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Preferences for redistribution in the land of opportunities

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Abstract

This paper explores how individual preferences for redistribution depend on future income prospects. In addition to estimating the impact of individuals' socioeconomic background and of their subjective perceptions of future mobility, we employ panel data to construct 'objective' measures of expected gains and losses from redistribution for different categories of individuals. We find that such measures have considerable explanatory power and perform better than 'general mobility' indexes. We also find that preferences for redistribution respond to individual beliefs on what determines one's position in the social ladder. Ceteris paribus, people who believe that the American society offers 'equal opportunities are more averse to redistribution.

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1. Introduction

Amongst the three traditional roles of the government, provision of public goods, stabilization and redistribution, the latter is increasingly important in today's industrial countries. In 1960, the average share of the government transfers was about 8% of GDP in

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OECD countries versus 15% of provision of public goods and services. Today these two figures are about 16% and 17%, respectively, Thus, while the share of social spending and transfers has doubled, that of government consumption has stayed roughly constant.[1] In order to explain the size of government in industrial democracies, one must therefore understand what are the determinants of the demand for redistribution. This is the goal of the present paper.

Since redistribution is meant to go from the 'wealthy' to the 'poor', at any point in time one would expect the latter to favor it and the former to oppose it. However, the effect in income on preferences for redistribution is more complex. To the extent that today's poor may be the wealthy of tomorrow, and vice versa, the prospects of future positions in the income ladder should affect individuals' current preferences for redistributive policies. We focus on the role of future income prospects and provide considerable evidence that the Americans do take them into account when evaluating the pros and cons of redistribution. More specifically, we estimate the role played by dynamic considerations over individual income profile using three types of indicators: (i) individuals' account history of *past* mobility, (ii) individuals' *subjective* perception of their future standards of living and (iii) *objective*' indexes of expected future gains and losses from redistribution, constructed from long panel data. While the first two types of indicators have to some extent already been employed in the literature on preferences for redistribution, the latter never has. Indeed, we find that controlling for a number of individual characteristics, the higher an individual's expected income and the higher his/her likelihood of being in the upper deciles of the income distribution over the next 1–5 years, the lower his/her support for government redistribution. Furthermore, while such measures of expected gains and losses from redistribution (derived from standard political economy models) perform rather well in explaining individual preferences, general indexes of upward and downward mobility do not.

The relevance of economic considerations on individual expected gains and losses from redistribution should not lead to the conclusion that such calculations are the only, or the main, factor driving support for redistributive policies. For a given extent of mobility in society, the belief on whether the mobility process is 'fair' or on whether society offers *equal opportunities* to its members may be an important determinant of the demand for redistribution. We find that those who believe that the United States is a land of equal opportunities, so that effort and ability determine socioeconomic success, do not look favorably at government redistribution. On the other hand, those who believe that the social 'rat race' is not a fair game, e.g. because it is important to know the right people or because not everyone has a chance to get an education, are more supportive of government intervention in redistributive matters.

A recent and rapidly growing literature has addressed the question of what determines the demand for redistribution. Benabou and Ok (2001a) have focused on the role of social mobility and have modelled the "prospect of upward mobility"

[1] All the data are from OECD. On the one hand, these figures may underestimate the amount of redistribution since some of ther government wage bill, which is classified as consumption of goods and services, has redistributive component. On the other hand, a portion of these tranfers do not go to the poor strictly defined.

(POUM) hypothesis. According to their model, when redistributive policies cannot be changed too frequently, there can be a range of individuals with income below the mean who oppose such policies because they rationally expect to be above the mean in the future, and the mass of people who oppose redistribution can be a majority in the population. Piketty (1996) proposes a learning model, which implies a link between social mobility, beliefs about whether effort or luck determine income, and individual preference for redistribution, and finds empirical support for its predictions using data from the General Social Survey (GSS).[2] Moffit et al. (1998) analyze how a median voter model and other attitudinal variables explain the pattern of the preferences for more or less welfare spending in the US. As we discuss below, welfare spending is only one, and an especially politically charged one, instrument to redistributive income along the social ladder. Alesina and Glaeser (2004) contrast the redistributive policies of US and Western Europe.

Several empirical papers have tried to measure the extent of social mobility.[3] The relationship between social mobility and individual demand for redistribution is studied by Ravallion and Lokshin (2000) on Russian data, Corneo and Gruner (2002) using an international survey on several OECD countries, and by Corneo (2001) for Germany and the United States.[4] All these papers use cross-sectional data containing both the respondents' opinion on the desirability of redistributive policies and their *self-assessments* about their likelihood of being upwardly mobile, and they conclude that the latter significantly affect attitudes towards redistribution. The effect of beliefs in the source of income differences (merit or luck) on individual opinions regarding redistribution is estimated by Fong (2001) in a recent paper using Gallup Poll data for the US in 1998. She finds that such beliefs have and independent effect on preferences for redistribution which cannot be explained through 'self-interest'.

The present paper differs from the existing empirical literature in several respects. First, while all existing studies relate an individual's attitude towards redistributive policies to her *own* past experience of mobility (or to her subjective beliefs about the future), we also consider the role of the *general* mobility as objectively present in the society. This is an improvement on work that only uses past mobility because someone who lives in a particularly mobile environment may be convinced that she has good prospects of moving up the income ladder regardless of whether this has already happened to her. On the other

[2] The relationship between beliefs on the relative importance of individual effort and the demand for redistribution has recently been analyzed by Alesina and Angeletos (2003) and Benabou and Tirole (2003).

[3] For an early survey and assessment of data problems, see Atkinson et al. (1992). More recently, Checchi et al. (1999) found the intergenerational social mobility is higher in the United States than in Italy and redistributive policies are more extensive in Italy than in the US. In a comparison of Sweden and the US, Bjorklund and Jantti (1997) reach inconclusive results. Looking at British data, Gardiner and Hills (1999) find mixed evidence on the pattern of income mobility in the UK and on whether these patterns can explain the types of redistributive policies adopted. Finally, Gottschalk and Spolaore (in press) examine different measures of mobility in Germany and the United States and conclude that income mobility is slightly higher in the United States, especially for the middle class.

[4] In the paper by Corneo and Gruner (2002), other motivations of the demand for redistribution, along with the political-economic channel, are taken into account, and the results are shown to differ to Eastern European countries and for Western ones.

hand, 'objective' indexes of future income prospects should not be redundant in the face of individual subjective assessments if there is bias in the way respondents form their expectations or the way they answer the mobility question. In other words, while the existing literature has *either* looked at the individual determinants of the demand for redistribution, *or* assessed the extent of general mobility in the United States, we carry out both efforts at the same time because we believe the two sides cannot be disjoint if we are trying to understand who wants redistributive policies and why. For this purpose, we match the information contained in the GSS with measures of future income prospects representative at the national or state level constructed from the Panel Study of Income Dynamics (PSID). Secondly, we do not rely o a generic measure of mobility, but rather we define an index that is as close as possible to what economic theory predicts should be the 'rational' measure to employ, namely, either expected future income or the likelihood moving above a given income threshold, thus being a net loser from redistribution. Finally, although the GSS is not a panel, its nature of repeated cross section allows us to exploit time variation, as well as geographic variation, in the patterns of future income prospects constructed from the PSID.

The rest of the paper is organized as follows. Section 2 briefly discusses the determinants of the demand for redistributive policies. Section 3 presents our empirical strategy and data. Section 4 illustrates our econometric results and the last section concludes.

2. The demand for redistribution

Who is in favor of redistributive policies? First of all, *current income* should be a good predictor of individual attitudes towards redistribution: the poor should be the main supporters of redistributive policies as in Romer (1975) and Meltzer and Richards (1981). In their framework, a proportional tax on income is levied on individuals with different productivity and the proceeds are redistributed in a lump sum manner. The lower is the pre-tax income of an individual, the higher is her desired tax rate, that is, the extent of redistribution. Anybody with a pre-tax income above the mean would vote for a zero tax, but if the is below the mean, the median voter would choose a positive tax rate.

Some of today's poor may become rich tomorrow and—to the extent that redistributive policies cannot be changed very frequently—they may oppose redistributive schemes that, although advantageous today, may make them net losers in the future. In other words, the prospect of upward mobility influences preferences for redistributive policies, under the reasonable assumption that once in place these policies are relatively stable over time.[5] Thus, in the context of the "linear tax with lump sum redistribution" model discussed above, *expected future income*, in addition to current income, should influence the preference for the size of redistribution.

[5] In our discussion, we shall refer to prospects of upward mobility as decreasing one's support for redistribution, but it should be noted that the same reasoning can be applied to *downward* mobility leading to increased support. In the sensitivity analysis below, we show that the two approaches lead to the same qualitative results.

What follows is a very simple formalization of these ideas. Define y_{it} the (exogenous) pre tax income of a risk neutral individual i at time and y_{it}^d her after tax income. Consider a two-period model in which the tax/transfer scheme is decided at the beginning of the first period and cannot be changed. This scheme involves a linear tax on income, which is then redistributed lump sum. Also, this process involves a waste w, which is convex in the tax rate τ: in particular, $w=(\tau^2/2)\bar{y}$, where $\bar{y}$ represents average income of the community, assumed constant in both periods. Ignoring discounting, the total disposable income of individual i in the two periods t=1,2 is given by:

$$y_{i1}^d + E\left(y_{i2}^d\right) = (1-\tau)\left(y_{i1} + E(y_{i2})\right) + 2\tau\bar{y} - \tau^2\bar{y} \tag{1}$$

where $E(\cdot)$ stands for expected value. Note that Eq. (1) implies a balanced government budget and the single parameter τ captures the size of the redistributive scheme. The tax rate most preferred by individual i can be obtained by maximizing Eq. (1) and is equal to:

$$\tau_i^* = 1 - \frac{1}{2\bar{y}}\left(y_{i1} + E(y_{i2})\right). \tag{2}$$

Thus, the level of redistribution desired by an individual is decreasing in her current and future expected income. The relevant "future" is the period in which the tax/transfer scheme is held unchanged. Particularly important is the mobility of the voters close to the median, as a determinant of the equilibrium amount of redistribution. In fact, Benabou and Ok (2001a) show that there exists a range of individuals with below-mean income who oppose redistribution if their expected income is a concave function of today's income.[6]

In reality, redistributive programs are more complex than those implied by the linear tax schedule à la Meltzer and Richards, that is, tax/transfer schemes can be very non-linear. The eligibility for certain programs is often related to being below a given threshold in income. In this case, the *probability* of being above the relevant income threshold should be an indicator of how social mobility influences individual preferences for redistribution.

Consider then the following extreme case of non-linearity. Individual pre tax incomes are distributed on the support $[y^m, y^M]$ with cdf $F(y)$. People vote in period 1 for a tax/transfer scheme that will stay in place for two periods. The scheme is designed as follows: each individual i receives a transfer s if her income is below a given threshold $\tilde{y}$ and pays a lump sum tax h if it is above. Formally:

$$s_i = \begin{matrix} s \text{ if } y_i < \tilde{y} \\ 0 \text{ if } y_i \geq \tilde{y} \end{matrix}$$

$$h_i = \begin{matrix} 0 \text{ if } y_i < \tilde{y} \\ h \text{ if } y_i \geq \tilde{y} \end{matrix}$$

[6] This concavity is reasonably realistic: it implies that future income prospects are increasing in today's income but at a decreasing rate, a sort of decreasing return in opportunities. This restriction would be satisfied for instance in models with credit constraints in borrowing to invest in education and decreasing returns on investment in human capital.

Ignoring for simplicity the wastage in the tax collection, budget constraint implies that $\int_{y^m}^{y} s_i \mathrm{d}F(y_i) = \int_{y}^{y^M} h_i \mathrm{d}F(y_i)$. The total disposable income of individual i for the two periods is then:[7]

$$y_{i1}^d + E\left(y_{12}^d\right) = y_{i1} + s_{i1} - h_{i1} + E(y_{i2} + s_{i2} - h_{i2}). \tag{3}$$

Let p_i=Pr $ob(y_{i2}>\tilde{y})$. Then, individual i will favor this redistributive scheme if and only if the probability of being a net loser from redistribution tomorrow is sufficiently low, namely:

$$p_i < \frac{s_{i1} - h_{i1} + E(s_{i2})}{E(s_{i2}) + E(h_{i2})}. \tag{4}$$

In summary, the above exemplifications predict that measures of expected future income and chances of being above some given income threshold (which depends on the nature of redistribution) should influence individual preferences for the redistributive role of the government. These are precisely to provide the two measures of future income prospects that we shall employ in the empirical section. In addition to 'objectively measured' indexes of future income prospects, we shall also consider individuals' subjective perceptions. These are likely to provide additional information, either because individuals may have private information about their *own* potential for upward (or downward) mobility, or because they may be under-or over-optimistic about it.[8]

Concerning the information that individuals have in determining their chances of upward mobility, Piketty (1995) emphasizes that when individuals do not know their "true" chances of being upwardly mobile and learning is costly, differences of opinions about redistribution will persist. From an empirical standpoint, this implies that individuals may extract signals about their future prospects of from their own recent experience. So we can expect one's *past history of mobility* to affect views about the desirability of redistributive policies. Note that the personal history of mobility may be one of the reasons why individuals' perceptions of their own future prospects may be different from objective measures, as discussed above.

Another important factor affecting the demand for redistribution is individual *risk aversion.* In fact, redistributive policies constitute a form of insurance so that, for a given degree of mobility, more risk averse individuals should be more favorable to redistribution (see, e.g., Sinn, 1995). For sufficiently risk averse individuals, even though today's redistributive policies may bring a net loss, they may constitute a desirable means of insuring against future downward mobility.

[7] This simple model implies that individuals' ranking with respect to disposable income differs from that with respect to gross income, due to the continuity of the income variable and the lump sum nature of the tax/transfer scheme. This problem can be fixed by a straightforward extension in which income is not continuous but categorical and in which the size of the subsidy is not large enough to move the recipients to the next higher income category (and/or the size of the tax is small enough to maintain taxpayers in the higher categories).

[8] Indirect evidence on this point is provided by Alesina and Glaeser (2004). They note that Americans believe that there is a lot of social mobility in the US and that the poor have a good chance of moving up in the social ladder. Europeans believe that there is much less mobility in their own countries. Direct evidence comparing "objective" measures of social mobility in the US and Europe point to much smaller differences.

All the above factors capture some 'economic' motivations underlying individual support for redistribution. But may be in favor of redistribution. But people may be in favor of redistribution, regardless of their present or future economic benefits, purely for a sense of *altruism*. A related point is that observing poverty may have a negative effect on individuals' utility, therefore to some extent rich voters may favor policies that make them net losers on the income front but increase their overall utility by reducing observed poverty.[9]

Also, individuals' perceptions about *equal opportunities* may shape their attitudes toward redistribution. Consider someone who believes that family background or other exogenous factors unduly influence one's position in the income ladder. This person may favor redistribution regardless of her wealth or mobility prospects, simply to correct for "unfair advantages". On the other hand, someone who thinks that class differences simply reflect merit (e.g., they depend on individual ability) may not support government intervention if differences in "merit" are perceived as fair. Obviously, beliefs about the source of differences in merit (or in ability) could in turn affect the demand for redistribution. For example, if ability were the result of a blind draw by nature, one may still want the government to correct for that. To account for this, in the empirical analysis we shall confine ourselves as much as possible to relatively explicit and incontrovertible statements about "fair" versus "unfair" differences in opportunities (e.g. whether family wealth matters, or it matters whom you know, etc.).[10]

In summary, we identify: (a) current income; (b) measures of future income and relative ranking, including individuals' beliefs about their own mobility; (c) personal history of income mobility; (d) risk aversion; (e) altruism; and (f) beliefs in the existence of equal opportunities for all, as variables that could influence people's preferences concerning government redistributive policies. In what follows, we test the significance of these different channels.

3. Empirical strategy and data

In our baseline specification, we assume that the support for distribution of individual i living in state s at time t can be characterized by a "latent variable":

$$Y^*_{ist} = X_{ist}\beta + M_{ist}\gamma + S\lambda + T\xi + \varepsilon_{ist} \tag{5}$$

where X_{ist} is a vector of individual characteristics such as age, education, etc., which also includes proxies for risk aversion and altruism; M_{ist} is a vector of dummies capturing the individual's past history of mobility and her subjective assessment of own future mobility;

[9] It is also true that observed poverty may have the opposite effect: for somebody who works, the observation of many people who live on welfare may convey the impression of being "exploited" and increase aversion to redistributive policies (see Luttmer, 2001 for evidence on the latter point). Also transfers to the poor may reduce incentives to commit crimes; hence, there may be a link between crime prevention and the demand for redistribution.

[10] The relationship between social mobility and equal opportunities is also stressed Benabou and Ok (2001b) and Bowles and Gintis (2000).

S is a vector of state dummies; T is a vector of year dummies; and ε_{ist} is an error term. The vectors β, γ, λ and ξ are parameters.

We do not observe Y^*_{ist} but a variable Y_{ist} taking values 1 to 7 increasing in individual support for redistribution. In particular, we have

$$Y_{ist} = j \text{ if } \mu_{j-1} \leq Y^*_{isf} < \mu_j \text{ for } j = 1,\ldots,7 \tag{6}$$

where the μ_j's are unknown cut points to be estimated with $\mu_0 = -\infty$, $\mu_7 = +\infty$. Assuming that the distribution of the error term is logistic, we estimate an ordered probit model. In order to facilitate the interpretation of the magnitude of the coefficients, we also collapse the dependent variable into a binary variable taking value 1 if the individual declares a relatively high support redistribution and 0 otherwise (see below for an exact definition).

We begin by estimating our model using individual level data to assess the relative size and significance of the vector of coefficients β (capturing various determinants of preferences) and of γ (capturing the mobility experienced by the individual). Section 4.1 describes the results of this procedure.

We next move to study the *future income prospects* that the individual may face. In order to do this, we use a long panel to construct indexes of expected income and of likelihood to be above a given income threshold which vary by state or by year for each decile of the income distribution. We then identify the decile to which each individual belongs and match the individual with the appropriate index. In terms of the above specification, this amounts to replacing Eq. (5) with:

$$Y^{d*}_{ist} = X_{ist}\beta + M_{ist}\gamma + F^d_{st}\delta + S\lambda + T\xi + \varepsilon_{ist} \tag{7}$$

where d indicates the decile to which individual i belongs and F^d_{st} is an index of future income prospects for someone in the dth decile at time t in state s. In most of our empirical analysis, we will not employ an index that is time and state-varying at the same time, because this would not leave us with enough observations in the transition matrix to construct a meaningful measure. In other words, we will employ alternatively R^d_t and R^d_s. For the same reason, we cannot construct transition matrices for geographical units smaller than a state. Section 4.2 describes these results. In Section 4.3, we test the significance of the various explanatory variables when different types of redistributive policies are explicitly mentioned.

Finally, we are interested in understanding whether perceptions of fairness and of equality of opportunities in society affect individual preferences for redistribution. In order to investigate these effects, we augment our specification with a set of dummies capturing the beliefs of the respondent on which factors contribute to economic success in life. The results are reported in Section 4.4.

The data for our regressions come from two main sources. The first is the General Social Survey (GSS), which since 1974 has interviewed about 1500 individuals every year from a nationally representative sample, asking questions on individual socioeconomic background, but especially on preferences and attitudes towards social and political issues. From this source, we draw our dependent variable, which captures individual support for redistribution, as well as individual controls such as age, sex, education, personal history

of mobility, beliefs on fairness, etc. Our final sample covers the years 1978–1991, which are the ones for which we can match the PSID and GSS.[11]

The second data source is the PSID. This very well known study contains longitudinal data on a representative sample of US individuals from 1968 to nowadays. The initial sample of 5000 respondents has been interviewed every year, and members of each household have been followed in the new households they may have formed, so that the sample has grown to over 50,000 in recent years. The crucial aspect for our purposes is that the panel nature of the study allows us to follow over time the earnings profile of a fairly large set of individuals, and to construct intra-generational mobility indexes for US states over the sample period or for the US as a whole each year.

We use income variables for the period 1968–1993. We measure mobility within any 2 consecutive years in this period, but we also explore longer horizons for our mobility measure. As for the definition of income, our benchmark specification employs total family income measured by the PSID variable "total taxable income of head and wife". This would seem the most appropriate variable, since taxes are levied on this measure of income and many transfer programs are related to it. In any event, we check robustness using alternative measures of income, such as family income including other family members and earnings of the household head (see below for a detailed description).

3.1. Measuring future income prospects

A first way in which one's future income prospects may be assessed is by looking at the *history of past personal mobility*. Starting from GSS data we can construct two such measures. The first captures the individual's status in terms of job prestige, and is a dummy equal to 1 if the respondent has a higher "occupational prestige score" than his father's.[12] The second measure relates to the educational attainment and is the difference between the years of education of the respondent and those of the father. Unfortunately, no information is available in the GSS on the time profile of the respondent's own earnings, so these inter-generational mobility measures are the only available proxies for intra-generational mobility.

A second notion of future income prospects relates to *subjective expectations* and can be proxied by the GSS question "The way things are in America, people like me and my family have a good chance of improving our standard of living—do you agree or disagree?". The original response varies on a scale of 1–5 from "strongly agree" to "strongly disagree". We construct the dummy variable 'expect better life' equal to 1 of the respondent "strongly agrees" or "agrees" and zero otherwise.

As for *objective measures* of future income prospects, several considerations guided our choice. First of all, unless we assume inter-generational altruism in the utility function, an individual's support for redistributive policies should respond to the prospects faced by the

[11] Definitions and summary statistics of all variables are provided in a detailed appendix available in the working paper version of this paper posted on the authors' web sites. For detailed information about the GSS, the reader is referred to Davis and Smith (1994).

[12] For a detailed discussion of the GSS occupational prestige scores, the reader is referred to Nakao et al. (1990) and Nakao and Treas (1990).

Table 1
Transition matrix for US (t, t+1), average 1972–1992

Deciles	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1st	61.78	22.74	8.42	3.70	1.50	0.95	0.48	0.18	0.11	0.13
2nd	20.70	43.42	20.03	7.98	4.16	1.79	0.87	0.59	0.29	0.17
3rd	8.08	18.36	39.54	18.53	8.05	3.66	1.79	1.12	0.55	0.30
4th	4.16	6.53	18.14	36.50	19.44	8.00	3.79	1.94	1.00	0.50
5th	2.21	3.71	7.09	18.55	35.44	18.78	8.08	3.83	1.62	0.69
6th	1.47	2.15	3.16	7.07	18.98	35.12	20.51	7.79	2.72	1.03
7th	0.91	1.31	2.20	3.74	7.18	19.52	36.41	20.02	6.77	1.94
8th	0.57	0.64	1.14	1.94	3.73	7.15	19.72	41.51	19.60	4.01
9th	0.34	0.28	0.57	1.03	1.50	2.95	5.96	19.43	51.24	16.70
10th	0.29	0.32	0.47	0.50	0.83	0.94	2.04	4.11	16.30	74.20

individual herself and not by her children.[13] In addition, if one estimates the interval between two generations to be 25–30 years, it is unlikely to expect that policies voted upon today will necessarily be in place 30 years from now. This restricts our attention to measures of *intra-generational*, as opposed to inter-generational, indexes. Also, we choose to discretize the distribution of income and then look at the *transition matrix* between one income category and the other, in order to get measures that are robust to possible data contamination (see Cowell and Schluter, 1998 on this point).

Table 1 shows the average yearly transition matrix between income deciles (measured on family income) for the United States in the period 1967–1992.[14] The figures in each cell represent "transition probabilities", that is p_{ij} in row i and column j is the probability that an individual whose family income is in the ith decile in year t will move to the jth decile in year (t+1).[15] The elements on the principal diagonal contain the probabilities that someone stays in the same decile, i.e. is "immobile". Immobility defined in this sense is highest at the extremes and decreases monotonically from the extreme deciles towards the fourth and fifth deciles.[16] For instance, individuals whose family income is in the first decile have a 38% probability of moving to a higher decile, and more than half of this probability of moving to a higher decile, and more than half of this probability refers to moving to the second decile. Individuals who start today from the third decile have a 66% probability of being in the third or in lower deciles next year and 34% of moving upwards. Conversely, for individuals in the 10th decile of the earnings distribution, the total probability of moving below the 9th is less than 10%.

Table 2 shows a similar matrix, but calculated on a 5-year interval rather than between 2 consecutive years. Note that, as expected, the elements of the diagonal are

[13] Conversely, if people cared about their children or judged redistribution to be desirable in a hypothetic stationary state, then inter-generational mobility prospects would be an additional determinant of the demand for redistribution.

[14] The original PSID data are for the years 1968–1993, but interviews in a given year refer to incomes earned during the *previous* year.

[15] Notice that Table 1 is reported for expositional convenience, but will not be employed in the econometric analysis.

[16] Notice that for the 1st and the 10th decile the high values on the principal diagonal partly reflect a "truncation" effect: mobility in one direction is in fact impossible by definition.

Table 2
Transition matrix for US (t, t+5), average 1972–1987

Deciles	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1st	47.54	23.66	11.67	5.89	3.76	2.71	1.90	1.30	1.03	0.53
2nd	21.58	30.52	20.52	10.24	6.47	4.37	2.53	1.95	1.25	0.57
3rd	10.97	18.55	26.25	17.43	10.60	6.65	4.23	2.67	1.75	0.90
4th	6.39	9.13	17.48	22.55	17.30	11.27	6.94	4.53	2.84	1.57
5th	4.77	6.00	9.25	17.55	22.10	16.77	10.68	6.69	3.91	2.29
6th	3.51	3.80	5.93	9.50	17.14	21.29	17.37	11.49	6.81	3.16
7th	2.92	2.21	4.23	6.77	10.87	17.25	22.13	17.92	10.84	4.86
8th	2.21	1.88	2.61	4.52	5.75	11.06	19.28	24.06	19.38	9.23
9th	1.71	1.36	1.79	2.29	3.71	6.14	10.75	19.72	32.42	20.12
10th	1.17	1.03	1.08	1.52	2.08	2.93	4.69	8.80	19.91	56.79

significantly smaller in this matrix relative to those in Table 1. Income mobility increases with the time span on which it is calculated. An interesting comparison is that between the two contiguous cells to each diagonal element (to the right and to the left) in Tables 1 and 2. This comparison shows that when we consider mobility between from 1 year to the next, the probability of staying in the same decile is almost twice of moving one decile up or down; on the other hand, when we look at 5-year mobility the gap reduces significantly and the likelihood of moving one decile up or down for people in intermediate deciles (say the fifth or the sixth) is roughly 4 percentage points less than that of being immobile.

Following our previous discussion on the determinants of preferences for redistribution, we employ two measures of potential future loss from redistributive policies. One is *expected future income*, defined as follows

$$EXPINC_{d,(t-1)} = \sum_{i=j}^{10} pd_j \bar{y}_{j,t}. \tag{8}$$

Expression (8) represents the income that an individual who is in decile d at time $t-1$ can expect to have time t, and is a weighted average of the mean income of all deciles in year t (i.e., $\bar{y}_{j,t}$) where the weights are the probabilities that the individual has to move to those deciles from $t-1$ to t (i.e., p_{dj}). We will also experiment with a similar index constructed for a 5-year time span.

Our second measure of future relative success isolates the *probability* that the respondent will have a "relatively high" income in the future and bear a "relatively heavy" redistributive burden. We define the following index:

$$Prob(J - 10 \text{ decile})_d = \sum_{j=1}^{10} p_{di}. \tag{9}$$

Expression (9) is the probability that an individual whose current income is in decile d will move to deciles greater or equal to J in the future. In the empirical work, we set J=7 to capture roughly the probability of being above mean income (in fact, in our PSID sample mean income generally falls in the sixth decile or at the boundary between the sixth and

the seventh), but we also experiment with the different income thresholds. Notice that this index captures "upward mobility" for those of those individuals who start from decile below J, but can be associated with immobility or even downward mobility for individuals in top income deciles. However, our goal is not to construct a general measure of generalized "mobility", but one that is related to the likelihood that the individual will lose or benefit from redistribution.

Knowing the decile to which each GSS respondent belongs, we can match her with the corresponding value for, say, Prob(7–10 decile)$_d$ in two alternative ways. The first is to opt for a 'local' notion of mobility and say that an individual's preferences respond to the average degree of mobility of her decile in the state where she lives. In other words, we can compute a state-specific index Prob(7–10 decile)$_d^s$ from a transition matrix that is constructed pooling all the PSID respondents who lived in state s during any 2 consecutive years between 1967 and 1992.[17] Due to the sample size, it is not possible to construct meaningful transition matrixes for different years within a state, nor for any geographical area smaller than a state.

The second option is to use a time-varying index, say Prob(7–10 decile)$_d^t$, which amounts to computing Prob(7–10 decile)$_d$ for the entire US in every year between 1967 and 1992, and assign to each GSS respondent to the index for the year before the one in which the individual characteristics such age, education or race.[18] For example, the future income prospects of two individuals of the same age and race starting from the same decile in a given year are likely to differ if one has just graduated from college and the other is a high school dropout. We have thus constructed category-specific transition matrixes for each year: the probabilities within each cell were computed by pooling separately the PSID respondents by age of the head (less than 35, 35–44, 45 or more), or by race (white, non-white), or by years of education (less than 12, 12–15, 16 or more). In this case, each GSS respondent is assigned the index of her decile *and* her category in the given year.[19] Analogously, we have constructed state-varying, time-varying and time, and category-varying measures of expected future income and matched them with the GSS using the same criteria.

Fig. 1 shows the distribution across states of our probability index for the median income decile, i.e. Prob(7–10 decile)$_5^s$. Note that, when we have less than 100 individuals matching the criteria for the state-specific transition matrix in the PSID, we report the index as missing.[20] Generally speaking, the North–West displays higher values than the South–East.

[17] For a more detailed description, see Appendix A in the working paper version. Note that each individual in the PSID is counted for the state in which she lived in the second of any 2 consecutive years. For those who have changed state over the sample period, we have tried dropping them for the sample in the year in which the migration occurred, instead of retaining them with the criterion of the second year explained above (which amounts to attributing their mobility to the state of arrival). As can be seen from Table 9 below, our results were unaffected.

[18] There may be difference also across genders but we use family income so differentiating across gender is not possible.

[19] We could not construct category-specific matrices at the state level due to the insufficient number of observations within categories for most states.

[20] The states for which this occurs are Alaska, Delaware, Idaho and North Dakota.

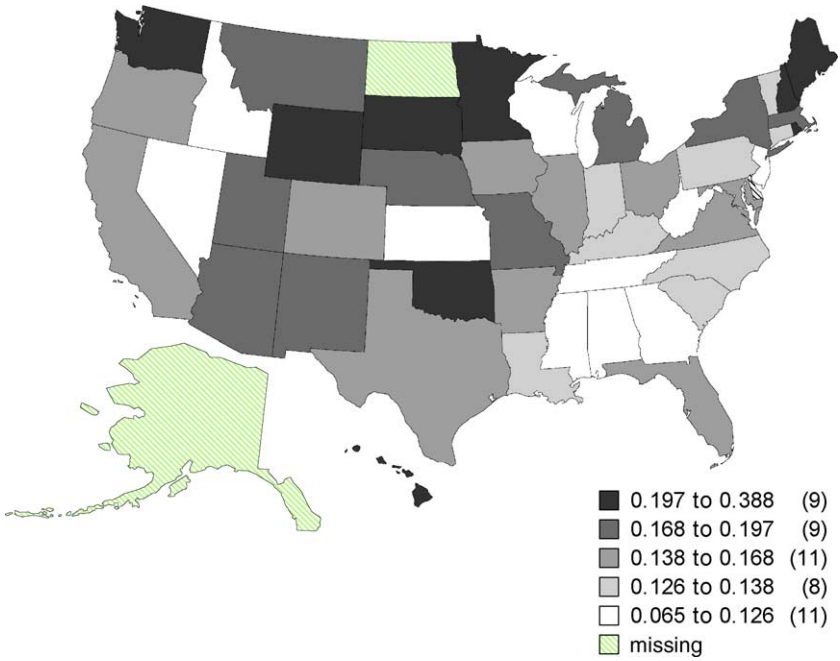

Fig. 1. Probability of moving above the sixth decile for the median voter.

Fig. 2 shows the time series of our probability and expected income variables for the median decile, i.e. Prob(7–10 decile)$_5^t$ (top panel) and EXPINC$_5^t$ (bottom panel). Not surprisingly, expected income is highly correlated with the business cycle, while the other index is not.[21] Obviously, in all regressions we shall control for the cycle using time dummies.

These two measures have pros and cons. The state measure is meant to capture for the "local" notion of future income prospects. A state may, however, by too large or too small depending on what one perceives as the relevant community to look at. It is too large if one's expectations respond to what happens in the neighborhood or city where the individual lives; it is too small if the individual evaluates her prospects by looking at the whole nation. Given the impossibility to construct meaningful indexes at the MSA or county level, we still believe that it is instructive to take into account the geographical variation in the patterns of mobility across the US. On the other hand, the time varying measure, which is constructed at the US level, relies on the changes in the perceived chances of success from year to year. This perception may not change too much in yearly frequencies, and for this reason we also consider 5-year intervals, but looking at longer time horizons severely restricts the size of the sample. We perform all our tests using both types of variables.

[21] The variability of Prob(7–10 decile)$_5^t$ over time may be related to job turnover. For an analysis of wage mobility between and within jobs, see Gottschalk (2000). Note that the declining trend over time is consistent with recent analyses of wage mobility in the US (e.g., Buchinsky and Hunt (1999)), though ours is not really an index of "mobility".

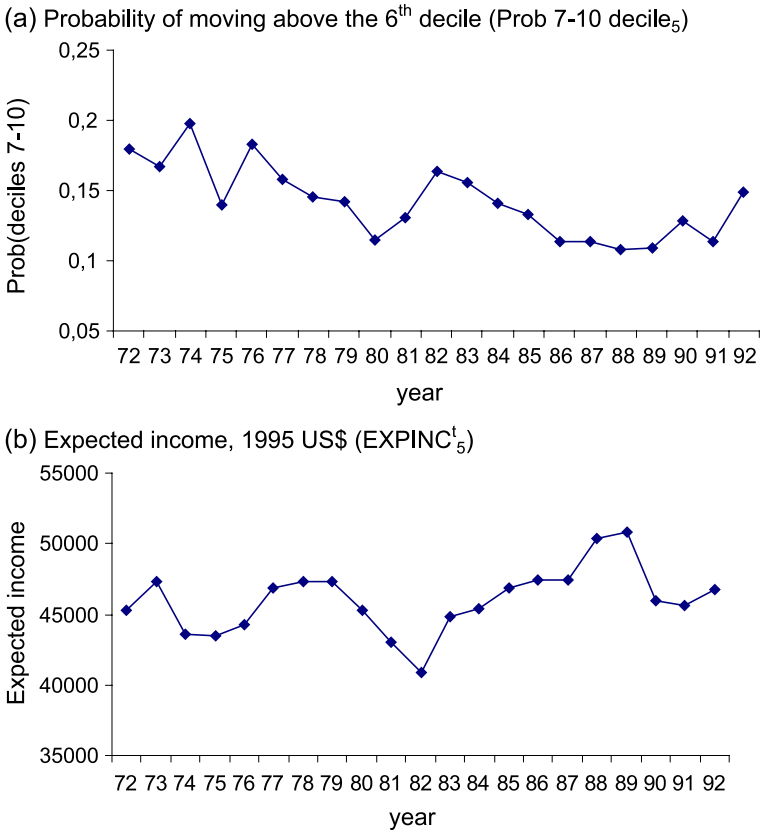

Fig. 2. Time profile of future income prospects for the median voter.

Finally, a word on reverse causality. One may argue that preferences for redistribution translate into voting patterns that generate redistributive policies, which in turn affect social mobility.[22] However, the effect of redistribution on our two measures of future income prospects is unclear. Increasing opportunities for the poor, for instance through subsidized schooling, may increase their upward mobility, but it decreases the relative likelihood of the rich to remain in the top quintiles of the distribution. Furthermore, progressive income taxes may discourage investment in effort and decrease future income even for the upwardly mobile middle class. This means that, if there is a bias, it does not affect our indexes in the same direction for all income categories, precisely because ours are not "overall mobility" measures.

In our empirical analysis, we shall also test whether individuals respond to measures of mobility that are less closely linked to the notion of relative gains and losses from redistribution. We expect these indices *not* to work because they are not meant, to capture prospects of gains and loses from redistributive schemes. For example, we shall test

[22] See Maoz and Moav (1999).

whether preferences for redistribution are influenced by the mobility index proposed by Fields and Ok (1996):

$$(\text{Fields} - \text{Ok})_{st} = \sum_{i=1}^{N} \frac{1}{N} |y^i_{s,t+1} - y^i_{s,t}| \tag{10}$$

where y^i_t individual i's income in state s at time t and N is the total number of individuals. An analogous formula can be used substituting the logarithm for the level of income. Broadly speaking, the index (10) captures the aggregate amount of income shifts in a state between 1 year and the following one, without conveying any information on whether the rank of individuals above and below the mean has changed.

Another general index of mobility can be constructed starting from the Spearman's rank correlation coefficient.[23] In particular, we define the following index:

$$(\text{Spearman mobility})_{st} = 1 - \rho_{st} \tag{11}$$

where ρ_{st} is the Spearman's correlation coefficient for state s in year t, i.e. it captures the correlation between an individual's rank in the income scale in year $t-1$ and that in year t, within a given state.[24] Though compared to Eq. (10), the index (11) does convey information on re-ranking among individual incomes, it does not link mobility to any criterion for losing or gaining from redistribution; hence, we expect it to have low explanatory power in our regressions compared to expected income and to the index Prob(7–10 decile).

Finally, we construct the index of social mobility suggested by King (1983). Let N be the number of individuals living in state s at time t, and denote by y_i the income of individual i and by $\bar{y}$ the mean income in the state. One can evaluate changes in the ranking of individuals between $t-1$ and t in terms of the following scaled order statistic

$$r_i = \frac{|y_{i,t} - y_{i,t-1}|}{\bar{y}}.$$

Clearly, r_i will assume a positive value when an individual rank changes and 0 when it is unchanged. The index of mobility proposed by the King builds on the above statistic and has the following expression:

$$\begin{aligned} King_{st} &= 1 - \left[\frac{\sum_i (y_i \exp(\gamma r_i))^k}{\sum_i y_i^k} \right]^{-1/k} \quad \text{for } k \neq 0 \\ &= 1 - \exp\left(-\frac{\gamma}{N} \sum_i r_i \right) \text{ for } k = 0 \end{aligned} \tag{12}$$

where $\gamma \geq 0$ is the degree of immobility aversion (higher γ means more aversion to immobility) and $k \leq 1$ parameterizes the preference for 'vertical' inequality (the higher is

[23] For a thorough discussion of orderings in two-way contingency tables, see Dardanoni and Forcina (1998).

[24] Notice that, since neither the Fields–Ok index nor that based on the Spearman coefficient are constructed from inter-decile transition matrices, we have enough observations to build mobility indexes that are state and time varying at the same time.

Table 3
Attitudes toward redistribution

Should government reduce income difference between rich and poor?								
	1 No	2	3	4	5	6	7 Yes	Dummy REDISTR01
Full sample	0.13	0.07	0.12	0.20	0.17	0.11	0.20	0.59
By year								
1978	0.12	0.08	0.11	0.21	0.17	0.11	0.19	0.61
1980	0.16	0.07	0.13	0.20	0.17	0.09	0.17	0.55
1983	0.15	0.08	0.11	0.18	0.16	0.11	0.20	0.58
1984	0.12	0.08	0.13	0.17	0.15	0.12	0.21	0.60
1986	0.12	0.06	0.11	0.21	0.17	0.09	0.23	0.62
1987	0.12	0.06	0.12	0.21	0.17	0.09	0.23	0.62
1988	0.12	0.08	0.12	0.20	0.18	0.10	0.20	0.60
1989	0.11	0.07	0.11	0.20	0.20	0.13	0.18	0.63
1990	0.11	0.06	0.09	0.22	0.18	0.12	0.21	0.66
1991	0.09	0.08	0.12	0.20	0.17	0.13	0.20	0.63
1993	0.12	0.08	0.12	0.18	0.19	0.12	0.18	0.60
1994	0.15	0.08	0.15	0.21	0.16	0.09	0.15	0.51
By region								
West	0.16	0.09	0.13	0.18	0.17	0.10	0.16	0.53
Midwest	0.11	0.07	0.13	0.20	0.19	0.11	0.20	0.62
North–West	0.11	0.07	0.12	0.20	0.18	0.10	0.21	0.62
South	0.14	0.07	0.11	0.21	0.15	0.10	0.20	0.59

$(1-k)$, the higher is aversion to inequality).[25] As in the case of the Fields–Ok and the Spearman mobility index, King's measure is not closely linked to the relative gains and losses from redistributive taxation; hence, we expect it to have low explanatory power in regression that focus on the political–economic determinants of preferences for redistribution.

3.2. Descriptive statistics

Before estimating the effect of different notions of mobility through multivariate analysis, in Table 3, we report some descriptive statistics.

Our dependent variable is derived from the GSS question EQWLTH, which asks whether "the government should reduce income differences between the rich and the poor, perhaps by raising the taxes of wealthy families or by giving income assistance to the poor". The respondent could choose on a 1–7 scale from 1="should" to 7="should not". Starting from this question, we created the ordinal variable REDISTR, which is increasing in individual support for redistribution, i.e. takes value 1 if the respondent says that the government should not redistribute and 7 if he or she says that it should.[26] This GSS question is the most appropriate for our

[25] King (1983) uses the term 'vertical equity' to refer to the distribution of welfare levels and 'horizontal equity' to refer to the ranking of individuals within the distribution.

[26] Thus REDISTR=8−EQWLTH.

purposes. In fact, it captures the general attitude of the respondent toward the actual redistributive role of government, which is precisely what we are interested in. It also makes clear in its formulation that redistributive policies imply higher taxes on wealthier families and more generous transfers to poorer ones. There are other questions in the GSS that indirectly refer to redistributive policies, like spending on welfare or social security. We discuss them below in a sensitivity section.

In what follows, we use the entire scale in our ordered probit regressions. For our probit regressions, we transformed this variable into the binary variable REDISTR01 coding as 1 (favorable to redistribution) the individuals who had a score of 5–7 in the above variable REDISTR, and as 0 (averse to redistribution) those who had a score of 1–3. We chose to drop the respondents with a score of 4, i.e., those with mild preferences or undecided, in order to avoid an arbitrary assignment to the category "in favor" or "against". None of our results is affected if we retain them in the sample. As can be seen from the last column of Table 3, on average, this binary classification breaks the respondents into a 60:40 split.

When then examine the pattern of responses over time, the last column of Table 3 seems to suggest that the fraction of people with relatively strong preferences in favor of redistribution followed an upward trend during the eighties and then started to decline from the beginning of the nineties.[27] As for the regional dimension of this variable, support for redistribution is lower in the West and in the South, and higher in the North-East and Midwest. If we relate this with Fig. 1 above, it would appear that regions with more mobility overall display a higher aversion to redistribution.

4. Results

4.1. Preferences for redistribution

The first five columns of Table 4 show the coefficients of our ordered probit regressions on the individual determinants of preferences for redistribution. In all regressions, standard errors are adjusted for clustering of the residuals at the MSA level. All specifications include state and year dummies (not shown). The different number of observations is due to different coverage of the GSS for the various questions. In this table, we use all the available observations in every regression.

First of all, current income matters; wealthier individuals look less favorably to redistribution. Several other individual characteristics are also significant. For example, younger individuals, women and African Americans are generally more supportive of redistributive policies. More educated individuals are instead less favorable, even after controlling for income. Marital status and the presence of children do not significantly affect the preferences for redistribution. On the other hand, religious affiliation seems to have limited influence: the coefficient on

[27] Note the sharp drop in 1994 relative to 1993. However, 1994 respondents will not be in our regressions because our PSID sample ends in 1993.

Table 4
Individual determinants of preference for redistribution

Dependent variables	REDISTR ordered probit					REDISTR01 probit	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age	−0.003**	−0.002**	−0.002**	−0.004**	−0.006	−0.002**	−0.0005
	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.001)	(0.002)
Married	0.020	0.025	0.019	0.003	−0.015	0.004	−0.014
	(0.020)	(0.020)	(0.030)	(0.023)	(0.066)	(0.018)	(0.058)
Female	0.130**	0.137**	0.142**	0.130**	0.094	0.090**	0.076
	(0.027)	(0.028)	(0.028)	(0.030)	(0.078)	(0.014)	(0.056)
Black	0.439**	0.451**	0.445**	0.400**	0.317**	0.195**	0.162*
	(0.056)	(0.059)	(0.058)	(0.056)	(0.112)	(0.028)	(0.083)
Educ.<12	0.291**	0.288**	0.257**	0.331**	0.177**	0.158**	0.036
	(0.023)	(0.023)	(0.057)	(0.028)	(0.090)	(0.025)	(0.106)
Educ.>16	−0.186**	−0.192**	−0.179**	−0.220**	−0.215**	−0.088**	0.007
	(0.029)	(0.028)	(0.032)	(0.032)	(0.097)	(0.023)	(0.075)
Children	−0.005	−0.006	0.012	−0.008	−0.020	−0.001	−0.003
	(0.021)	(0.021)	(0.029)	(0.021)	(0.069)	(0.017)	(0.055)
ln(real income)	−0.159**	−0.158**	−0.153**	−0.158**	−0.174**	−0.083**	−0.059*
	(0.012)	(0.012)	(0.017)	(0.013)	(0.045)	(0.013)	0.033
Self-employed	−0.179**	−0.180**	−0.113**	−0.184**	−0.112	−0.117**	−0.134
	(0.033)	(0.033)	(0.032)	(0.041)	(0.111)	(0.025)	(0.085)
Unemployed	0.140**	0.139**	0.117**	0.156**	0.073	0.092**	0.043
last 5 years	(0.022)	(0.023)	(0.030)	(0.025)	(0.108)	(0.017)	(0.054)
Protestant		−0.088*					
		(0.050)					
Catholic		−0.010					
		(0.047)					
Jewish		−0.099					
		(0.076)					
Other religion		0.224**					
		(0.079)					
Help others			0.149**				
			(0.050)				
Job prestige>				−0.047**	−0.061	−0.005	0.043
father's				(0.021)	(0.073)	(0.016)	(0.055)
Educ.—father's				0.018**	0.028**	0.006**	0.009
				(0.002)	(0.010)	(0.002)	(0.008)
Expect					−0.245**		−0.105**
better life			35		(0.056)		(0.051)
No. obs.	11352	11339	6217	8396	980	4360	502
$R^2_{M\&Z}$	0.11	0.11	0.10	0.10	0.14	0.18	0.18
R^2_{Count}	0.25	0.25	0.24	0.23	0.25	0.66	0.66

Standard errors corrected for heteroskedasticity and clustering of the residuals at the MSA level.
$R^2_{M\&Z}$ is McKelvey and Zavoina's R^2; R^2_{Count} is the proportion of correct predictions.
All regressions include YEAR and STATE fixed effects.
* Denotes significance at the 10% level.
** At the 5% level.

Protestants is negative and borderline significant, that on Catholic and Jewish is insignificant, and that on "other" religions is positive and significant (the omitted category is "no religion").

Let us now turn to risk aversion. Unfortunately, the GSS does not contain any question that would allow us to directly measure individual risk aversion (e.g., information on gambling or on willingness to pay for lotteries). We are thus forced to rely on proxies. The first proxy we consider is self-employment: self-employed individuals may be so because they are more prone to take risks. Our results show that self-employed people are more averse to redistribution after controlling for income and all other individual characteristics, possibly because they do not value too highly the "insurance" against negative income shocks provided by redistributive programs. Of course, there are alternative explanations. One may be that the self-employed benefit less various government programs. Another is that self-employed individuals may have chosen this type of job because they have a more "individualistic" attitude, thus being more favorable to a self-made person culture. Also, if self-employment is chosen as an alternative to unemployment, this variable may capture a mix of entrepreneurial capacity and "pride". Finally, access to credit may play a role in determining someone's status as self-employed.

The dummy for whether the respondent has been unemployed in the last 5 years takes a positive and significant coefficient. Having experienced unemployment may both increase risk aversion and directly affect one's view of redistributive policies. For example, a spell of unemployment can be a learning experience about the respondent's need for government intervention. Alternative interpretations are that unemployment may lead to empathizing with poor, or that it may reveal something about risk itself (hence about the need for social insurance) or about the mobility process in society, following Piketty (1995). In the latter case, this variable may be correlated with the measure of future income prospects that we shall use and bias our estimates downward. The interpretation of unemployment as affecting risk aversion is in part supported by the fact that when use a relative's unemployment experience (as opposed to the respondent's own experience), this variable remains significant at the 5% level. This result is also encouraging because a relative's unemployment status is less prone to be endogenous to the respondent's preferences about redistribution. In the next column, we introduce the variable "Help others" to capture the idea that support for redistribution may be due to a sense of altruism. This variable identifies the respondents who answer yes to the question of whether children should be taught that helping others is the most important moral value. This variable has a positive and significant coefficient.

In column 4, we add some measures of personal mobility. Ideally, we would want some measure of the evolution of the respondent's earnings in the past, but the GSS is not a panel and it does not even contain retrospective questions regarding earnings profiles. We are thus forced to use two proxies that capture intergenerational (as opposed to intra-generational) mobility. The first is a dummy for whether the respondent's "job prestige" is higher than the father's. The second is the difference between the years of education of the respondent and those of the father. The results are mixed. The prestige variable has a significant coefficient with the expected (negative) sign: people whose job is more "prestigious" than their father's look less favorably to redistributive policies. On the other hand, the coefficient on the education gap has the opposite sign of what we would expect. We can offer two interpretations for this fact. One is the line of Galor and Tsiddon's (1997) model: if individual earning prospects increase with parental human capital, or if there is serial correlation in ability (and parental education is a proxy for individual unobserved

ability), then a large difference between the child's and the parent's education implies a relatively low level of parental education, which in such setting is consistent with pro-redistributive attitudes. A second interpretation is that the positive coefficient on the education gap variable signals a difference in attitudes between those individuals that have achieved economic success without significantly improving on their parent's education, and those who have been both economically and "educationally" mobile. Alternatively, it may simply be the case that the widespread trend of increasing education between generations makes the education gap variable a not very meaningful indicator of mobility.

In column 5, we add to these measures of past mobility the subjective index of upward mobility described in Section 3.1, namely the dummy for whether the respondent believes that he and his family "have a good chance of improving their standard of living". As expected, this variable has a strong negative impact on individual support for redistribution. Note, however, that this GSS question is available only for 1 year of our sample, 1987, which reduces dramatically the number of observations and make it impossible to exploit variation over time in mobility trends. For this reason, the baseline specification employed in the following tables will omit this control.

In the last two columns of Table 4, we report the marginal coefficients from a probit regression in which the left hand side variable is the binary variable REDISTR01 discussed above. This helps interpret the magnitude of several coefficients in a more straightforward way. From column 6, one of the most striking results is the very large coefficient on the variable Black. This coefficient is more than twice as large (in absolute terms) than that on the respondent's unemployment experience and on the female dummy. It is the same order of magnitude of the difference in preferences between the maximum and the minimum level of education. Though not direct evidence on the interaction between redistribution and radical conflicts, our result that African Americans are significantly more favorable to redistribution is consistent with a vast literature on the subject, as well documented by Gilens (1999) amongst others.[28] According to this literature, wealthy whites are especially averse to redistributive policies if they perceive that the beneficiaries are members of racial minorities. Empirical evidence on this point is provided by Poterba (1997), Alesina et al. (1997), Luttmer (2001) and Alesina and Glaeser (2004).[29] Finally, the coefficient on the variable "expect better life" in column 7 shows that ceteris paribus those who believe their standards of living will improve are about 10% less likely to support redistribution.

Table 5 provides an additional way of interpreting the effects of individual characteristics on attitudes toward redistribution. The table reports the predicted probabilities of falling in categories 1, 2,. . ., 7 of the variable REDISTR, based on the estimated coefficients of column 4 in Table 4. The first two lines compare the observed and predicted

[28] See also Alesina and Glaeser (2004) and Greene and Nelson (2000) for regressions of preferences for more welfare spending, which show results on individual characteristics broadly consistent with ours.

[29] The first paper shows that elderly white voters are particularly adverse to public spending on education in communities where a large fraction of children are from minority groups. The second paper shows that a measure of racial fragmentation is inversely related to welfare spending in United States cities, countries and metropolitan areas. The third one finds that individuals are more likely to favor welfare spending, the higher the share of recipients from their own race in their neighborhood. Finally, the last paper shows that racial divisions are one of the main reasons why the welfare state is smaller in the US than in Europe.

Table 5
Predicted probabilities

Should government reduce income differences between rich and poor?							
	1	2	3	4	5	6	7
	No						Yes
Observed, full sample	0.13	0.08	0.13	0.19	0.18	0.11	0.18
Predicted, full sample	0.12	0.08	0.14	0.20	0.19	0.11	0.16
By race							
White	0.12	0.08	0.14	0.21	0.18	0.11	0.15
Black	0.06	0.05	0.10	0.18	0.20	0.14	0.26
By gender							
Male	0.13	0.08	0.15	0.21	0.18	0.11	0.14
Female	0.10	0.07	0.13	0.20	0.19	0.12	0.18
By education							
Less than 12 years	0.06	0.05	0.11	0.18	0.20	0.14	0.25
16 years or more	0.17	0.10	0.16	0.21	0.17	0.09	0.11

Based on estimates of column 4 in Table 4.
Independent variables other than those listed are calculated at the mean.

probabilities for the full sample. The lines below report predicted probabilities separately by race, gender and education of the respondent, holding all other controls at the sample means. According to our estimates, ceteris paribus a black person is 11 percentage points more likely to be extremely favorable to redistribution (score 7) than a white one with the same socioeconomic characteristics.[30] This gap is slightly smaller than that between education categories: other things being equal a high school dropout is 14 percentage points more likely than a college graduate to declare maximum support for redistribution, and 11 percentage points less likely to be totally against it. To the extent that expected lifetime income increases with education, this suggests an additional link between education, upward mobility and the demand for redistribution. On the other hand, gender differences in preferences for redistribution are considerably smaller: women are 4 percentage points more likely than men to give the highest support and 3 percentage points less likely to give the lowest, other things being equal.

4.2. Future income prospects

In Table 6, we add to the basic specification of column 4 in Table 4 our measures of future income prospects defined in expressions (8) and (9).[31] The first four columns report our ordered probit estimates for the case in which the transition matrix is constructed separately for each state (columns 1 and 2) or varies over time for the whole US (columns 3 and 4). The last four columns have a similar structure, but report marginal probit coefficients for the specification in which the dependent variable is the binary one, REDISTR01.

[30] This result is consistent with those of Gilens (1999) and Kinder and Sanders (1999) amongst others.

[31] In this regressions, we drop the "help others" variable and the religious variables because they would restrict significantly the number of available observations.

Table 6
Preferences for redistribution and future income prospects

Dependent variables	REDISTR ordered probit				REDISTR01 probit			
	Transition matrix				Transition matrix			
	By state		By year		By state		By year	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Age	−0.004**	−0.004**	−0.004**	−0.004**	−0.001**	−0.001*	−0.001**	−0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.0006)	(0.0006)
Married	0.018	0.011	0.018	0.013	0.006	0.002	0.006	0.003
	(0.025)	(0.025)	(0.025)	(0.025)	(0.019)	(0.019)	(0.019)	(0.019)
Female	0.116**	0.116**	0.116**	0.117**	0.081**	0.082**	0.081**	0.082**
	(0.031)	(0.031)	(0.031)	(0.031)	(0.017)	(0.016)	(0.017)	(0.016)
Black	0.398**	0.400**	0.398**	0.400**	0.190**	0.192**	0.190**	0.191**
	(0.057)	(0.058)	(0.057)	(0.058)	(0.030)	(0.030)	(0.030)	(0.030)
Educ.<12	0.310**	0.317**	0.311**	0.316**	0.144**	0.146**	0.144**	0.146**
	(0.031)	(0.031)	(0.031)	(0.031)	(0.026)	(0.026)	(0.026)	(0.026)
Educ.>16	−0.223**	−0.211**	−0.223**	−0.214**	−0.099**	−0.095**	−0.099**	−0.094**
	(0.030)	(0.030)	(0.030)	(0.030)	(0.024)	(0.024)	(0.024)	(0.024)
Children	−0.007	−0.008	−0.007	−0.009	0.004	0.004	0.004	0.003
	(0.022)	(0.022)	(0.022)	(0.021)	(0.018)	(0.018)	(0.018)	(0.018)
ln(real income)	−0.089**	−0.050**	−0.095**	−0.464	−0.044**	−0.029	−0.046**	−0.015
	(0.024)	(0.024)	(0.025)	(0.032)	(0.021)	(0.024)	(0.021)	(0.025)
Self-employed	−0.201**	−0.191**	−0.201**	−0.191**	−0.119**	−0.114**	−0.119**	−0.115**
	(0.042)	(0.041)	(0.042)	(0.041)	(0.028)	(0.028)	(0.028)	(0.028)
Unemployed	0.153**	0.154**	0.153**	0.155*8	0.090**	0.091**	0.090**	0.091**
last 5 years	(0.026)	(0.027)	(0.026)	(0.026)	(0.017)	(0.018)	(0.018)	(0.017)
Prestige>father's	−0.044*	−0.046**	−0.044*	−0.047**	0.001	−0.000	−0.001	−0.001
	(0.023)	(0.023)	(0.023)	(0.022)	(0.017)	(0.017)	(0.017)0	(0.017)
Education—	0.018**	0.018**	0.018**	0.018**	0.006**	0.006**	0.006**	0.006**
father's	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Prob(7–10	−0.219**		−0.192**		−0.108**		−0.098**	
decile)	(0.023)		(0.058)		(0.045)		(0.042)	
Expected [a]		−0.004**		−0.004**		−0.002**		−0.002**
income		(0.001)		(0.001)		(0.001)		(0.001)
No. obs.	7537	7537	7537	7537	3885	3885	3885	3885
$R^2_{M\&Z}$	0.11	0.11	0.11	0.11	0.18	0.18	0.18	0.18
R^2_{Count}	0.23	0.24	0.24	0.24	0.66	0.66	0.66	0.66

See notes to Table 4.
[a] Coefficient and standard error multiplied by 10^3 in columns 2, 4, 6 and 8.

In all models both the probability of being above the sixth decile and the expected future income negatively influence individual support for the redistribution, and these effects are significant at the 1% level. Most coefficients on the individual controls remain basically unchanged relative to the previous table. The binary probit specifications allow for an easier evaluation of the size of these coefficients. According to the estimates of column 5, if we hold all other variables at the mean, a change in Prob(7–10 decile) from the mean for the first decile to the mean for the tenth decile reduces the propensity to favor redistribution by 7.9 percentage points (7.8 points according to the estimates in column 7). This effect is quite sizeable if we consider that it is the same order of magnitude of having been recently

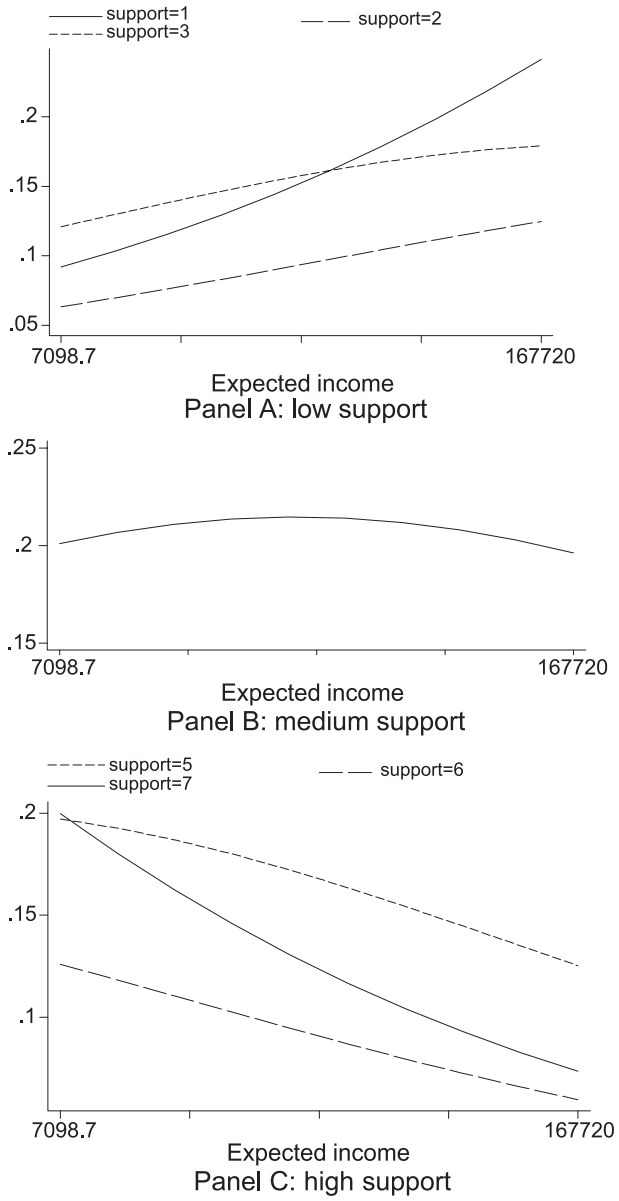

Fig. 3. Support for redistribution and expected income.

unemployed. Looking at the expected income, an increase of expected income from the mean for the lowest to the mean for the highest decile reduces the probability of supporting redistribution by 12.2 percentage points according to the estimates of column 6 (and by 15.1 according to those of column 8). This is larger than the effect of having been unemployed in the last 5 years and is the same order of magnitude of being a high school dropout.

Table 7
Different income definitions and time horizons

Ordered probit. Dependent variable=REDISTR					
	Family income	Hourly earnings of head		Family income (including OFUM)	
	t, t+5	t, t+1	t, t+5	t, t+1	t, t+5
	[1]	[2]	[3]	[4]	[5]
Coefficient on:	−0.321**	−0.062	−0.027	−0.247**	−0.404**
Prob(7–10 decile)	(0.083)	(0.047)	(0.060)	(0.067)	(0.099)
Expected income[a]	−0.004**	−0.003**	−0.004**	−0.004**	−0.005**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

See notes to Table 4.
Controls include: age, married, female, black, educ.<12, educ.>16, children, ln(real income), self-employed, unemployed last 5 years, prestige>father's, educ.—father's, states, years.
[a] Coefficient and standard error multiplied by 10^3.

To get some insights on how support for redistribution is affected by future income prospects, it is useful to look at Fig. 3. This figure plots the predicted probabilities of giving support for redistribution equal to 1, 2, 3 (Panel A), equal to 4 (Panel B), or greater than 4 (Panel C), as a function of our expected income variable.[32] Most of the action lies in the extreme categories: while the path of the intermediate support category is virtually flat, that of the lowest (support=1) and the highest (support=7) categories are markedly increasing and decreasing, respectively, in our measure of future income prospects. In other words, the expectation of being a future net loser from redistribution seems to affect especially the preferences of those with strong views.

We now turn to some sensitivity analysis and experiment with different definitions of income and time horizons. Individual controls, state and year dummies are included in the regressions, though not shown in Table 7. Each cell refers to a separate ordered probit regression in which the specification is that of column 1 and column 2 of Table 6, respectively, for the first and second row of coefficients in Table 7. Column 1 uses family income as defined above, looking at a 5-year horizon in the transition matrix. Our results in this case are actually strengthened, in that the effect of the probability of moving above the sixth decile becomes larger. The second and third columns of Table 7 use measures of future income prospects constructed from the hourly earnings of the household head rather than from total taxable income of head and wife, for both the 1- and 5-year time horizon. The idea is to try and isolate changes in 'job status' from changes in the number of hours worked. While the coefficient on expected income (or to be precise, expected hourly earnings) remains negative and significant, that on our probability index loses significance. This may be due to several reasons, among which the noise in the hourly earnings variable, the fact that this variable only covers labor income (as opposed to the other variables which include income from assets), and the fact that hourly earnings are a less meaningful concept than family income from the point of view of the tax base. Finally, in the last two columns, we broaden the definition of family income by including in the computation of

[32] In this table we use estimates of coefficients of column 2 of Table 6. All controls but the index on the horizontal axis are held at average values. A similar figure with the same message but computed using the Prob(7–10) index instead of expected income is available in the working paper version.

Table 8
Transition matrix by age, education and race

Ordered probit. Dependent variable=REDISTR						
	$t+1$			$t+5$		
	Age	Educ.	Race	Age	Educ.	Race
	[1]	[2]	[3]	[4]	[5]	[6]
Coefficient on:	−0.178**	−0.206**	−0.185**	−0.323**	−0.193**	−0.305**
Prob(7–10 decile)	(0.054)	(0.066)	(0.059)	(0.076)	(0.084)	(0.096)
Expected income[a]	−0.002**	−0.0015**	−0.002**	−0.003**	−0.001	−0.003**
	(0.001)	(0.0006)	(0.001)	(0.001)	(0.001)	(0.001)

See notes to Table 4.
Controls include: age, married, female, black, educ.<12, educ.>16, children, ln(real income), self-employed, unemployed last 5 years, prestige>father's, educ.—father's, states, years.
[a] Coefficient and standard error multiplied by 10^3.

total taxable income all "other family unit members" (OFUMs) together with head and spouse. Our results remain virtually unchanged.

We next refine our measure of future income prospects by allowing them to reflect individual attributes other than income. Table 8 reports the results of our basic regression for the 1- (columns 1–3) and 5-year (columns 4–6) time horizon when the transition matrix is allowed to differ depending on the age (columns 1 and 4), education (columns 2 and 5) or race (columns 3 and 6) of the respondent. For example, a 25-year-old in the first decile of the income distribution and a 55-year-old also in the first decile will have different values of expected income and different probabilities of moving above the 6th decile. Similarly, a high school dropout and a college graduate (or a white and a non-white) belonging to the same decile will have different mobility prospects. Our results remain basically unchanged with this more stringent definition: in 11 out of 12 cases, our indexes remain significant at the 5% level.

In Table 9, we perform further sensitivity analysis. The first column of Panel A excludes the influential observations using the DFbeta method.[33] Both the coefficient on Prob(7–10 decile) and that on expected income remain negative and highly significant. In the second column, we modify our construction of the mobility indexes dropping from the PSID sample the individuals who changed state of residence from 1 year to the next. Again, the results are unchanged compared to Table 6. In the third column, we address the issue of noise in year-to-year variation in incomes by using a 3-year average instead of a point level income figure. In other words, when constructing transition matrixes in the PSID, the income of a respondent in year t is replaced by her average income in $t-1$, t and $t-1$. This obviously leads to a smaller sample size in the PSID, but the results in our regressions are virtually unchanged.

In Panels B and C of Table 9, we test the robustness of our results to the functional form in which current income enters the regression. In columns 4, 5, and 6 of Panel B,

[33] We calculate the DFbetas from each original regression and drop those observations that lead to significant changes in the coefficients of our mobility indexes. Precisely, we drop those observations for which $abs(DF\beta) > 2/\sqrt{\#obs}$ (see, e.g., Besley et al., 1980, p. 28).

Table 9
Sensitivity analysis

Ordered probit. Dependent variable=REDISTR			
Panel A[a]	No influential observations	No migrants	Average income ($t-1$, t, $t+1$)
	[1]	[2]	[3]
Coefficient on: Prob(7–10 decile)	−0.249**	−0.205**	−0.147**
	(0.055)	(0.057)	(0.047)
Expected income[b]	−0.005**	−0.004**	−0.004**
	(0.001)	(0.001)	(0.001)
Panel B—all individual controls[c]	Linear current inc.	Cubic current inc.	Deciles for current inc.
	[4]	[5]	[6]
Coefficient on: Prob(7–10 decile)	−0.107**	−0.083	0.169**
	(0.047)	(0.079)	(0.064)
Expected income[b]	−0.002	−0.001	−0.0002
	(0.001)	(0.002)	(0.002)
Panel C—income only[d]	Linear current inc.	Cubic current inc.	Deciles for current inc.
	[7]	[8]	[9]
Coefficient on: Prob(7–10 decile)	−0.211**	0.020	−0.211**
	(0.035)	(0.055)	(0.058)
Expected income[b]	−0.004**	−0.001	−0.002
	(0.001)	(0.002)	(0.002)

See notes to Table 4.

[a] Controls in Panel A include: age, married, female, black, educ.<12, educ.>16, children, ln(real income), self-employed, unemployed last 5 years, prestige>father's, educ.—father's, states, years.

[b] Coefficient and standard errors multiplied by 10^3.

[c] Controls in Panel B include: age, married, female, black, educ.<12, educ.>16, children, self-employed, unemployed last 5 years, prestige>father's, educ.—father's, states, years, current income in the form listed by column.

[d] Controls in Panel C include: states, years and current income in the form listed by column.

we retain our baseline specification for the individual controls and employ, respectively, a linear term in current income, a cubic polynomial and a set of dummies for income deciles. While Prob(7–10 decile) remains negative and significant at the 5% level in two cases out of three, expected future income is no longer statistically significant. This is likely due to the high correlation between current and expected future income and the fact that we identify the effect of future income nonlinear form in which deciles differ across states or between years. In Panel C, we repeat the same exercise but only control for state and year fixed effects, in addition to current and future income prospects. The idea behind this "minimal" specification is that other demographic variables may correlate with unmeasured components of current and future income. The results are essentially the same as in Panel B, with the exception of column 7 where they are improved, in the sense that both Prob(7–10 decile) and expected income are statistically

significant.[34] Despite the fragility of the expected income variable, the relative robustness of the probability of moving above the sixth decile (which remains significant when we introduce deciles dummies)[35] seems to suggest that there is a separate role for future gains and losses from redistribution, in addition to current ones, to affect the demand for redistributive policies.

We have also experimented with different income thresholds for our Prob(J–10 decile) index. In particular, we have computed the index (9) looking at the probability of moving to deciles 6–10 or 5–10. While the former has a coefficient which is borderline significant at standard confidence levels, the latter has an insignificant coefficient. These results are comforting, since they display a monotonically declining level of significance as we move the threshold lower and lower. It would appear that the threshold that makes respondents significantly averse to redistribution lies somewhere between the sixth and the seventh decile. This is close to the mean income of the population, and probably not much higher than the average income of the electorate, since voters' participation is positively correlated with income. All our analysis has focused on the relationship between the expected loss from redistribution and preferences for redistributive policies. Conversely, we could have looked at the expected *gains* from redistribution, and indeed the results would have been qualitatively unchanged. When the probability of moving to the first five deciles is used as a measure of future income prospects, its coefficient is positive and highly significant, as expected.[36]

Finally, in Table 10, we consider measures of income mobility that differ from our indexes Prob(7–10 decile) and expected income in that they capture mobility in a way that is not directly related to the chances of being a winner or loser from redistribution in the near future. These measures are the index (10), the Spearman mobility index (11) and King's index (12) with parameters γ=1 and k=−0.1.[37] We compute them both for the 1-year and for the 5-year time horizon. Interestingly, none of these coefficients are significantly different from zero. This result is encouraging, because it highlights that not all measures of mobility "work". Measures that seem to work are those directly related to

[34] When current income enters the regression in logarithm, as in our baseline specification, both measures of future income prospects have negative and significant coefficients. Specifically, the coefficient (and standard error) on Prob(7–10 decile) are −0.307 (0.034) and those on expected income are −0.006 (0.001).

[35] When we introduce decile dummies in addition to state and year fixed effects, identification relies on geographical or time series variation between deciles. For example, the coefficient on the dummy for first decile will capture the extent of mobility that is common to that decile across states, and our index will have independent variation because, say, the first decile in California may be more mobile than the first decile in Alabama. Analogous arguments apply to variation in mobility within deciles over the years.

[36] More precisely, the estimated ordered probit coefficient is 0.156, with a standard error of 0.045. We also experimented with probabilities of moving to lower deciles, e.g. to the first two deciles. However, this index has low variability in our data because it is virtually zero for all the people starting from deciles above the third (in particular, the mean probability to move to deciles 1–2 starting from deciles 4 and above is 0.04, and the mean starting from deciles 3 and above is 0.07). When we restrict the sample to individuals in the lowest deciles this variable displays a positive and significant coefficient, as expected. Results are available upon request.

[37] There is no clear criterion for choosing parameter values for King's index and we do not know of any study that has implemented this index empirically. We have computed it for a broad range of parameters and then chosen what seemed to be 'average' values, not too biased in favor or against immobility and inequality. The parameterization used in Table 10 can be thought of as 'average' aversion to immobility and to inequality.

Table 10
Other mobility measures

Ordered probit. Dependent variable=REDISTR		
	t+1	t+5
Coefficient on:		
[1] Spearman mobility	−0.037	0.226
	(0.185)	(0.141)
[2] Fields–Ok	−0.003	−0.005
	(0.010)	(0.006)
[3] Fields–Ok (logs)	−0.025	−0.117
	(0.165)	(0.115)
[4] King	0.460	−0.023
	(0.342)	(0.199)

See notes to Table 4.
Controls include: age, married, female, black, educ.<12, educ.>16, children, ln(real income), self-employed, unemployed last 5 years, prestige>father's, educ.—father's, states, years.

expected future income and to the probability of being in the upper deciles. This is consistent with the interpretation that the people who oppose redistribution more are those that are afraid to "loose" in the future, rather than those that are generically "mobile" and hence likely to go up or down.

4.3. Different questions about redistribution

The dependent variable we used thus far, REDISTR, was rescaled from the original GSS question EQWLTH. This question is the most appropriate for our purposes because it captures in the most general terms the idea of redistributing from the rich to the poor along the entire income ladder. The GSS contains four other questions that could potentially be used as proxies for attitudes towards redistribution. One is the variable EQINCOME, which asks whether "it is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes". This question is very similar to ours, but during our sample period it was asked only in 1985 and 1990; therefore, we chose not to use it in our analysis. A second variable is NATSOC, which asks whether "we are spending too much money, too little money or about the right amount" on social security. For the purposes of our analysis, this variable is somewhat less appropriate than REDISTR because it may prompt the respondent to think about the elderly in general and introduces issues on intergenerational redistribution in addition to direct rich-poor redistribution. A third variable is NATFARE, which has the same structure as NATSOC but refers to "welfare" instead of "social security". This variable has been widely used in the literature, e.g., by Moffit et al. (1998) and by Luttmer (2001), and has generated interesting results. Two variants of the same question, NATFAREY and NATFAREZ, mention "assistance to the poor" and "caring for the poor", respectively, instead of "welfare". These variables get to the question of redistributing to the poor but, unlike our variable, they do not clearly imply a tax transfer scheme, that is, they do not mention explicitly the point of taxing the richer for giving to the poorer. As well shall see below, some variants on this question generate similar results to ours, others do not.

Table 11
Different redistributive policies

Ordered probit. Dependent variables:								
	REDISTR		Welfare		Assistance to/care for the poor[a]		Social security	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Age	−0.004**	−0.004**	−0.001	−0.001	−0.009**	−0.009**	−0.007**	0.007**
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Married	0.018	0.011	−0.084**	−0.079**	−0.012	−0.011	0.015	0.011
	(0.025)	(0.025)	(0.038)	(0.038)	(0.049)	(0.049)	(0.050)	(0.049)
Female	0.116**	0.116**	0.022	0.022	0.186**	0.185**	0.199**	0.200**
	(0.031)	(0.031)	(0.029)	(0.029)	(0.041)	(0.041)	(0.025)	(0.026)
Black	0.398**	0.400**	0.631**	0.630**	0.836**	0.837**	0.348**	0.349**
	(0.057)	(0.058)	(0.087)	(0.089)	(0.157)	(0.157)	(0.076)	(0.077)
Educ.<12	0.310**	0.317**	0.120*	0.116*	0.287**	0.286**	0.173**	0.176**
	(0.031)	(0.031)	(0.071)	(0.071)	(0.100)	(0.099)	(0.048)	(0.048)
Educ.>16	−0.223**	−0.211**	0.113**	0.108**	−0.184**	−0.184**	−0.388**	−0.384**
	(0.030)	(0.030)	(0.050)	(0.048)	(0.051)	(0.050)	(0.036)	(0.036)
Children	−0.007	−0.0008	0.016	0.016	0.027	0.028	0.109*	0.107**
	(0.022)	(0.022)	(0.031)	(0.031)	(0.042)	(0.042)	(0.037)	(0.037)
ln(real income)	−0.089**	−0.050**	−0.233**	−0.242**	−0.072*	−0.065	−0.032	−0.024
	(0.024)	(0.024)	(0.029)	(0.036)	(0.042)	(0.054)	(0.040)	(0.034)
Self-employed	−0.201**	−0.191*	−0.087*	−0.091**	−0.185**	−0.186**	−0.226**	−0.220**
	(0.042)	(0.041)	(0.046)	(0.046)	(0.051)	(0.052)	(0.040)	(0.040)
Unemployed last 5 years	0.153**	0.154**	0.179**	0.179**	0.114*	0.113*	0.110*	0.112**
	(0.026)	(0.027)	(0.039)	(0.038)	(0.061)	(0.061)	(0.043)	(0.042)
Prestige>father's	−0.044*	−0.046**	−0.017*	−0.016	−0.028	−0.027	0.011	−0.009
	(0.023)	(0.023)	(0.030)	(0.030)	(0.043)	(0.043)	(0.035)	(0.035)
Education—father's	0.018**	0.018**	0.006	0.007	0.011*	0.011*	0.015**	0.014**
	(0.003)	(0.003)	(0.004)	(0.004)	(0.006)	(0.006)	(0.005)	(0.005)
Prob(7–10 decile)	−0.219**		0.147		0.041		−0.143	
	(0.060)		(0.090)		(0.091)		(0.094)	
Expected income[b]		−0.004**		0.002**		−0.0002		−0.002**
		0.001		(0.001)		(0.002)		(0.001)
No. obs.	7537	7537	44422	44422	2891	2891	4707	4707
$R^2_{M\&Z}$	0.11	0.11	0.13	0.13	0.14	0.15	0.12	0.12
R^2_{Count}	0.24	0.24	0.53	0.53	0.66	0.66	0.60	0.60

See notes to Table 4.

[a] Controls in this column include a dummy for whether dependent variable was "caring for"—instead of "assistance to"—the poor. Coefficient (standard error) on the dummy are 0.082 (0.151) and 0.083 (0.151) for columns [5] and [6], respectively.

Ordered probit estimates are reported in Table 11.[38] To make comparisons easier, the first two columns report our baseline estimates from Table 6 (columns 1 and 2). The dependent variables in the following columns are on a three-point scale and take values 1, 2, 3, respectively, when the respondent says that "too much", "about right" and "too-little" is spent on the issue mentioned. The issue is welfare in columns 3 and 4 (dependent

[38] In all cases, the original GSS variables have been rescaled so that they are *increasing* in individual support for redistribution.

variable constructed from NATFARE), assistance to/caring for the poor in columns 5 and 6 (variable constructed pooling the original GSS questions NATFAREY and NATFAREZ and adding to the controls a dummy for which version of the question was used), and social security in columns 7 and 8 (from the GSS variable NATSOC).

The results are quite informative. When the question asked refers to "the poor" or to "social security", the overall results are along the same lines of those obtained with our dependent variable. In particular, the estimated effects of individual controls like age, gender, education, marital status, etc. are very similar, suggesting that the answers to these questions follow similar patterns. The fact that our variables of interests (i.e., different measures of future income prospects) display insignificant or weaker effects is, in our view, consistent the fact that the dependent variables in columns 5–8 do not capture the issue of taxing the richer to give to the poorer with the same clarity as our preferred variable.

On the other hand, the results when the dependent variable is WELFARE are rather different. On the individual controls, our results are very to similar to those of Moffit et al. (1998). These authors relate the response to this variable to a host individual characteristics (our variables are a subset of theirs) and conclude that the preference for more or less welfare depends on a mixture of altruism, self interest, political views and social distance from the poor. A particularly interesting variable is education. While for all the other measures of redistribution in Table 11 ceteris paribus individuals with a college degree or higher are relatively less favorable to redistribution, in the case or welfare they are more in favor. Education is not the only individual control that enters differently in columns 3 and 4 relative to all the others. Age and gender are insignificant (though significant in the other regressions), while being married significantly decreases support for welfare (and is insignificant in all other regressions). Our measures of future income prospects also enter with the opposite sign in this regression: Prob(7–10 decile) is insignificant, while expected income is positive and significant. We interpret this result not as an anomaly of our variables, but as a general indication that towards "welfare" differ markedly from attitudes towards redistribution in general. We base our conjecture on the fact that other individual characteristics switch sign in the WELFARE regression in ways consistent with this interpretation.

The fact that Americans endorse general efforts to assist the poor but are much less supportive towards welfare recipients is well known. In public opinion polls, questions relating specifically to "welfare" stir a complex web of emotional responses that range from altruism to negative reactions (and racial stereotypes) related to such phenomena like the so called "welfare queens", as emphasized by Alesina and Glaeser (2004) and a large sociological literature cited therein. According to the influential study by Gilens (1999), the widespread perception of welfare recipients as "black and undeserving" was forged by the media by over-reporting black incidence in non-sympathetic poverty stories. We venture the interpretation that more educated and more upwardly mobile individuals are less prone to manipulation by the media and less likely to fall into prejudices about "undeserving welfare recipients" and racial stereotypes. In fact when we augment the regression in columns 3 and 4 with proxies for individual prejudices (e.g., whether the respondent strongly objects having a black person home for dinner, or thinks that woman should stay home) both education and our indexes of future income prospects become insignificant.

4.4. Equal opportunities

The final point we address is how preferences relate to individual perceptions on the 'fairness' in opportunities. An individual's conviction on whether society offers equal opportunities or not likely to be correlated with the individual's own mobility prospects. For example, those who have a high likelihood of moving up the income ladder may have a tendency to believe (or say) that they deserve it because everyone has a fair chance if he or she works hard enough, and vice versa for those people whose income is likely to be in the bottom deciles in the future. Without controlling for one's future income prospects, then one may incorrectly estimate the effect of opinions on equality of opportunities on redistributive preferences. In this section, we therefore include among the controls both individual's belief about the source of economic success or the fairness in opportunities, and our "hard" measures of future income prospects, in order to net out the effect of such beliefs *conditional* on the objective mobility process.

Table 12 contains our main results on this point.[39] In addition to our full specification of Table 6, we add among the regressors a dummy for whether the respondent thinks that getting ahead in life is a matter of working hard (columns 1–4) and a dummy for whether he or she thinks it is a matter of luck or help (columns 5–8). Specifically, these variables are constructed from the GSS question GETAHEAD, which was asked almost every year from 1980 onwards. The question was phrased as follows: "Some people say that people get ahead by their own hard work; others say that lucky breaks or help from other people are more important. Which do you think is most important?". We created two dummy variables: one for those saying that hard work was most important (66% of the sample), and one for those saying that luck or outside help were most important (13% of the sample), the remaining category being the people who said that both were equally important. The estimates in Panel A show that, ceteris paribus, those who believe that hard work is the source of economic success are less favorable to redistribution, while those who believe that individual effort in not enough and luck or outside help is needed, are favorable to it. Notice that our measures of future income prospects, namely Prob(7–10 decile) and expected income, turn out to be quite robust as they have a negative and significant coefficient in all specifications. Panel B reports predicted probabilities for the ordered probit in order to gauge the magnitude of the effects for four variables of interest: the two types of beliefs on the source of economic success, and our two "hard" measures of future income prospects. Ceteris paribus, those who believe that hard work is enough to get ahead are 2 percentage point less likely to be extremely favorable to redistribution (score 7) and 1 percentage point more likely to be totally against it (score 1). Vice versa, those who believe that luck or outside help play a fundamental role are 3 percentage points more likely to be totally in favor and 3 percentage points less likely to be totally against redistribution. The effects of future income prospects can be assessed by comparing

[39] The findings of this section are related to those of Fong (2001), but we use a different dataset and different measures of income mobility. She found that beliefs about the causes of poverty and beliefs about equality of opportunities have strong effects on individuals' attitude about redistribution after controlling for subjective mobility. We show below that this remains the case even after we control for our "objective" measure of future income prospects.

Table 12
Beliefs on the sources of economic success

Panel A: estimated coefficients

Ordered probit. Dependent variable: REDISTR

	Transition matrix				Transition matrix			
	By state		By year		By state		By year	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Get ahead: hardwork	−0.082**	−0.081**	−0.082**	−0.081**				
	(0.031)	(0.031)	(0.031)	(0.031)				
Get ahead: luck/help					0.152**	0.152**	0.152**	0.151**
					(0.045)	(0.045)	(0.046)	(0.045)
Prob(7–10 decile)	−0.132**		0.116**		−.0139**		−0.122**	
	(0.057)		(0.055)		(0.058)		(0.055)	
Expected income[a]		−0.002**		−0.003**		−0.003**		−0.003**
		(0.001)		(0.001)		(0.001)		(0.001)
No. obs.	4042	4042	4042	4042	4042	4042	4042	4042
$R^2_{M\&Z}$	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
R_{Count}	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24

See notes to Table 4. Controls include: age, married, female, black, educ.<12, educ.>16, children, ln(real income), self-employed, unemployed last 5 years, prestige>father's, educ.—father's, states, years.

Panel B: average predicted probabilities

Should government reduce income differences between rich and poor?							
	1	2	3	4	5	6	7
	No						Yes
Get ahead by hard work?[b]							
No	0.11	0.07	0.14	0.21	0.18	0.12	0.16
Yes	0.12	0.08	0.15	0.21	0.18	0.11	0.14
Get ahead by luck/help?[c]							
Yes	0.09	0.07	0.14	0.20	0.19	0.13	0.18
No	0.12	0.08	0.15	0.21	0.18	0.11	0.15
Prob(7–10 decile)[d]							
Mean for 1st decile	0.11	0.07	0.14	0.21	0.18	0.12	0.16
Mean for 10th decile	0.13	0.08	0.15	0.21	0.17	0.11	0.14
Expected income[e]							
Mean for 1st decile	0.10	0.07	0.14	0.21	0.18	0.12	0.17
Mean for 10th decile	0.15	0.09	0.16	0.21	0.17	0.10	0.12

Independent variables other than those listed are calculated at the mean.

Independent variables other than those listed are caculated at the mean.

[a] Coefficient and standard error multiplied by 103 in columns 2, 4, 6 and 8.

[b] Based on estimates of cols. 1, 2, 3, 4 in Table 12, Panel A.

[c] Based on estimates of cols. 5,6,7,8 in Table 12 panel A.

[d] Based on estimates of cols. 1,3,5,7 in Table 12 panel A.

[e] Based on estimates of cols. 2,4,6,8 in Table 12 panel A.

predicted probabilities for someone with, say, expected income equal to those in the 1st decile and someone with expected income equal to those in the 10th decile. Holding all other characteristics at the mean, the person with lower expected income would be 5 percentage points more likely to be extremely favorable to redistributive policies and 5 percentage points less likely to be totally against it. The effects for Prob(7–10 decile) are similar but smaller in magnitude.

To further explore the role of beliefs in equal opportunities we turned to another set of GSS questions that investigate whether the respondent believes that society is fair. These questions concern issues such as whether family background matters for success, whether it is important to know the right people, and more generally whether there are equal opportunities. Unfortunately, some were asked only in 1984 and some only in 1987, so we had to rely on a smaller sample and we could exploit only cross state variation in future income prospects. Our complete set of results are reported in the working paper version of this article. Broadly speaking, the results are quite consistent with those presented in Table 12 and they confirm that beliefs in equal opportunities have a sizeable impact on individual attitudes towards redistribution even after controlling for one's own future income prospects, and that future income prospects retain an independent effect after controlling for individual beliefs.

5. Conclusions

This paper has estimated the impact of individual and society-wide attributes on preferences for government redistribution. In addition to considering individual demographic and socioeconomic attributes, as well as their subjective perceptions of upward mobility, we have shown that support for redistributive policies is negatively affected by 'objective' measures of expected future income and by the likelihood of moving above an income threshold that is likely to separate the winners and the losers from redistribution. Interestingly, attributes toward redistribution are *not* influenced by generic measures of mobility (up and down) that do not capture the relative gains and losses from future redistributive policies. We have also found evidence that people take into account not only mobility considerations but also equality of opportunities when taking a stand on redistribution. Ceteris paribus, those who believe that chances of getting ahead in life are not unduly influenced by factors other than 'hard work and merit are more averse to redistributive policies. On the contrary, those who believe that opportunities are unequal (e.g., because not everyone can get an education or because family background plays a key role) favor redistribution, possibly as a way to correct for such bias in the mobility process. These findings shed some light on issues that are likely to be crucial for the political acceptability of any program to reform the welfare state.

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