

Expectations of Social Mobility, Meritocracy and Demand for Redistribution in Spain¹

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Abstract: The classical model developed by Meltzer and Richard (1981) stated that democracy will boost redistribution of income from the richer to the poorer. Given that the median voter is poorer than the average-income voter, a majority of voters will vote for redistribution. However, the positive relationship between democracy and equalization of income has been highly criticized on both theoretical and empirical grounds. The main question remains why do not the poorest vote for a higher level of redistribution? Some scholars have argued that expectations of social mobility may induce the poorer to believe they will have a higher income in the future, even if this is not true. However, there is an alternative explanation, which stands that preferences for redistribution depend on the perceived relationship between effort and income: if wealth come from hard work inequalities are easy to be accepted. Then, an additional question arises: Where do these expectations come from? In this paper, I analyze, to what extent, preferences for redistribution, at the individual level, depends on the expectations of future income, and the expected relationship between effort and income. Furthermore, I analyze whether expectations of social mobility are related to the true probability of mobility or they are based upon subjective expectations of mobility. Empirically, I use data from the Spanish labor market to compute objective measures of social mobility and survey data to explain preferences for redistribution. Empirical results show that preferences for redistribution depends both on the expectations of social mobility and meritocracy ideology. However, expectations of social mobility are only weakly related to the true probability of mobility.

Keywords: inequality, social mobility, redistribution, preferences, expectations.

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1. Introduction

According to Meltzer and Richard's (1981) model, there must be a positive correlation between inequality and demand for redistribution at the aggregate level (more recently, Franzese, 2002). That will be true if preferences for redistribution depend on the relative income at the individual level. The poorer will prefer a higher level of redistribution, and those who are above the mean income will oppose redistribution, since they will become net losers from redistribution. However, empirical evidence linking income levels to preferences for redistribution is not conclusive at the individual level. Neither is the link between inequality and demand for redistribution at the aggregate level. From a rational point of view, one explanation about the reason why the poorer do not expropriate the richer in a democracy is the idea that individuals do not only care about their current relative income, but also about their expected relative income in the future. That brings to the model the social structure of the society and the expectations of social mobility in a given context. Those who expect to be better off in the future may not want to vote for redistribution today. Moreover, there is also a normative argument about opportunities of social mobility. If people think they live in a meritocratic society, in which inequalities are the outcome of one's merit and effort, they may not want to vote for redistribution, because hard working individuals have the opportunity of climbing in social hierarchy by themselves. Therefore, we would expect that in open societies, where social mobility is relatively high, demand for redistribution will be lower, even if inequality is relatively high (Alesina and La Ferrara, 2005; Benabou and Tirole, 2006).

The idea behind the "prospect of upward mobility" (the POUM hypothesis) was formalized by Benabou and Ok (2001) and empirically tested by Alesina and La Ferrara (2005) for the United States, and by Checchi and Filippin (2004) within an experimental setting. It is worth to say that the POUM hypothesis assumes that individuals have almost perfect knowledge about social structure. Specifically, it is assumed that they know the shape of the income distribution and the true probabilities of social mobility. These assumptions seem to be somewhat unrealistic, since they do not take into account the fact that people may hold "wrong" beliefs about the fluidity of the social structure (Evans and Kelley, 2004). More recently, Rainer and Siedler (2008) have addressed the issue of the subjective probabilities of income mobility. Rainer and Siedler found that

subjective expectations about future income, as measured by the subjective expectation of an increase in pay, will shape preferences for redistribution at the individual level. In this paper I deal with a different aspect of the problem, which is the subjective perception of one's position on the income distribution and its impact on the preferences for redistribution. Within the sociological literature on relative deprivation, it has been known for a longtime that individuals systematically underestimate the real extent of inequality, since then do not really know their true position on the social hierarchy (Lockwood, 1966; Runciman, 1966; Rose, 2006). Individuals view themselves through social comparisons with other people, but the range of these comparisons is generally limited to the group to which individuals belongs to. Given that social groups are relatively homogeneous in terms of statuses and incomes, individuals wrongly belief that they are very close to the average income earner, as further empirical research has found (Evans and Kelley, 2004).

The main goal of this paper is to show how self-perceived position on the income ladder affects preferences for redistribution at the individual level, though these subjective beliefs about relative position do not accurately represent the real position. I will show that expectations of social mobility can explain preferences for redistribution. However, these expectations are not based upon objective probabilities of upward mobility, but on subjective probabilities. These subjective probabilities are, in fact, the product of the self-perceived position on the income ladder. Statistical evidence presented here will show that subjective perception about relative income is highly biased to the middle of the income distribution. To test this hypothesis, I will focus on the Spanish case. The rest of the paper is organized as follows. The following section presents a brief overview of the literature about preferences for redistribution and social mobility. In the next two sections, I will present the Spanish case and I will explain the methodology and the data used in this research. Main statistical findings are discussed in the following section. Finally, there is a section containing the main conclusions of the paper.

2. Social mobility and preferences for redistribution. An overview

Empirical evidence shows that preferences for redistribution are somehow related to income, but they cannot be fully explained by this sole variable (Benabou and Tirole, 2006; Corneo and Grüner, 2002; Svallfors, 2006). Within the self-interest

approach, two main sources of explanation have appeared to deal with this issue, both of which try to incorporate actors' beliefs about social mobility into the model. The first one does not depart from self-centered motivations and extends the original model to take into account expectations of future income. Given that taxes and redistributive schemes are in place for a lengthy period, individuals will not only care about today's income after taxes, but also about future incomes. The second approach is rather group-oriented and deals with people's beliefs about social structure and how these beliefs shape their preferences for redistribution. If individuals think they live in a relatively open society where wealth is distributed accordingly to fair distributive principles (mostly meritocratic ones), they may not favor redistribution, since the original distribution seems to be fair enough. Both the pure self-interest approach and the group-oriented one are mainly focused on beliefs about social mobility. For the first one, expectations of individual upward mobility may discourage people from demanding redistribution, since present benefits may become future costs in case they reach a high income position. For the second one, preferences for redistribution depends on the degree of openness of the society. The main motivation is to achieve a fair collective outcome. Assuming a shared meritocratic ideology, individuals will compare social outcomes with a totally open society, in which only individual merit and effort determine income. The greater the difference between the two of them, the greater the demand for redistribution we should expect.

The first approach states that, from a dynamic point of view, preferences for redistribution are to be linked to expectations about future income. Extending Meltzer and Richard's (1981) model to a multi-period setting, we would expect that people will maximize a multi-period utility function in which income at further stages will be properly discounted. There are two main accounts of the expectations about the future in the literature about preferences for redistribution at the individual level: the "tunnel effect" (Hirschman, 1973), and the "prospect of upward mobility" (POUM) (Benabou and Ok, 2001).

Hirschman (1973) coined the term "tunnel effect" to name the expectations about future well-being, according to the following metaphor. Suppose a group of people driving through a two lanes tunnel, both going in the same direction. Suppose furthermore, that there is an obstacle on the road ahead the tunnel causing a traffic jam and no car moves in either lane, although no driver can see what happen outside the tunnel. After a while, the cars in one of the lanes start to move, while no movement

occurs in the other lane. Hirschman said that those in the blocked lane will not feel angry. Instead they will believe that the obstacle on the road has been removed, and hence they will turn to move anytime soon. What we can learn from this metaphor is that people may be tolerant to rising inequalities for a while (a group of people getting richer and the other remaining poor). The key idea is that when we see others doing well we may anticipate that our well-being will also improve in the coming future. That would explain why some societies are able to suffer high inequality levels without increasing pressures for redistribution.

However, people are patient to some extent only. After a longtime blocked in the tunnel, people may get disappointed if those on the other lane keep moving. The first ones may suspect foul play and become very furious. That would open the door to complaints, and even direct action. Hirschman (1973) said that if the expectations of improving are not fulfilled, the consequences can be dramatic. The relative tolerance for inequalities at the first stage may become frustration at further stages if no improvement at all occurs. The main implication is that increasing inequalities will lead to strong pressures for redistribution in the long-run. Nevertheless, we should expect low demand for redistribution in the short-run if the members of the poor group believe their fortune will improve in the future, even if their relative position has not changed at all. Ravallion and Lokshin (2000) tested the “tunnel effect” hypothesis in Russia during the highly volatile decade of the nineties. According to Ravallion and Lokshin (2000), support for redistribution was higher amongst those who expect their welfare to fall and vice-versa. More interestingly, those who were experiencing an improvement were less prone to favor redistribution, after controlling for others variables such as their real income.

Benabou and Ok (2001) put things in a different way. They formalize the history behind the prospect of upward mobility (POUM) assuming that people only care about their own income. In their model, people are supposed to maximize an inter-temporal utility function in which expected future incomes are taken into account. The main finding of Benabou and Ok (2001) is that there is a range of individuals below the average income that will oppose redistribution since they expect that their future income will be above the average. It is clear that this cannot be true for all the people below average income. Even if some fraction of the poor of today increases their income above currently average income, those who are richer than the average today will have even higher incomes in the future. Therefore, the poor of today will be still poor in

relative terms tomorrow. Nevertheless, Benabou and Ok (2001) conclude that the prospect of upward mobility could be rational under some circumstances. Specifically, the POUM hypothesis depends on three critical circumstances.

The first one is that redistribution schemes chosen today will last for some period of time. The second one is that people are not too risk averse. In this context, that means that people are not too worried about changes in their relative position, because in that case they may be tempted to vote for redistribution as a mean to assure their current income. Finally, some fraction of the population who are currently poorer than the average has to expect being above the average in the future. Benabou and Ok (2001) made the critical assumption that income transition function is concave, which basically means that income will grow at a higher rate among low income levels. From these assumptions, they derive two main results. Firstly, the more concave the transition function of income, the smaller will be the share of people below average income supporting redistribution. Secondly, this fraction will be smaller as the time horizon for the chosen taxation increases. Benabou and Ok (2001) argue that these are rather plausible assumptions, given a negative marginal return of income. Under these assumptions, it is still possible that a majority of the population is simultaneously poorer than the average now and richer than the average in the future. However, this depends critically on a second assumption, which is that people are relatively low risk averse. As has been said, those who are risk averse may prefer to vote for redistribution in order to insure against misfortune. Nevertheless, empirical evidence provided by the authors rather suggests that risk aversion motivation is stronger than the prospect of upward mobility. In a different vein, Checchi and Filippin (2004) designed an experiment to test the main implications of POUM hypothesis, and they did find strong support for the POUM hypothesis under different settings.

From a group-oriented point of view, beliefs about meritocracy have to play a role in shaping preferences for redistribution. For instance, Piketty (1995) concluded that individual preferences for redistribution depend on the beliefs about the sources of social mobility. According to Piketty's model, income is the result of both effort and inherited factors. However, individual agents do not fully know to what extent effort is important in determining their own income. They have to learn about the true parameters of the model using a Bayesian rule to incorporate information about their own experience. As they exert different levels of effort and they go up and down in the social structure they will gain information about the effect of effort on income.

Nevertheless, they can only learn from their own experience, so each generation's knowledge is not transmissible to their offspring, which is a key assumption in Piketty's model. Since learning the true role of effort in determining the income level is costly (it requires a lot of costly experimentation), each generation will not be able to learn the real chances of social mobility. Even if agents are truly rational Bayesian learners, initial beliefs will not converge to the true parameters for the whole population. In Piketty's model, final beliefs about social mobility depends on initial beliefs, either they are true or not. Thus individuals holding different initial beliefs will interpret an experience of upward (or downward) mobility in different ways. And therefore, they will vote for different redistribution schemes, although all of them care about social justice. Those who think that their society is rather open will vote for more generous redistribution and vice-versa.

Somewhat differently, Benabou and Tirole (2006) have developed a model intended to explain cross-national differences in support for redistribution. The main argument of Benabou and Tirole is rather cultural in nature, though the high level of formalization. There are different ideologies about the origin of social inequalities. Due to imperfect will-power individuals strive to motivate themselves toward effort. To make sense of their own actions, people try to convince themselves that effort will bring wealth. This is kind of a virtuous circle: people need to believe in meritocracy to commit themselves to a high effort level. At the same, due to the need of avoiding cognitive dissonance people exerting a high level of effort need to believe that effort will have a proper reward. Let imagine that in a given society there is a majority of people committed to the ideology of meritocracy. That would give birth to an equilibrium in which the majority will vote for low taxes. At the same time, low taxes will motivate people to work hard, since they already know that redistribution is low. Let now imagine the reverse situation in which the majority hold the view that inequalities are caused by external factors and they do not depend on personal effort. In that situation the majority will vote for a generous redistribution, and furthermore it will be difficult to find a motivation to exert higher levels of effort. Now, the belief against meritocracy prevents from taking risks and hence people will vote for higher redistribution. According to Benabou and Tirole (2006), while the first equilibrium describes the American case, the second is in place in most European countries. Interestingly, both are self-maintained and reinforcing equilibria, in such a way that is very difficult to go from one to another.

Both Piketty's and Benabou and Tirole's approaches explicitly take into account beliefs about meritocracy and social mobility in explaining preferences for redistribution. For Piketty (1995), individuals are concerned about a fair model of society, while for Benabou and Tirole (2006), individuals adapt their beliefs about the opportunities of social mobility to the dominant beliefs, represented by the equilibrium in place. Empirically, Linos and West (2003) have found that ideas about the determinants of social mobility play a role in shaping preferences toward redistribution, although there are important differences between countries, depending on the welfare regime, which is mainly consistent with Benabou and Tirole's model.

After this short review of the literature, it is clear that there are many sources of expectations concerning prospects of social mobility, of which five are particularly important here: a) individuals may compute objective probabilities of upward mobility based on the aggregate flux in the occupational structure (Alesina y La Ferrara, 2005); b) they can rely on personal past experiences of social mobility (Piketty, 1995); c) they can make their own assessment of the probabilities of upward mobility based on their idiosyncratic situation (Rainer and Seidler, 2008); d) it is possible that people base their expectations of social mobility on the degree of openness of the society (Alesina and La Ferrara, 2006); e) moreover, from a meritocratic point of view, individuals may accept social inequalities if they believe that wealth is the result of talent and hard work (Benabou and Tirole, 2006).

None of the previous expectations of social mobility, however, take into account how people view themselves on the income ladder. Some of them assume that people already know where they are (such as the objective probabilities of income mobility). The others do not consider this issue (such as the beliefs about meritocracy, which are neutral regarding individual's position on the income ladder). In the late sixties, Runciman (1966) stated that perceptions of inequality in society as a whole are shaped by feelings of relative deprivation at the individual level. Deprivation theory is based upon the idea that people view their own position in relation to others. This assessment is parallel to the "tunnel effect" hypothesis proposed by Hirschman (1973). However, contrary to Hirschman prediction, Runciman concluded that social order is possible in the presence of persistent high inequality. The reason why is because people underestimate the extent of the inequality in the society as a whole. This tendency to underestimate social inequalities was found in several empirical studies (Lockwood, 1966; Rose, 2006). According to Runciman (1966), one possible explanation derives

from reference group theory. Most people have a very limited group of reference within which they make comparisons about their own position in the social hierarchy, given that social groups are relatively homogenous in statuses and incomes. Thus people tend to view themselves really close to the average individual, because they are not so different from the representative member of the group they belong to. This is, of course, a wrong belief, but people behave as it were true.

Rose (2006) has re-examined the conclusions posited by Runciman forty years after his seminal work. Social structures of contemporary societies have remarkably changed during this period, and mass media have now a greater influence in how people evaluate social reality. However, despite these important changes, Rose concluded that individuals continue to make very limited social comparison in their everyday life. As a consequence, they do not appreciate the full extent of inequality. Thus inequality is tolerated and so does not become a source of social conflict. In a similar vein, Evans and Kelley (2004) have found that most people tend to put themselves systematically on the middle of the income ladder. Evans and Kelley interpret this interesting fact as a special case of the “availability heuristic”. That would imply that any given individual builds his own image of the society at large by generalizing from one’s experience within familiar groups and the information they get from the media. Then, “people’s perceptions of their place in the social hierarchy are largely formed by the circle of their close acquaintance” (Evans and Kelley, 2004: 4).

As previously argued, we should expect that preferences for redistribution will depend on expectations about future income and beliefs about mobility. However, measuring expectations of social mobility is not an easy task. Expectations of future income depend on the relative position on the income ladder and a transition matrix of income between periods. While we can compute objective relative positions and transitions matrices, these objective measures do not have to be equal to subjective beliefs, since it is very unrealistic to assume that people have the proper knowledge about the social structure. As previous studies have found, people use to put themselves in the middle of the income ladder (Evans and Kelley, 2004). Therefore, it is more plausible to assume that people make their expectations about future income based upon the belief they have about their current position. Even if they fully know the transition matrix of income, their expected future income will be biased, since they do not really know where they are now on the income ladder. Nevertheless, even if we have information about where people think they are on the income ladder, we cannot know

the probabilities people assign to be in each of the positions on the income ladder in the coming future. The next two sections are devoted to explain how expectations of social mobility at the individual level have been computed in this context and the empirical strategic decisions undertaken.

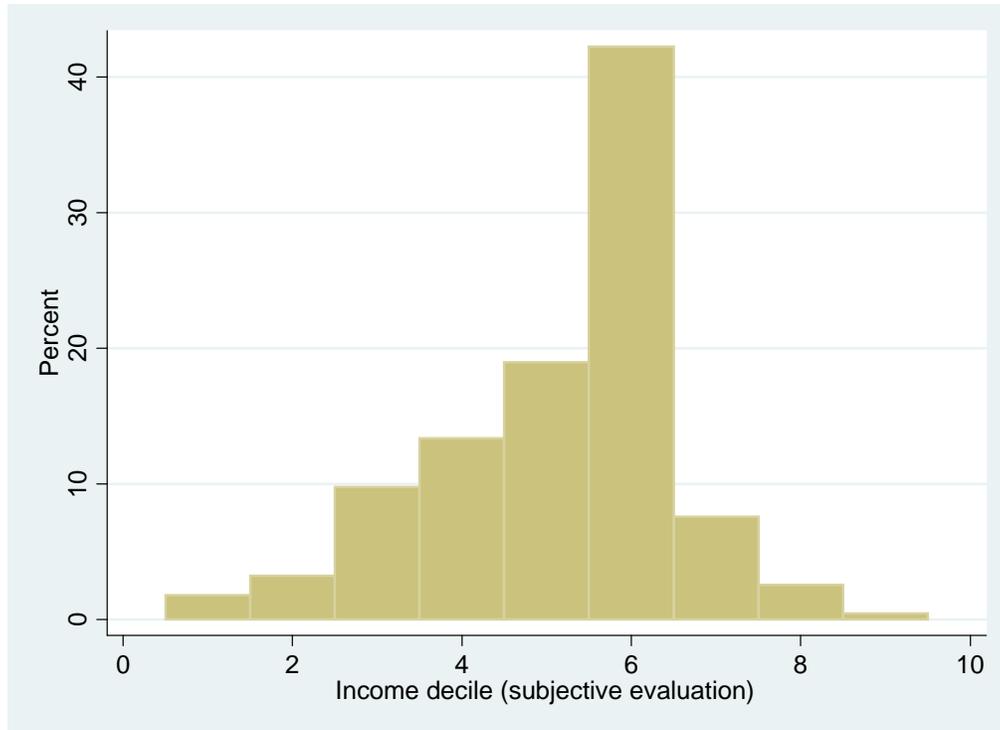
3. Expectations of social mobility in Spain

From a comparative point of view, Spain is a highly unequal country within the European context. Inequality of income distribution at the end of the nineties, as measured by Gini index, was 0.33 (Eurostat, 2000). By this time, that was similar to Greece and Great Britain and only below Portugal. Consequently, Spaniards believe they live in a very unequal society (Jaime-Castillo, 2000). Data from the ISSP (1999) showed that, 89.3 % of Spaniards agree (to some degree) with the statement “differences in income in Spain are too large”. At the same time, demand for redistribution in Spain was higher than the European average, and similar to other Southern European countries. Over a five point scale, the average demand for redistribution was 4.01 with standard deviation 0.93. Only Portugal had a higher average amongst the West-European countries covered by this study. Regarding to social mobility, Spain had intermediate levels of social mobility (Carabaña, 1999) and relatively high level of income mobility (Cantó, 2000). That fact seems to be translated into popular beliefs about social structure. Within the European context, Spaniards believed they live in a relatively open society: 38.2 % of them agree (to some degree) with the statement “people get rewarded for their effort”. This share was lower than in the USA (64.7 %) or in West-Germany (57.0 %), but higher than in most of the European countries, including those with lower levels of inequality.

The last figures seem to reflect some degree of congruence between objective data and subjective perceptions of the reality. However, as it occurs in other countries (Evans and Kelley, 2004), Spaniards have no accurate information about their own position on the social hierarchy. Figure 1 shows the position where people put themselves on the income ladder in Spain. On a ten point scale, 42.2 % of the people put themselves on the point 6, which is the modal value. The mean of the distribution is 5.17 with standard deviation 1.45. An analysis of the relation between the real position on the income ladder and the subjective one reveals two different patterns that would explain the inflation around the middle of the subjective scale. On the one hand, low-

income earners overestimate their position. And at the same time, those at top underestimate their relative position. Therefore, there is a regression to the mean of the income distribution. That would explain why correlation between real income decile of belonging and subjective evaluation, measured by Spearman's rho, is only 0.293, although significant at 95.5 % confidence level.

Figure 1: Perceived position on the income distribution



Source: International Social Survey Program.

The other issue we have to deal in order to estimate subjective expectations about future income is the transition matrix between periods. Unfortunately, this is hard to compute, since survey data do not provide us with enough information to make such calculations. Basically there are two different approaches to find an estimate, both of which have strengths and weakness. For instance, while Rainer and Siedler (2008) use subjective expectations of having an increase (decrease) in pay (in work salaries) along the year to come, Alesina and La Ferrara (2005) use objective probabilities of income mobility between periods of one and five years. These objective probabilities are derived from a transition matrix similar to the one presented in table 1. Alesina and La Ferrara (2005) also include a subjective prospect of mobility: the agreement with the statement that “people like me and my family have a good chance of improving our

standard of living”. However, it is unclear that this variable truly reflects prospects of upward mobility at the individual level. One may contend that this is a measure of the degree of openness at the societal level.

Subjective prospects of increase in pay are problematic since they do not make possible to infer a quantifiable expected future income. Hence, they do not necessarily reflect the subjective probability of being above the mean of income distribution (which is the cut point in the POUM hypothesis), or any other reference point. Alesina and La Ferrara (2005) have found that not all measures of mobility work as a predictor of preferences for redistribution. Interestingly, only those that are related to the probability of being above average income seem to have a significant effect. That would suggest that expectations of social mobility have to be defined in such a way that they make possible to distinguish between net losers and net winners from redistribution.

Table 1: Transition matrix of income mobility in Spain (1993-1998)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1st	35.7	15.7	12.7	9.5	7.1	5.8	5.4	5.2	1.7	1.1
2nd	19.3	17.1	16.4	12.8	10.9	9.4	7.6	4.6	1.9	0.0
3rd	12.3	23.0	8.6	12.5	11.2	6.9	7.5	11.6	2.9	3.5
4th	5.6	12.0	13.9	19.6	8.9	12.9	6.2	6.6	11.2	3.0
5th	7.5	7.2	9.9	14.9	10.5	12.0	8.4	9.0	6.3	14.4
6th	3.9	8.4	8.2	7.6	18.0	17.8	11.2	9.7	12.8	2.5
7th	2.3	4.3	8.5	8.2	16.6	16.4	19.3	13.0	8.5	2.9
8th	2.8	3.8	9.0	6.5	6.7	9.9	16.5	21.9	14.2	8.7
9th		2.7	6.3	1.7	6.0	5.6	12.3	14.3	28.3	22.7
10th			3.5	2.7	3.4	3.1	9.2	8.7	21.1	48.3

Source: European Community Household Panel (Eurostat, 2000).

At the same time, objective probabilities of income mobility may not truly reflect subjective prospects. As it has been shown, individuals have a biased perception about their position on the income ladder. Therefore, it is hard to assume that they will have reliable information about their chances of being mobile. As in the previous case, they may lack important information about the social structure of the society they live in, or they may have “wishful thoughts” in the guise of predictions. In both cases, transition matrices of income mobility are not fully reliable. However, the goal of this paper is to compare the effect of the expectations of social mobility based upon subjective position on the income ladder over preferences for redistribution with that of the expectations of social mobility based upon objective income. It means that we need to have comparable transition matrices to perform the empirical analysis. For that

reason, I have used a transition matrix of income mobility in Spain, similar to the one used by Alesina and La Ferrara (2005). The cells of the matrix have been computed using data from the European Community Household Panel (ECHP). Even if this transition is not an appropriate measure of expected future income, it will allow us to compare the effect of objective and subjective income over preferences for redistribution, under the assumption that individuals fully know mobility chances in the social structure. Thus, if the expected future income based on the perceived position on the income ladder has a stronger effect than the expected future income based on the real income, we will be able to conclude that subjective expectations matters in a different way that previous studies have shown.

Table 1 shows the transition matrix of personal income mobility in Spain between 1993 and 1998. The number in each cell represents transition probabilities between income deciles. So p_{ij} in row i and column j is the probability that an individual whose income is in the i th decile in 1993 moved to the j th decile in 1998. The elements in the diagonal represent the probability of remaining immobile along a period of five years. Cells below the diagonal represent the probability of experimenting downward mobility, and cells above the diagonal represent the probability of having upward mobility. The time interval chosen is five years, as in Alesina and La Ferrara (2005), though they also include an additional interval of one year. As they pointed out, the probability of remaining in the same income decile increases as the length of the temporal interval increases. Small variations in the relative position in the short-run (mostly between adjacent deciles) get cancelled in the long-run. Although there is not a clear theoretical reason to prefer any particular length of time to compute the transition matrix it seem to be the more appropriate to chose a more stable measure such as the five year interval. Regarding to the empirical results of the analysis, Alesina and La Ferrara (2005) experienced with different definitions and time horizons, having fairly similar results with both the one year and the five transition probabilities².

A simple inspection of the transition matrix in table 1, using a simple absolute mobility measure, such as the proportion of individuals outside the main diagonal of the matrix, reveals that 77.3 % of the population experiences some degree of mobility, while the rest remains immobile. On the other hand, the probability of income mobility

² Although results are not reported in tables I have performed a similar analysis using both one year and five year time horizons. The magnitude and the significance of the coefficients in the ordered logistic regressions remained mostly unchanged.

(upwardly or downwardly) is higher in the middle of the income ladder than in the extremes. For instance, the probability of being mobile for those in the 5th decile is 0.895, while the same probability equals 0.643 for those at the bottom income decile and 0.517 for those at the top income decile. Data also suggest that mobility is higher at the bottom of the income distribution. That would indicate that low income positions are more volatile than the high income positions. A closer look at the table shows that mobility is mostly limited to adjacent deciles, so the higher mobility at the bottom of the income ladder is mostly between similar positions. In fact, this is a very general pattern. The probability of changing between any two given deciles is inversely proportional to the distance between them. For instance, the probability of changing more than one income decile within a given period is 0.489 for the whole table, and the probability of changing more than two deciles is 0.315. According to the data in the table, the objective probability of being above the average income in the next five year period is very low at the bottom of the income distribution. Further analysis will show that if people were truly aware of their relative position, only those who are above the average now should expect to be above the average in the next period³. That would mean that if people are using objective probabilities of mobility, expected future incomes will have a very limited impact over preferences for redistribution, under the assumption of risk-neutrality.

4. Data and methods

As argued previously, preferences for redistribution are shaped by probabilities of social mobility and meritocracy, though probabilities of social mobility are not necessarily accurate. Even assuming that people know what these probabilities are, their expected income will depend on where they put themselves on the income ladder. To deal with this problem two different probabilities of income mobility have been computed. The objective probability refers to the real probability of being mobile, derived from the current relative income and the chances of mobility between deciles; subjective probability refers to the self-assessed probability of being mobile, taking into account the place where people view themselves on the income distribution.

³ Calculations are straightforward. Given that only the 7th to 10th deciles have higher income than the average, and after computing the probability of being in the 7th to 10th deciles for each decile, it can be shown that only those in the range 7th to 10th deciles have probabilities bigger than 0.50 of being in the same range.

Data and variables

In order to test whether objective or subjective probabilities are the most important factor shaping preferences for redistribution at the individual level, two different sources of data have been used. Attitudinal variables come from the International Social Survey Program (ISSP): “Social Inequality III” (1999). Data about income and income mobility were computed using the European Community Household Panel (ECHP, 1999, 6th wave). The dependent variable used in this research is the individual preference for redistribution. Respondents were asked about their level of agreement with the following statement: “It is responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes”. The ordered categorical responses were: (1) “strongly disagree”, (2) “disagree”, (3) “neither agree nor disagree”, (4) “agree”, and (5) “strongly agree” (the order of the response categories was the opposite in the questionnaire, but were reversed for easier interpretation).

Table 2: Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
Government must reduce differences in income	4.008	0.934	1	5
Real income	3431.303	1220.600	1384	8710
Expected income (objective probability)	4428.260	903.231	3055.33	8419.412
Expected income (subjective probability)	5180.268	701.542	3055.33	8419.412
Probability of being in the 7th-10th deciles (objective)	0.245	10.851	12.4	84.5
Probability of being in the 7th-10th deciles (subjective)	0.325	9.824	12.4	84.5
People get rewarded for their effort	2.893	1.089	1	5
People get rewarded for their skills	3.057	1.033	1	5
Gender	1.509	0.500	1	2
Age	45.187	18.315	18	91
Education level	1.211	0.807	0	3
Work status	2.055	0.964	1	3
Self-employed	0.126	0.332	0	1
Public worker	0.123	0.329	0	1
Union’s member	0.069	0.254	0	1

Source: International Social Survey Program.

Four types of explanatory variables are included in the analysis: personal income, expectations of mobility and future income, perception of meritocracy in

society, and socio-demographics variables. Personal income is computed as the mean income of the decile to which the individual belongs. The data of mean income by decile is from ECHP 6th wave (1999). Natural logarithm of annual personal income is taken as explanatory variable in statistical models. Expected future income is measured using the method followed by Alesina and La Ferrara (2005). However, I distinguish between the objective and the subjective expected future income, although I assume that probabilities of mobility are common knowledge. The objective expected future income is computed as if individuals already know their position on the income ladder:

$$OEI_{d,t} = \sum_{i=j}^{10} pd_j \bar{y}_{j,t+1}$$

This expression represents the income that an individual who is in decile d at time t will expect to have at time $t+1$. This is a weighted average of the mean income of all deciles in time t , where the weights are the probabilities that the individual has to move to those deciles from t to $t+1$, departing from the income decile he is at time t . The subjective expected future income is computed as a function of the income decile individuals think they belong to:

$$SEI_{s,t} = \sum_{i=j}^{10} ps_j \bar{y}_{j,t+1}$$

This expression represents the income that an individual who thinks is in decile s at time t will expect to have at time $t+1$. This is a weighted average of the mean income of all deciles in time t , where the weights are the probabilities that the individual has to move to those deciles from t to $t+1$, departing from the income decile he think he is at time t . Natural logarithms of objective and subjective expected future income are taken as explanatory variables. In both cases, probabilities of changing from one income decile to another are those contained in the transition matrix reported in table 1.

The second measure of expectations about the position on the income ladder is the probability of being above the mean income in the next period. Given that mean personal income for the whole population in the period analyzed is euro 5.617, and the mean income for sixth and seventh deciles is euro 4.992 and 5.958, respectively, we can safely say that those in the seventh decile are above mean income (which is similar to the results used by Alesina and La Ferrara). As for the case of the expected future income, objective and subjective expectations are computed. Objective probability of being above the mean income is computed according to the following expression:

$$\Pr(J - 10 \text{ decile})_d = \sum_{j=1}^{10} p_{dj}$$

This expression represents the probability that an individual whose income is in decile d in time t will move to deciles greater or equal to J in time $t+1$. Subjective probability of being above the mean income is computed according to the following expression:

$$\Pr(J - 10 \text{ decile})_s = \sum_{j=1}^{10} p_{sj}$$

This expression represents the probability that an individual whose who think is in decile s in time time t will move to deciles greater or equal to J in time $t+1$.

Perception of meritocracy is measured through two variables, reflecting the degree of agreement with the two following statements: “people get rewarded for their effort” and “people get rewarded for their skills”. Ordered categorical responses are the same that those of the dependent variable. Socio-demographic variables include those that reflect differences in sources of income: gender (0 = “Male”, and 1 = “Female”), age and age squared, education level⁴ (0 = “No formal education”, 1 = “Primary School”, 2 = “Secondary School”, and 3 = “University”), work status⁵ (1 = “Employed”, 2 = “Unemployed”, and 3 = “Not in the labor force”), and self-employed (0 = “No”, and 1 = “Yes”). Two additional variables have been included: private or public sector in which the person works (0 = “Private sector”, and 1 = “Public sector”), and trade union’s membership at the present time (0 = “Not member”, and 1 = “Member”). A descriptive analysis of these variables is reported in table 2.

Statistical methodology

Given that the dependent variable is ordered categorical I have used ordered logistic regression to estimate the effect of explanatory variables (Greene, 2008; McKelvey and Zavoina, 1975). I assume that support for redistribution of individual i can be defined by a latent variable y_i^* , which is a function of a vector of individual characteristics x_i :

⁴ This variable has been recoded from original values. No formal education category includes those who have no education and those who have not finished primary education. In the same vein, those who have not completed an educational level have been assigned to the highest they have completed.

⁵ This variable has been recoded from original values. Employed category includes full-time and part-time workers. Not in the labor force category includes those who are helping a family member, students, retired people, housewife or houseman, permanent disabled and others not in the labor force.

$$y_i^* = \beta'x_i + \varepsilon_i$$

We do not observe y_i^* , but a variable y_i taking values 1 to 5 increasing in individual support for redistribution. The probability that an individual observed preference for redistribution y_i is m can be expressed as the probability of y_i^* being between cutpoints μ_{m-1} and μ_m :

$$P(y_i = m | x_i) = P(\mu_{m-1} \leq y_i^* < \mu_m | x_i)$$

Then, we can compute the probability of being in the m category as:

$$P(y_i = m | x_i) = \Lambda(\mu_m - \beta'x_i) - \Lambda(\mu_{m-1} - \beta'x_i)$$

Assuming that the distribution of the error term ε_i is logistic, we estimate an ordered logistic model. For purposes of testing the robustness of the estimates an ordered probit model has been estimated for each one of the logit reported, although coefficients are not displayed in table 3. The sign, the significance level and the magnitude of both estimates were pretty similar.

5. Findings and discussion

This section presents the results of two empirical analyses of preferences for redistribution. First, I will focus on the effect of the prospect of upward mobility on preferences. Specifically, I test the hypothesis that the probability of being above average income will shape preferences for redistribution, using both objective and subjective evaluations of relative position on the income ladder. Second, I focus on the effect of expected future income on preferences. In this case, I test the hypothesis that preferences for redistribution depends on expected future income. Both objective and subjective expected income are used in statistical analysis. In this case, present income is not incorporated in the equation because of technical reasons. That is, the present income is highly correlated with future income, given that the last one strongly depends on the first one. That would amount to assuming preferences for redistribution are independent from present income, so they are only shaped by prospects of future incomes, though this assumption is neutral regarding the relative effect of subjective and objective expectations. Several statistical specifications have been run in order to test each of these hypotheses. Socio-demographic variables are always present as controls. The Wald test proposed by Brant (1990) has been used to test the parallel regression assumption (also known as the proportional odds assumption), which entails

that the coefficients of the $m-1$ binary logits implied by the ordered logit share common regression parameters. The results of the test show that parallel regression assumption can be hold.

Prospect of upward mobility

To test the hypothesis of upward mobility four ordered logistic regressions have been estimated. Results are displayed in table 3. The first model includes only socio-demographic characteristics and the logarithm of the real income (column 1 in table 3). In this model, real income has a negative and significant effect on preferences for redistribution. Among the other variables, only union membership has a significant effect over preferences. That supports the general hypothesis of self-interest, according to which, preferences for redistribution will be lower as the income increases.

In the second model, a new set of variables is incorporated: the probabilities of moving to deciles seventh or higher on the income distribution in the next period, which is equivalent to the probability of being above mean income (column 2 in table 3). I consider both objective and subjective probabilities. In this model, both the logarithm of the real income and union membership hold a significant effect, and the subjective probability of being above the mean income also has a significant and negative effect. However, the objective probability does not have a significant impact on the dependent variable. That finding has two different implications. Firstly, it supports the idea that wealth is important to explain preferences for redistribution, given that income and subjective probability of having income above the average in the future will affect preferences. Secondly, it shows that the subjective evaluation (conditional on the perceived social position) is more important than the objective one.

Table 3: Preferences for redistribution. Ordered logistic regressions

	Prospect of upward mobility				Expected future income			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Real income (ln)	-0.528 ^b (0.226)	-0.687 ^c (0.353)	-0.414 ^c (0.236)	-0.516 (0.367)				
Expected income (objective) (ln)					-1.039 ^b (0.463)		-0.828 ^c (0.482)	-0.574 (0.494)
Expected income (subjective) (ln)						-1.657 ^a (0.443)	-0.926 ^c (0.553)	-1.041 ^c (0.570)
Prob. 7-10 deciles (objective)		1.333 (1.344)		1.100 (1.369)				

Prob. 7-10 deciles (subjective)	-1.770 ^b (0.875)		-1.834 ^b (0.917)					
Effort			-0.271 ^a (0.096)	-0.273 ^a (0.097)				-0.282 ^a (0.097)
Skills			0.042 (0.099)	0.080 (0.101)				0.088 (0.100)
Female	-0.233 (0.158)	-0.209 (0.162)	-0.244 (0.163)	-0.234 (0.166)	-0.235 (0.159)	-0.083 (0.125)	-0.230 (0.161)	-0.250 (0.165)
Age	0.019 (0.024)	0.021 (0.025)	0.021 (0.025)	0.023 (0.025)	0.020 (0.024)	0.019 (0.019)	0.024 (0.025)	0.025 (0.025)
Age squared	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Primary school	-0.062 (0.231)	-0.095 (0.237)	-0.035 (0.239)	-0.054 (0.246)	-0.056 (0.231)	0.000 (0.198)	-0.061 (0.237)	-0.021 (0.245)
Secondary school	-0.384 (0.291)	-0.451 (0.303)	-0.405 (0.300)	-0.439 (0.313)	-0.365 (0.293)	-0.342 (0.243)	-0.382 (0.299)	-0.378 (0.308)
University	-0.447 (0.349)	-0.483 (0.362)	-0.408 (0.356)	-0.402 (0.372)	-0.420 (0.352)	-0.497 ^c (0.303)	-0.409 (0.358)	-0.343 (0.367)
Unemployed	0.039 (0.345)	0.207 (0.352)	-0.030 (0.351)	0.160 (0.359)	0.065 (0.342)	0.442 ^c (0.243)	0.212 (0.348)	0.157 (0.354)
Not in the labor force	0.317 (0.235)	0.363 (0.237)	0.304 (0.239)	0.361 (0.241)	0.332 (0.234)	0.265 ^c (0.154)	0.383 (0.236)	0.377 (0.239)
Self-employed	0.015 (0.215)	0.043 (0.217)	0.014 (0.221)	0.044 (0.224)	0.016 (0.215)	0.171 (0.194)	0.038 (0.217)	0.039 (0.224)
Public worker	0.172 (0.224)	0.236 (0.227)	0.159 (0.228)	0.211 (0.231)	0.169 (0.224)	0.262 (0.195)	0.207 (0.227)	0.192 (0.231)
Union's member	0.514 ^b (0.257)	0.512 ^b (0.258)	0.502 ^c (0.259)	0.506 ^c (0.260)	0.507 ^b (0.257)	0.451 ^c (0.235)	0.521 ^b (0.258)	0.517 ^b (0.261)
Threshold μ_1	-7.896 (1.838)	-9.415 (2.698)	-7.575 (1.921)	-8.577 (2.819)	-12.300 (3.809)	-17.788 (3.805)	-18.365 (5.386)	-17.729 (5.588)
Threshold μ_2	-6.430 (1.824)	-7.961 (2.688)	-6.104 (1.907)	-7.120 (2.810)	-10.833 (3.802)	-16.153 (3.799)	-16.913 (5.381)	-16.274 (5.583)
Threshold μ_3	-5.460 (1.821)	-7.002 (2.685)	-5.143 (1.905)	-6.170 (2.807)	-9.864 (3.801)	-15.230 (3.797)	-15.956 (5.379)	-15.326 (5.582)
Threshold μ_4	-3.362 (1.813)	-4.874 (2.677)	-3.010 (1.896)	-4.006 (2.800)	-7.767 (3.792)	-12.993 (3.789)	-13.834 (5.369)	-13.164 (5.572)
No. Obs.	691	677	670	657	691	1057	677	657
McFadden's pseudo-R ²	0.014	0.018	0.021	0.024	0.014	0.015	0.017	0.023
Log likelihood	-838.3	-816.6	-810.4	-790.3	-838.5	-1263.6	-817.7	-790.8

Notes: a, b, and c indicate significance level at 1%, 5%, and 10% level, respectively. Standard errors between brackets.

Source: International Social Survey Program.

The third model includes perceptions of openness and meritocracy in society, removing from the model the probabilities of been above the average income in the next period. Two variables are included at this step: the feeling that people get rewarded for their skills and the feeling that they rewarded by their effort (column 3 in table 3). The last variable has a negative, significant and strong effect over the preferences for

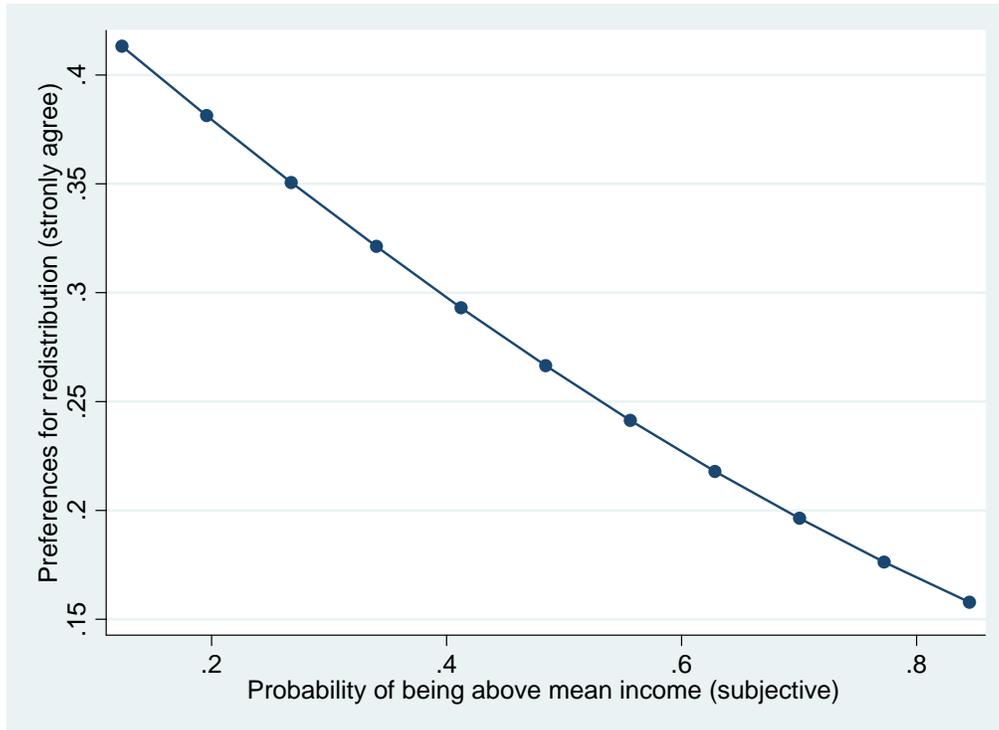
redistribution, although the first one has no significant effect. Those who think that people get rich (or not) proportionally to their effort are prone to accept inequalities and therefore reject redistribution. Interestingly, the belief that the sources of income differentials are the innate skills has no significant effect at all. That means that people accept inequalities caused by circumstances that depends on persons' will (such as the effort they exert), but not by innate circumstances, which are beyond persons' decisions. The degree of openness of the society is important in order to explain preferences for redistribution as it makes possible that people with different backgrounds and different levels of abilities may get rewarded by their personal effort, but not by nature.

The full model includes probabilities of being above mean income and perceptions of meritocracy (column 4 in table 3). As Alesina and La Ferrara (2005) have previously found, both the probabilities of being above the mean income in the next period and the feeling that people get rewarded by their effort have a significant impact on preferences for redistribution (rewards based upon innate ability remain no significant). However, as in the second ordered logistic regression, only subjective probabilities have a significant impact. Interestingly also, in the full model, the natural logarithm of income is not significant, though the magnitude of the coefficient is similar to that of the first model. These findings support the hypothesis that preferences for redistribution are shaped by expectations of upward social mobility, but what really matters is the subjective probability of being upward mobile, based on the subjective evaluation of one's position on the income ladder. Statistical results explain well why some rich people still favor redistribution, given that they view themselves very close to the average income earner. As Runciman (1966) argued, people tend to evaluate their position in the social structure through the social group they belong to. And since social networks of acquaintances are relatively homogeneous in terms of social statuses and incomes, people may think they are close to the average in the whole society, as long as they are close to their networks' average.

A further analysis is required to show the influence of subjective expectations of social mobility over preferences for redistribution. Figure 2 graphs subjective probabilities of being above mean income in the next period against the probability of strongly agree with the statement "the government must reduce differences in income". The graph shows a negative relationship between the two variables in the whole range of expected probabilities of upward social mobility. Thus, for those who have a low probability of been above mean income in the next period (below 20 %) the probability

of strongly agree is above 40%. Conversely, for those whose income will be above the mean income with high probability (above 80 %) the probability of strongly agree is around 15 %.

Figure 2: Preferences for redistribution and the probability of being above the mean income



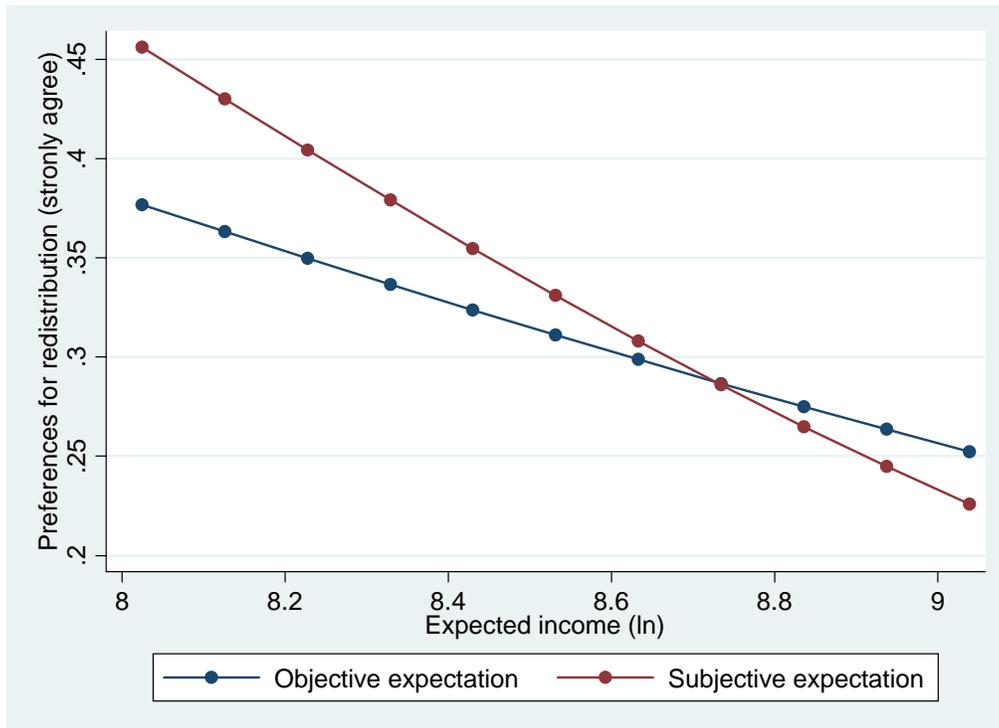
Source: International Social Survey Program.

The socio-demographic characteristics of the individuals do not seem to have a significant impact on preferences for redistribution in the estimated models, although the direction of the coefficients is the expected. For instance, the relationship between education level and demand for redistribution is negative but not significant. Also public workers prefer a higher redistribution but the effect of the working status is no significant. Only union membership has a significant impact on preferences. Those who are members of unions demand a higher level of redistribution. That seems to reflect an ideological predisposition in favor of redistribution of those who belong to workers' organizations. It also reflects the influence of these organizations in shaping a "class consciousness", which is expressed in political preferences.

Expected future income

In the second step, I will explore the relationship between expected future income and preferences for redistribution. Although we should expect to get similar results it is important to test whether the previous findings are robust enough, so they can be found using different model specifications. Four ordered logistic regressions have been estimated. The first model includes the natural log of the objective expected future income as explanatory variable as well as controls (column 5 in table 3). The estimates show that objective expectations have a significant impact over preferences in this model. Those who expect to have a lower income (based upon objective probabilities) will demand higher redistribution. This finding reinforces the hypothesis of self-interest and the idea that people cares about the future. In the second regression, the natural log of subjective expected future income has been used as explanatory variable (column 6 in table 3). Statistical results show that subjective expected future income also has a significant impact over preferences for redistribution. Moreover, the magnitude of the coefficient is higher, although standard errors are similar.

Figure 3: Preferences for redistribution and expected income



Source: International Social Survey Program.

The third regression includes both the natural log of the objective and the subjective expected future income (column 7 in table 3). Both variables have a

significant impact on preferences for redistribution, showing that both expectations matters, although the coefficient for subjective expectations is higher. The last model includes expected future income (both objective and subjective) and meritocracy as explanatory variables (column 8 in table 3). The results show that, controlling for meritocracy, objective expected future income is not longer significant. On the other hand, the impact of meritocracy is similar to those referred in the first step. Those who think that people get rewarded for their effort oppose redistribution. However, there are not significant differences in preferences for redistribution depending on what people think about the relationship between rewards and innate skills. And socio-demographic characteristics of the individuals remain not significant, though union's membership is significant.

These findings are mainly coincident with those I have found at the first step, and they support the idea that preferences for redistribution depends on expectations about future income. Nevertheless, when we take into account the combined effect of subjective and objective expectations, as well as meritocracy, only subjective expectations remain statistically significant. Figure 3 shows the relationship between the natural log of the expected future income (both objective and subjective expectation) and the probability of strongly agree with the statement “the government must reduce differences in income”. As we can see, the variation in preferences for redistribution is sharper for subjective expectations than for objective expectations. Focusing on subjective expectations, for those who expect to have an income below Euro 3.000 in the next period the probability of strongly agree with the statement is above 45 %. At the other extreme, for those who expect to have an income above Euro 8.000 the probability is near to 20 %. If we focus on objective expectations, variation in probabilities is considerably lower: from 37 % to 25 %.

6. Conclusions

Metlizer and Richard (1981) predicted that preference for redistribution will depend on the relative position on the income ladder. However, further empirical research has shown that the link between income and preferences is rather weak, both at the aggregate and the individual level. A strand of research has recently addressed this problem by incorporating the expectations of future income (Alesina and La Ferrara, 2005, Benabou and Ok, 2001). Since relative income positions are dynamic and

redistributive schemes are supposed to be effective for a period long enough, people not only care about their present income, but also about expected future income levels. Another strand of research has proved that meritocracy and beliefs about social structure have an impact on preferences for redistribution (Benabou and Tirole, 2006). People may accept inequalities to some degree if they think these inequalities are the product of different levels of effort. None of these previous works has taken seriously into account the fact that people have a rather limited knowledge about their own position on the social structure. According to relative deprivation theorists, people deduce their relative position from comparisons they make in everyday life (Runciman, 1966). Given that the range of comparisons is limited to those with whom they interact frequently, and that social networks are relatively homogeneous in terms of social statuses and income, people tend to underestimate the extent of the inequalities in the society as a whole. As a consequence, people also have a propensity to view themselves near to the average income earner.

The main goal of this paper has been to confirm these findings of previous studies about the relationship between expectations of social mobility and preferences for redistribution in the Spanish case. Spain has a relatively high level of inequality (as compared to other European countries). And at the same time support for redistribution is high among the whole population, which implies low differences between incomes levels. However, as it has been found in a general survey of countries (Evans and Kelley, 2004), Spaniards have no accurate awareness of their relative position on the income ladder. Thus, they use to put themselves on the middle of the income distribution, since the richer systematically underestimate their relative position and the poorer overestimate their own. Following the framework proposed by Alesina and La Ferrara (2005) for the analysis of the relationship between social mobility and preferences for redistribution, though in a reduced scope, this research departed from previous works on the topic differentiating between objective and subjective probabilities of mobility. The first ones are computed as if people were aware of their relative income. The second ones take into account the place where people put themselves on the income ladder. Similarly, objective and subjective expected incomes have computed using the same set of assumptions.

Empirical results show that real income and meritocracy are the main forces shaping preferences for redistribution in Spain. The probability of supporting redistribution decreases as the income increases. However, it has been also found that

subjective expectations about future income levels are more important than objective expectations. According to these findings, it can be said that is not where you are (or where you should be in the future), but where you think you are (or where you think you will be), what mostly determines attitudes towards redistribution. A second analysis has found that both the objective and the subjective expected future income have a significant impact over preferences. However, if both variables are incorporated at the same time in the equation (along with meritocracy at the other controls), only subjective expectations remain significant.

These results altogether would imply that expectations of social mobility are very important in order to explain preferences for redistribution. However, they also reveal that conventional measures of expectations are not accurate. What is most important, what affect preferences for redistribution is not the objective probability of being mobile, but the subjective expectations formed through daily life interactions. The most plausible explanation for these findings comes from relative deprivation theory. People tend to estimate their position on the income ladder from comparisons made in a narrow range of income, so they feel themselves like the average income earner, though it would be somewhat possible that people may overestimate their true probabilities of upward mobility. This research has convincingly shown that subjective expectations really matter, and that the measurement of social mobility' expectations has to deal with subjective beliefs more carefully. Nevertheless, further research will must to be undertaken in order to investigate the mechanisms through which these expectations of social mobility are formed at the individual level.

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