñas *et al.* (2008) who investigate individual preferences in Spain; after controlling for individual characteristics, they find that regional conditions (inequality and regional public expenditures) may also be relevant to explain regional differences. A second one is by Boarini and Le Clainche (2009), who analyze individual preferences expressed by French people and find them to be partially influenced by the region of residence.

3. Data and methodology

Our econometric analysis is based on the WVS aggregated database. Based on interviews to representative samples of the population, this database collects data about the socio-economic characteristics of the interviewed people, together with information about their personal beliefs, cultural tendencies and ideas about political, religious, and economic issues. The WVS surveys were carried a out in a wide set of countries during five rounds, from 1981 to 2005. We base our analysis on the 2005 data that have a relatively low rate of missing values[3].

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[2] In the empirical analyses countries' differences are usually analyzed by the means of country dummy variables that result to be a sort of "black boxes" (Guillaud, 2008)

[3] The creation of the italian sample for 2005 was made taking into account the regional distribution of the population, age and gender but no stratification by education was possible; therefore people with lower education are under-represented. For more details see the Technical Specifications of the 2005 Values Survey on the WVS website (http://www.wvsevsdb.com)

Assuming that people are sincere believers of their preferences, we measure the individual attitude towards redistribution through the answer given to the question concerning their preference about the desired level of income equality; answering to this question people had to use a scale from 1 to 10 where 1= *Income should be made more equal* and 10= *We need larger income differences as incentives for individual effort*. For presentation purpose we used the reversed scale as dependent variable (this variable is labeled REDISTRIBUTION).

According to the literature reviewed in par. 2, a broad set of variables may be selected as explanatory: the individuals' socio-demographic and economic characteristics as well as the institutional and spatial context they live in, may affect their support for redistributive policies. Unfortunately, given the limited availability of data, only some of the variables suggested by the literature were considered in this study. However, our analysis focuses on some of the most important ones.

Gender, age and marital status are socio-demographic characteristics usually included as controls when studying this issue. Women's attitude to solidarity (see Svallfors, 1997, for a discussion on this point) is reported by the literature (Edlund *et al.*, 2005), but this thesis is not confirmed by all the studies that were carried out (Garcia-Valinas *et al.*, 2008). In our regressions we use the dummy variable FEMALE that takes the value 1 if the respondent is female.

The impact of age is controversial as well; from a general point of view we can imagine that younger people are less supportive of state spending and redistribution as they perceive have long time to pursue social mobility and a rise in their income while older people, especially when approaching to the retirement age, may have stronger support for equality and income redistribution. Support for this thesis is found in some of the literature (Ravallion and Lokshin, 1999; Ohtake and Tomioka, 2004) and this is of particularly interest here, because Italy is a rapidly ageing country. In our regressions we use dummies for five age categories: *less than 30 years, 30-40, 40-50, 50-60* and *more than 60*.

Marital status may also be relevant: divorced, separated or never married are reported to be more inclined to redistribution than married (Singhal, 2008; Alesina *et al,* 2001: Fong, 2001) probably because they can't rely on the support of a partner. Anyway, also this result is not confirmed by other studies (Corneo and Grüner, 2002). In our regression analyses we use the dummy MARRIED taking the value 1 if respondent is married and 0 if never married or divorced/separated/widowed.

According to the *homo oeconomicus* approach, the respondent's financial situation is one of the most important determinants of the individual support to redistribution. Most of the quoted studies agree on this point (Guillaud, 2008). The WVS database includes one question about the respondent's household's income[4] but unfortunately a great number of answers to these questions are missing. Therefore, we use the question concerning *Satisfaction with the financial situation of the household* (FINANCIAL). Answers to this

[4] Respondents were asked to describe their household income choosing from a scale of incomes on which 1 indicates the *"lowest income decile"* and 10 the *"highest income decile"* in their country.

question range from 1 to 10 whit 1=*Completely dissatisfied* and 10= *Completely satisfied*. Clearly, the satisfaction about the financial condition of the household does not depend entirely on the amount of personal income of the respondent; incomes provided by other members of the household, the number of members as well as personal expectations may influence the scores given by the respondents.

Two variables are used to describe the employment status of the respondents. The dummy variable SELF takes the value 1 if the respondent is reported to be self employed and 0 otherwise. This variable may be a good proxy fir risk propensity as self employed people may be considered as naturally risk neutral or risk loving and more inclined to accept wage differences as the natural consequence of differences in individual efforts. The dummy variable UNEMP takes the value 1 if the respondent is unemployed and 0 otherwise. Unemployment status may have a strong impact on redistribution: following Kaltenthaler *et al.* (2008), unemployed people think of themselves as the losers of the market's operations and so may be in favour of State redistributive intervention.

Ideological attitudes and personal beliefs may affect personal support to redistribution. Here we test one hypothesis using data from the WVS question about the role of personal effort and luck in determining personal success (HWORK). Answers are coded from 1 to 10 where 1= *in the long run, hard work usually brings a better life* and 10= *it's more a matter of luck and connections*. Thinking that personal success is all a matter of personal effort means that lack of effort is interpreted as the cause of economic difficulties; as Boarini and Le Clainche (2009) show, this may lead to low support to redistribution.

Religion may also be an important explanatory power. Scheve and Stasavage (2006) as well as Stegmuller *et al.* (2011) argue that religion and welfare state spending may be interpreted as substitute mechanisms of social insurance; therefore, more religious individuals (Protestants and Catholics) are less supportive of social spending. We test this hypothesis by the means of the answers to the question: *Apart from weddings and funerals, about how often do you attend religious services ?* (CH_ATT). Answers range from 1 to 7, where 1= *more than once a week* and 7= *never*.

The educational level of individuals (EDUCATION) may also act as an explanatory variable: on one hand, more educated people are supposed to be well informed about costs and benefits of the redistribution, on the other, they may have more expectations about future social mobility. The WVS database includes questions about the formal education level achieved by the respondents. We grouped answers in three categories: primary education (PRIMARY, no more than the Italian "scuole medie"),secondary education (SECUNDARY, no more than "scuole superiori") and tertiary education (TERTIARY, laurea degree or more).

We also consider some context variables. First of all we analyze the possible impact of the size of the city of residence. While some studies find residence in large cities to be correlated with higher preferences for redistribution and welfare policies (Alesina, 2001), it seems reasonable to assume that very small towns are generally characterized by an high level of social cohesion between the inhabitants so that people living there are naturally more in favor of income equality than the ones living in very large and high income cities. Data on this point were taken from the WVS variable collecting

respondent's description of her domicile. Possible answers are: more than 500.000 inhabitants (DOMSIZE4), 100.000-500.000 inhabitants (DOMSIZE3), 20.000-100.000 inhabitants (DOMSIZE2) and less than 20.000 inhabitants (DOMSIZE1).
Dummies for macro regions (NORTH-WEST,NORTH-EST, CENTRE and SOUTH, with the latter including the islands[5]) and for regions (one for each of the 20 italian regions) are alternatively employed to verify the impact of other unobserved regional characteristics, i.e. level of economic disparity and levels of social spending.
After the listwise deletion of incomplete cases[6], the final sample contains 939 observations whose distribution across regions is quite similar to the population distribution in Italy. Tab. 1 (see appendix) summarizes the data.
The Inspection of correlations between the explanatory variables suggests that they may be all simultaneously considered in the regression analyses. As expected, HWORHK and FINANCIAL register a negative and significant correlation but the rank correlation coefficient results to be low (-0.131). CH_ATT is positively correlated with HWORK and negatively correlated with FINANCIAL but, again, the rank correlation coefficients are very low (0.069 and -0.086 respectively). A low (-0.191) negative and significant correlation is also registered between AGE and CH_ATT. Considering EDUCATION as an ordinal variable (assuming three values for primary, secondary and tertiary) it results to be positively correlated with FINANCIAL with a rank coefficient equal to 0.144. DOMICILE has a significant and positive correlation only with EDUCATION (0.244)

4. Results

Given the nature of our dependent variable and following the literature we quoted, regression analyses are carried out by the ordered probit model[7].
Model (1) in tab. 2 (see appendix) presents the results obtained in a basic specification, where only the socio-demographic variables (AGE, FEMALE, MARRIED) and the ones about the individual financial and employment condition (FINANCIAL, SELF EMPLOYED and UNEMPLOYED) are used as explanatory. In models (2), (3) and (4)

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[5] According to the classification by the italian National Statistical Insttution (ISTAT), North-West includes: Valle d'Aosta, Piemonte, Lombardia, Liguria; North-East includes: Trentino Alto Adige, Veneto, Friuli Venezia Giulia, Emilia Romagna; Center includes: Toscana, Umbria, Lazio, Marche, Abruzzo); South includes Molise Campania, Puglia, Basilicata, Calabria, Sicilia, Sardegna.

[6] Listwise deletion is the default approach to deal with missing data but it may lead to biased estimates especially when missing observations follow a pattern related to some unobservable variable (it seems not to be the case). Anyway only few paper follow alternatives approaches. Stegmuller *et al.* (2011), for example, use a multiple imputation approach to generate imputed data.

[7] The main problem with the ordered probit (and the ordered logit) estimation model is that the parallel lines assumption is often violated because the estimated coefficients of the independent variables may differ across values of the dependent variable (Williams, 2006). When the violation of the parallel lines assumption is confirmed by the results of the brant test, the generalized ordered probit approach may be applied to allow the coefficient to vary across categories of the dependent variable. Further research will check the robustness of the results by the adoption of the Generalized ordered probit model

we added, respectively, the variables related to the individual educational status (EDUCATION) , public values (HWORK and CHATT) and the context (DOMICILE). When including these variables, the results seem to be quite stable[8].

As it was expected, the coefficient of FINANCIAL is positive and significant; compatibly with the self interest hypothesis, individuals' attitude towards redistribution results to be influenced by their financial condition: the more people feel satisfied about their financial condition, the less they are pro-redistribution. The coefficient of SELF EMPLOYED is negative and significant. Also this result seems to be compatible with the hypothesis that risk loving people are less inclined to redistributive policies.

Given the sign of the coefficient of PRIMARY, people having lower levels of education are more inclined to redistribution than those having high levels of education (reference category here is TERTIARY education). No significant difference is registered between SECUNDARY and TERTIARY. The interpretation of this result is complex: on one hand we can imagine that less educated people completely ignore the costs arising from redistribution and so tend to be more inclined to equality; on the other hand, it seems reasonable to suppose that they have very low chances of social mobility and so are more inclined to accept the State redistributive intervention.

HWORK has positive and significant coefficient, meaning that beliefs about the roles of luck and effort in determining individual success affect attitudes to inequality and, consequently, to redistribution. As expected, thinking that personal effort is not a sufficient ingredient for success leads to higher preferences for income equality.

Following the predictions, the types of DOMICILE also seem to have a significant impact on individual attitudes. Compared with citizens living in the few very big Italian cities, people living in medium size cities (100.000 – 500.000 inhabitants), in small cities (20.000-100.000 inh.) and small towns (less than 20.000 inh.) register higher preferences for income equality.

While the coefficient of all the other variables have signs that follow, in general, the predictions made by the literature (this is not true, for example, for FEMALE), they are not significant. This means that no significant impact on individuals' attitude towards redistribution is registered for AGE, FEMALE, MARRIED and CH_ATT.

Looking at table 3, in model (5) we added dummies for the macro regions (NORTH EAST, CENTRE, SOUTH with NORTH WEST as reference category). Adding these dummies may allow to capture some of the unobserved heterogeneity; for this reason they are routinely included in empirical models but may lead to unbiased estimates due to multicollinearity (Verme, 2011). In this case, the inclusion of dummies does not alter

[8] OLS regressions were also calculated to compute variance of inflactor factor (VIF) and test for multicollinearity among the independent variables. OLS estimation are not reported as they are not significantly different from the ones obtained by ordered probit. In all the models, the variables registered VIF values below 4. VIF is the most popular test for collinearity but there is no formal cutoff value to use with VIF for determining presence of multicollinearity. In general, when VIF is equal to 1 there is no collinearity, while values higher than one indicate the presence of collinearity. Values of 4 or more(10 or more for others) are generally considered as indicators of high, and worrying, level of multicollinearity.

the estimates found in the previous models and multicollinearity, calculated running OLS and VIF, seems to be not worrying.
Results obtained in model (5) indicate that the macro region of residence matters: when we use NORTH WEST as reference category, the sign of the coefficients of the CENTRE and SOUTH dummies are positive and significant while NORTH EAST is positive but not significant. This may mean that regional conditions may have an influence on personal preferences. Following this hypothesis, in models (6) and (7) respectively, we added the variables GINI (the value of Gini coefficient calculated for each macro-region[9]) and the variable EXP (the average amount of social expenditures realized by the municipalities in each macro-region[10]). As is well known, the proper econometric technique to empirically analyze the relationships among individual and national level variables is hierarchical (or multivelel) models but in this case we decided to use an approach based on standard errors adjusted for clustering on the macro regions , just to put a starting point for further analyses.
The results seem to confirm the hypothesis that macro-regional conditions play a relevant role in influencing personal attitudes; in model (7), EXP has negative but not significant coefficient but in model (6) GINI has a positive and significant one, meaning that greater inequality leads to stronger preferences towards equality. The inclusion of clustered standard errors does not affect the sign and the significance of the coefficients we obtained from the previous analyses except for some of the AGE dummies.
In model (8) we introduce regional dummies instead of macro-regional ones because the regional fixed effects seems more appropriate to account for differences in omitted factors. An interpretation of the results is quite difficult; using Lombardia as the reference category, only the dummies for Friuli Venezia Giulia and Calabria are positive and significant while the dummy for Molise has a negative significant sign. Even when changing the reference category, several differences emerge also in confronting regions that belong to the same area (results are not reported but are available on request).

7. Conclusion

Using data from the WVS collected in Italy in 2005, in this paper we apply a standard ordered probit model to investigate the determinants of individual attitudes towards redistribution. While most of the literature studies the determinants of personal attitudes towards redistribution with a cross country approach, we focus on data from one single country, Italy, that is characterized by an high level of inter-regional economic disparity. The aim of the paper is two-fold: on one hand we want to test, with the support of the Italian data, some of the prediction made by the literature about the individual determinants of pro-redistribution preferences; on the other hand , we plan to verify if living in a specific regional context may play a significant role in conditioning personal attitudes.

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[9] Source is Istat, regional economic accounts database
[10] See Caltabiano (2004, in italian) for a discussion about differences among the welfare models adopted by the Italian regions

We find that that self-interest evaluations (satisfaction with the financial condition of the household, educational status, self employment status) , together with the personal system of beliefs (opinion about the role of effort and luck in success), do influence personal attitudes towards redistribution. The results also suggest that personal attitudes may be influenced also by the context: dimension of the city/town and income distribution in the macro region of residence seem to have a significant impact.
The results achieved have some relevant limitations. First of all, as reported in section 2, the sample is not perfectly representative of the Italian population, given that people with lower education result to be under-represented. Therefore, the generalization of this results is very risky. Second, the empirical analysis may be refined by the inclusion of a generalized ordered logit approach to overcome the problems arising from the adoption of ordered probit models in the case of violation of the parallel lines assumption. Finally, while our estimates suggest that regional economic conditions may have an impact on individual preferences, further research should test this hypothesis by the means of multilevel models.

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Appendix

Variable	Obs	Mean	Std. Dev.	Min	Max	Variable	Obs	Mean	Std. Dev.	Min	Max
REDISTRIBUTION	939	4.07	2.44	0	9	CENTRE	939	0.19	0.40	0	1
AGE <30	939	0.19	0.39	0	1	SOUTH	939	0.35	0.48	0	1
AGE 30-40	939	0.22	0.41	0	1	PIEMONTE	939	0.07	0.25	0	1
AGE3 40-50	939	0.17	0.37	0	1	VALLE D'AOSTA	939	0.01	0.11	0	1
AGE4 50-60	939	0.19	0.39	0	1	LOMBARDIA	939	0.15	0.36	0	1
AGE >60	939	0.23	0.42	0	1	TRENTINO	939	0.02	0.13	0	1
FEMALE	939	0.50	0.50	0	1	VENETO	939	0.08	0.27	0	1
MARRIED	939	0.61	0.49	0	1	FRIULI	939	0.02	0.15	0	1
FINANCIAL	939	6.52	1.86	1	10	LIGURIA	939	0.03	0.17	0	1
PRIMARY	939	0.33	0.47	0	1	EMILIA	939	0.07	0.26	0	1
SECUNDARY	939	0.44	0.50	0	1	TOSCANA	939	0.06	0.25	0	1
TERTIARY	939	0.23	0.42	0	1	UMBRIA	939	0.02	0.13	0	1
UNEMPL	939	0.06	0.24	0	1	MARCHE	939	0.02	0.13	0	1
SELFEMP	939	0.17	0.38	0	1	LAZIO	939	0.10	0.29	0	1
HWORK	939	5.28	2.54	1	10	ABRUZZO	939	0.01	0.12	0	1
CH_ATT	939	3.57	1.71	1	7	MOLISE	939	0.01	0.12	0	1
DOMSIZE1	939	0.52	0.50	0	1	CAMPANIA	939	0.10	0.30	0	1
DOMSIZE2	939	0.26	0.44	0	1	PUGLIA	939	0.07	0.26	0	1
DOMSIZE3	939	0.10	0.30	0	1	BASILICATA	939	0.01	0.09	0	1
DOMSIZE4	939	0.12	0.33	0	1	CALABRIA	939	0.02	0.14	0	1
NORTH-WEST	939	0.26	0.44	0	1	SICILIA	939	0.09	0.28	0	1
NORTH EAST	939	0.19	0.40	0	1	SARDEGNA	939	0.03	0.18	0	1

Tab. 1: Descriptive statistics of variables

DEP. VAR. : REDISTRIBUTION		(1)		(2)		(3)		(4)	
AGE[a]	30-40	-0.153	(0.110)	-0.171	(0.110)	-0.167	(0.110)	-0.156	(0.110)
	40-50	-0.041	(0.124)	-0.086	(0.125)	-0.108	(0.126)	-0.101	(0.126)
	50-60	-0.117	(0.120)	-0.200	(0.123)	-0.165	(0.123)	-0.155	(0.123)
	>60	-0.026	(0.113)	-0.157	(0.120)	-0.158	(0.120)	-0.138	(0.121)
FEMALE		-0.027	(0.068)	-0.012	(0.068)	-0.052	(0.070)	-0.051	(0.070)
MARRIED		-0.081	(0.078)	-0.100	(0.079)	-0.098	(0.080)	-0.097	(0.080)
FINANCIAL		-0.109***	(0.018)	-0.101***	(0.019)	-0.090***	(0.019)	-0.089***	(0.019)
UNEMPLOYED		0.187	(0.147)	0.175	(0.147)	0.166	(0.148)	0.179	(0.148)
SELF EMPLOYED		-0.243***	(0.092)	-0.231**	(0.092)	-0.215**	(0.092)	-0.211**	(0.092)
EDUCATION[b]	SECUNDARY			0.060	(0.087)	0.043	(0.087)	0.038	(0.088)
	PRIMARY			0.307***	(0.099)	0.279***	(0.099)	0.271***	(0.103)
HWORK						0.073***	(0.014)	0.075***	(0.014)
CH_ATT						-0.016	(0.021)	-0.016	(0.021)
DOMICILE[c]	<20.000							0.180*	(0.108)
	20.000-100.000							0.252**	(0.116)
	100.000-500.000							0.257*	(0.142)
	REGIONAL DUMMIES	*No*		*No*		*No*		*No*	
	log likelihood	-2011.98		-2006.07		-1991.63		-1988.97	
	LR chi square	54.71		66.53		95.41		100.73	
	Pseudo_R2	0.01		0.02		0.02		0.02	
	Prob>chi2	0.00		0.00		0.00		0.00	

Tab. 2: Standard errors in parentheses. *,**,*** mean significantly different from zero at the 0.10, 0.05, 0.01 significance level. *Notes on variables*: [a] the reference category is <30 years old. [b] The reference category is tertiary education. [c] The reference category is >500.000 inhabitants.

DEP. VAR. : REDISTRIBUTION		(5)		(6)[f]		(7)[f]		(8)	
AGE[a]	30-40	-0.137	(0.111)	-0.144***	(0.028)	-0.152***	(0.032)	-0.192*	(0.112)
	40-50	-0.071	(0.126)	-0.087	(0.105)	-0.097	(0.100)	-0.097	(0.127)
	50-60	-0.140	(0.124)	-0.143*	(0.077)	-0.150**	(0.074)	-0.154	(0.124)
	>60	-0.107	(0.122)	-0.120	(0.131)	-0.132	(0.133)	-0.156	(0.123)
FEMALE		-0.055	(0.070)	-0.050	(0.052)	-0.050	(0.051)	-0.076	(0.071)
MARRIED		-0.106	(0.080)	-0.097**	(0.044)	-0.096**	(0.044)	-0.076	(0.081)
FINANCIAL		-0.084***	(0.019)	-0.085***	(0.019)	-0.086***	(0.019)	-0.081***	(0.019)
EDUCATION[b]	SECUNDARY	0.045	(0.088)	0.043	(0.146)	0.040	(0.147)	0.035	(0.089)
	PRIMARY	0.269***	(0.103)	0.263***	(0.083)	0.266***	(0.083)	0.284***	(0.104)
UNEMPLOYED		0.155	(0.149)	0.153***	(0.049)	0.166***	(0.051)	0.131	(0.151)
SELF EMPLOYED		-0.214**	(0.092)	-0.213***	(0.030)	-0.212***	(0.029)	-0.230**	(0.094)
HWORK		0.074***	(0.014)	0.076***	(0.021)	0.076***	(0.021)	0.081***	(0.014)
CH_ATT		-0.013	(0.021)	-0.012	(0.019)	-0.014	(0.018)	-0.020	(0.021)
DOMICILE[c]	<20.000	0.185*	(0.111)	0.185***	(0.037)	0.189***	(0.038)	0.185	(0.123)
	20.000-100.000	0.263**	(0.119)	0.251	(0.172)	0.258	(0.179)	0.261**	(0.125)
	100.000-500.000	0.246*	(0.149)	0.271*	(0.144)	0.280*	(0.151)	0.332**	(0.166)
AREA[d]	NORTH-EST	0.070	(0.106)						
	CENTRE	0.192*	(0.102)						
	SOUTH	0.186**	(0.090)						
GINI				2.806***	(0.837)				
EXP						-0.511	(0.312)		
REGIONAL DUMMIES		*No*		*No*		*No*		*Yes*[e]	
log_likelihood		-1986.10		-1987.70		-1988.57		-1961.45	
Wald chi squared		106.48		.		.		155.78	
Pseudo_R2		0.03		0.03		0.02		0.04	
Prob>chi2		0.00		.		.		0.00	

Tab. 3: Standard errors in parentheses. *,**,*** mean significantly different from zero at the 0.10, 0.05, 0.01 significance level. *Notes on variables*: [a] the reference category is *<30 years old*. [b] The reference category is *tertiary education*. [c] The reference category is *>500.000 inhabitants*. [d] The reference category is *North-West*. [e] See coefficients in tab 4 [f] clustered standard errors applied

	coeff	st. err.
PIEMONTE	-0.248	(0.159)
VALLEAOSTA	0.186	(0.321)
TRENTINO	-0.013	(0.266)
VENETO	-0.147	(0.151)
FRIULI	0.691***	(0.240)
LIGURIA	0.002	(0.217)
EMILIA	-0.064	(0.158)
TOSCANA	0.164	(0.159)
UMBRIA	0.234	(0.283)
MARCHE	-0.097	(0.270)
LAZIO	0.129	(0.145)
ABRUZZO	0.218	(0.287)
MOLISE	-0.754**	(0.305)
CAMPANIA	0.142	(0.140)
PUGLIA	-0.113	(0.155)
BASILICATA	0.189	(0.403)
CALABRIA	1.207***	(0.264)
SICILIA	0.247*	(0.147)
SARDEGNA	-0.068	(0.210)

Tab. 4: Coefficients and standard errors of regional dummies.
The reference category is *Lombardia*