# Preferences for Redistribution in the Land of Opportunities<sup>1</sup>

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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.

*Keywords:* redistribution, mobility, equal opportunities *J.E.L. Classification:* D31, D63, H23

# 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 government transfers was about 8 per cent of GDP in OECD countries, versus 15 percent of provision of public goods and services. Today these two figures are about 16 per cent and 17 per cent respectively. Thus, while the share of social spending and transfers has doubled, that of government consumption has stayed roughly constant: the growth of government of the last few decades is almost entirely due to the growth of the redistributive side of government policies.<sup>1</sup> 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 of income on preferences for redistribution is more complex. To the extent that today's poor may be the wealthy of tomorrow, and viceversa, 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 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' actual history of past mobility; (ii)individuals' subjective perceptions of their future standards of living; and (iii) 'ob*jective*' 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 one to five 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

<sup>&</sup>lt;sup>1</sup>All the data are from OECD. On the one hand, these figures may underestimate the amount of redistribution since some of the government wage bill, which is classified as consumption of goods and services, has a redistributive component. On the other hand, a portion of these transfers do not go to the poor strictly defined, but rather to the middle class, as argued for example by Peltzman (1980) for the United States and by Van de Walle and Nead (1995) for developing countries.

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 socio-economic 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" (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 preferences for redistribution, and finds empirical support for its predictions using data from the General Social Survey (GSS).<sup>2</sup> Moffit, Ribar and Wilhelm (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 redistribute income along the social ladder. Alesina and Glaeser (2003) provide a broad discussion of preferences for redistributive policies contrasting and comparing US and Western Europe.

Several empirical papers have tried to measure the extent of social mobility.<sup>3</sup> The relationship between social mobility and individual demand for redistribution

<sup>&</sup>lt;sup>2</sup>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).

<sup>&</sup>lt;sup>3</sup>For an early survey and assessment of data problems see Atkinson, Bourguignon and Morrison (1992). More recently, Checchi, Ichino and Rustichini (1999) found that 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 U.K. and on whether these patterns can explain the types of redistributive policies adopted. Finally, Gottschalk and Spolaore (2002) 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

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.<sup>4</sup> 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 sources 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 his or her own past experience of mobility (or to his/her subjective beliefs about the future), we also consider the role of general mobility as objectively present in 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 he/she has good prospects of moving up the income ladder regardless of whether this has already happened to him/her. On the other hand, 'objective' indexes of future income prospects should not be redundant in the face of individual subjective assessments if there is a bias in the way respondents form their expectations or in 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 on 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

<sup>&</sup>lt;sup>4</sup>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 for Eastern European countries and for Western ones.

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 in the seminal work by 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 median 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.<sup>5</sup> 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.

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 *t* 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  $\tau$ : in particular,  $w = (\tau^2/2)\overline{y}$ , where  $\overline{y}$  represents average income of the community, assumed constant in both periods.<sup>6</sup> Ignoring discounting, the total disposable income of individual *i* in the two periods t = 1, 2 is given by:

$$y_{i1}^d + E(y_{i2}^d) = (1 - \tau)(y_{i1} + E(y_{i2})) + 2\tau \overline{y} - \tau^2 \overline{y}$$
(1)

<sup>&</sup>lt;sup>5</sup>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.

<sup>&</sup>lt;sup>6</sup>In Meltzer and Richards (1981) the distortionary costs of the tax rate is explicitly derived from a labor supply decision.

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

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

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.<sup>7</sup>

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:

$$s_{i} = \begin{array}{c} s \text{ if } y_{i} < \widetilde{y} \\ 0 \text{ if } y_{i} \ge \widetilde{y} \end{array}$$
$$h_{i} = \begin{array}{c} 0 \text{ if } y_{i} < \widetilde{y} \\ h \text{ if } y_{i} > \widetilde{y} \end{array}$$

Ignoring for simplicity the wastage in the tax collection, the budget constraint implies that  $\int_{y^m}^y s_i dF(y_i) = \int_y^{y^M} h_i dF(y_i)$ . The total disposable income of individual

<sup>&</sup>lt;sup>7</sup>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. See Benabou (1996) for a survey of these types of models. Another assumption in Benabou and Ok's analysis is that redistributive policies cannot be changed too frequently. In fact, ceteris paribus, the longer is the horizon for which redistributive schemes are fixed, the stronger the effect of the POUM hypothesis. This assumption of stickiness or "status quo bias" is also quite realistic.

*i* for the two periods is then:<sup>8</sup>

$$y_{i1}^d + E(y_{12}^d) = y_{i1} + s_{i1} - h_{i1} + E(y_{i2} + s_{i2} - h_{i2})$$
(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:

$$p_i < \frac{s_{i1} - h_{i1} + E(s_{i2})}{E(s_{i2}) + E(h_{i2})}.$$
(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 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 underor over-optimistic about it.<sup>9</sup>

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

<sup>&</sup>lt;sup>8</sup>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).

<sup>&</sup>lt;sup>9</sup>Indirect evidence on this point is provided by Alesina, Glaeser and Sacerdote (2001). 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 (if any at all).

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.

All the above factors capture some 'economic' motivations underlying individual support for redistribution. However, non-economic motivations are likely to play a significant role. For example, 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.<sup>10</sup>

Also, individuals' perceptions about *equal opportunities* may shape their attitudes towards 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.).<sup>11</sup>

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

<sup>&</sup>lt;sup>10</sup>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). A related point is that transfers to the poor may reduce incentives to commit crimes, hence there may be a link between crime prevention and the demand for redistribution. We thank a referee for making this point.

<sup>&</sup>lt;sup>11</sup>The relationship between social mobility and equal opportunities is stressed in a recent contribution by Benabou and Ok (2001b), who investigate the conditions under which a process of income mobility equalizes opportunities, and therefore can be seen as a substitute for redistributive policies. Equal opportunities are also related to the 'reciprocity and conditional obligations' view of Bowles and Gintis (2000), acording to whom people support the welfare state because they value a social norm of "fair" access to opportunities and they are willing to share with individuals similar to themselves.

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 redistribution of individual i living in state s at time t can be characterized by a "latent variable":

$$Y_{ist}^* = X_{ist}\beta + M_{ist}\gamma + S\lambda + T\xi + \varepsilon_{ist}$$
<sup>(5)</sup>

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; S is a vector of state dummies; T is a vector of year dummies, and  $\varepsilon_{ist}$  is an error term. The vectors  $\beta$ ,  $\gamma$ ,  $\lambda$ , and  $\xi$  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

$$Y_{ist} = j$$
 if  $\mu_{j-1} \le Y_{ist}^* < \mu_j$  for  $j = 1, ..., 7$  (6)

where the  $\mu_j$ 's are unknown cutpoints 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  $\beta$  (capturing various determinants of preferences) and of  $\gamma$  (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 (5) with:

$$Y_{ist}^{d*} = X_{ist}\beta + M_{ist}\gamma + F_{st}^d\delta + S\lambda + T\xi + \varepsilon_{ist}$$
<sup>(7)</sup>

where d indicates the decile to which individual i belongs, and  $F_{st}^d$  is an index of future income prospects for someone in the  $d^{th}$  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  $R_t^d$  and  $R_s^d$ . 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 1,500 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.<sup>12</sup> Definitions and summary statistics of all variables are provided in the Appendix.

The second data source is the Panel Study of Income Dynamics (PSID). This very well known study contains longitudinal data on a representative sample of US individuals from 1968 to nowadays. The initial sample of 5,000 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 1968-93. We measure mobility within any two consecutive years in this period, but we also explore longer horizons for our mobility measure. As for the definition of income, our benchmark specification

<sup>&</sup>lt;sup>12</sup>The years before 1978 cannot be used because the question identifying our dependent variables was not asked. The survey was not conducted in 1979, 1981, and 1992. Our regressions do not include the years from 1993 onwards because we are restricted by the data availability in the other dataset we use, namely the PSID. In fact, the "final release" PSID dataset ends in 1993, and the individuals interviewed in that year are asked questions about their income in 1992, which means that we can only build a social mobility index up to 1992. For detailed information about the GSS, the reader is referred to Davis and Smith (1994).

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.<sup>13</sup> The second measure relates to 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 to 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.<sup>14</sup>

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 individual herself and not by her children.<sup>15</sup> In addition, if one estimates the interval between two generations to be 25 to 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*,

 $<sup>^{13}</sup>$ For a detailed discussion of the GSS occupational prestige scores, the reader is referred to Nakao et al. (1990a,b).

<sup>&</sup>lt;sup>14</sup>We also check the robustness of our results to different definitions of the dummy variable, as explained below. While the focus of our analysis is on 'objective' indexes of future income prospects, an in depth analysis of different measures of subjective mobility can be found in Fong (2003).

<sup>&</sup>lt;sup>15</sup>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.

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).

#### [Insert Table 1]

Table 1 shows the average yearly transition matrix between income deciles (measured on family income) for the United States in the period 1967-92.<sup>16</sup> 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  $i^{th}$ decile in year t will move to the  $i^{th}$  decile in year (t+1).<sup>17</sup> 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 4th and 5th deciles.<sup>18</sup> For instance, individuals whose family income is in the 1st decile have a 38 percent probability of moving to a higher decile, and more than half of this probability refers to moving to the 2nd decile. Individuals who start today from the 3rd decile have a 66 percent probability of being in the 3rd or in lower deciles next year, and 34 percent 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 percent. People in the intermediate deciles have a relatively high likelihood of moving upwards or downwards.

## [Insert Table 2]

Table 2 shows a similar matrix, but calculated on a 5 year interval rather than between two consecutive years. Note that, as expected, the elements of the diagonal are 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 table 1 and in table 2. This comparison shows that when we consider mobility between from one year to the next, the probability of staying in the same

<sup>&</sup>lt;sup>16</sup>The original PSID data are for the years 1968 to 1993, but interviews in a given year refer to incomes earned during the *previous* year.

<sup>&</sup>lt;sup>17</sup>Notice that table 1 is reported for expositional convenience, but will not be employed in the econometric analysis. In fact, each value in table 1 is the average of the values in the corresponding cells from 25 separate matrices (one for every couple of consecutive years starting from 1967/68 until 1991/92). In our regressions we will refer to the original time-varying matrixes and match them with the relevant year for each GSS respondent.

<sup>&</sup>lt;sup>18</sup>Notice that for the 1st and 10th decile the high values on the principal diagonal partly reflect a "truncation" effect: mobility in one direction is in fact impossible by definition.

decile is almost twice that of moving one decile up or down; on the other hand, when we look at five-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

$$EXPINC_{d,(t-1)} = \sum_{j=1}^{10} p_{dj} \overline{y}_{j,t}$$
(8)

Expression (8) represents the income that an individual who is in decile d at time t - 1 can expect to have at time t, and is a weighted average of the mean income of all deciles in year t (i.e.,  $\overline{y}_{j,t}$ ) 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 five-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:

$$\operatorname{Prob}(J - 10 \operatorname{decile})_d = \sum_{i=J}^{10} p_{di}$$
(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 6th decile or at the boundary between the 6th and the 7th), but we also experiment with different income thresholds. Notice that this index captures "upward mobility" for those individuals who start from a decile below J, but can be associated with immobility or even downward mobility for individuals in the 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,  $\operatorname{Prob}(7-10 \operatorname{decile})_d$  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  $\operatorname{Prob}(7-10 \operatorname{decile})^s_d$ from a transition matrix that is constructed pooling all the PSID respondents who lived in State s during any two consecutive years between 1967 and 1992.<sup>19</sup> 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  $\operatorname{Prob}(7-10 \operatorname{ decile})_d^t$ which amounts to computing  $\operatorname{Prob}(7-10 \operatorname{decile})_d$  for the entire US in every year between 1967 and 1992, and assign to each GSS respondent the index for the year before the one in which the individual expresses an opinion about redistribution. We have also refined our time-varying indexes by allowing them to differ according to individual characteristics such as age, education, or race.<sup>20</sup> 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 categoryspecific 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.<sup>21</sup> 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.

# [Insert Figure 1]

Figure 1 shows the distribution across States of our probability index for the median income decile, i.e.  $\operatorname{Prob}(7 - 10 \text{ decile})_5^s$ . Note that when we have less than one hundred individuals matching the criteria for the State-specific transition matrix in the PSID, we report the index as missing.<sup>22</sup> Generally speaking, the North-West displays higher values than the South-East.

## [Insert Figure 2]

Figure 2 shows the time series of our probability and expected income variables for the median decile, i.e.  $\operatorname{Prob}(7-10 \text{ decile})_5^t$  (top panel) and  $EXPINC_5^t$  (bottom

<sup>&</sup>lt;sup>19</sup>For a more detailed description, see the Appendix. Note that each individual in the PSID is counted for the State in which she lived in the second of any two 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.

 $<sup>^{20}</sup>$ There may be difference also across genders but we use family income so differentiating across gender is not possible.

 $<sup>^{21}</sup>$ We could not construct category-specific matrices at the State level due to the insufficient number of observations within categories for most States.

<sup>&</sup>lt;sup>22</sup>The states for which this occurs are Alaska, Delaware, Idaho, and North Dakota.

panel). Not surprisingly, expected income is highly correlated with the business cycle, while the other index is not.<sup>23</sup> 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 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 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.

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.<sup>24</sup> 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 losses from redistributive schemes. For example, we shall test whether preferences for redistribution are influenced by

<sup>&</sup>lt;sup>23</sup>The variability of  $\operatorname{Prob}(7-10 \operatorname{decile})_5^t$  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".

<sup>&</sup>lt;sup>24</sup>For a model in which redistribution affects mobility in the presence of capital market imperfections, see Maoz and Moav (1999).

the mobility index proposed by Fields and Ok (1996a):

$$(Fields - Ok)_{st} = \sum_{i=1}^{N} \frac{1}{N} \left| y_{s,t+1}^{i} - y_{s,t}^{i} \right|$$
(10)

where  $y_t^i$  is 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 one 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.<sup>25</sup> In particular, we define the following index:

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

where  $\rho_{st}$  is the Spearman 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.<sup>26</sup> Though compared to (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  $\overline{y}$  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

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

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 King builds on the above statistic and has the following expression:

 $<sup>^{25}\</sup>mathrm{For}$  a thorough discussion of orderings in two-way contingency tables, see Dardanoni and Forcina (1998).

<sup>&</sup>lt;sup>26</sup>Notice that, since neither the Fields-Ok index nor that based on the Spearman coefficient are constructed from inter-decile transition matrices, we have anough observations to build mobility indexes that are state and time varying at the same time.

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

where  $\gamma \geq 0$  is the degree of immobility aversion (higher  $\gamma$  means more aversion to immobility) and  $k \leq 1$  parameterizes the preference for 'vertical' inequality (the higher is (1 - k), the higher is aversion to inequality).<sup>27</sup> 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 regressions 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.

#### [Insert Table 3]

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 to 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.<sup>28</sup> This GSS question is the most appropriate for our 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.

 $<sup>^{27}</sup>$ 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.

<sup>&</sup>lt;sup>28</sup>As explained in the appendix, REDISTR = 8- EQWLTH.

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 to 7 in the above variable REDISTR, and as 0 (averse to redistribution) those who had a score of 1 to 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 we 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.<sup>29</sup> 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 Figure 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.

## [Insert Table 4]

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

<sup>&</sup>lt;sup>29</sup>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.

hand, religious affiliation seems to have limited influence: the coefficient on 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 from 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.

Having experienced unemployment in the last few years 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, in the sense that by becoming unemployed the respondent may have learned about his or her need for government intervention and become more sensitive to the risk of future spells of unemployment. The dummy for whether the respondent has been unemployed in the last five years takes a positive and significant coefficient. Alternative interpretations of this finding are that unemployment may lead to empathizing with the 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.<sup>30</sup> The interpretation of unemployment as affecting risk aversion is in part supported by the fact that when we use a relative's unemployment experience (as opposed to the respondent's own experience), this variable remains significant at the 5 percent 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. The respondent's own experience has a larger effect on her views than a relative's

 $<sup>^{30}</sup>$ We thank two referees for bringing to our attention this and other points in the discussion of self-employment and unemployment.

experience.<sup>31</sup>

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.<sup>32</sup>

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 in 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 one year of our sample, 1987, which reduces dramatically the

<sup>&</sup>lt;sup>31</sup>All these results are available upon request.

 $<sup>^{32}</sup>$ From the same GSS question we have also constructed a dummy for whether helping others is one of the *two* most important moral values to be transmitted to children. The number of positive answers to this question is very large, however, making it of little significance for our purposes. Results obtained using this variable are consistent with those shown in Table 4.

number of observations and makes 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 RE-DISTR01 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 racial 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.<sup>33</sup> 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, Baqir and Easterly (1999), Luttmer (2001), and Alesina, Glaeser and Sacerdote (2001).<sup>34</sup> 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 percent less likely to support redistribution.

## [Insert Table 5]

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 category 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 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

 $<sup>^{33}</sup>$ See also Alesina, Glaeser and Sacerdote (2001) and Greene and Nelson (2000) for regressions of preferences for more welfare spending which show results on individual characteristics broadly consistent with ours.

<sup>&</sup>lt;sup>34</sup>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, counties 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.

favorable to redistribution (score 7) than a white one with the same socio-economic characteristics.<sup>35</sup> 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

#### [Insert table 6]

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).<sup>36</sup> 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.

In all models both the probability of being above the 6th decile and the expected future income negatively influence individual support for redistribution, and these effects are significant at the 1 percent 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 unemployed. Looking at 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

<sup>&</sup>lt;sup>35</sup>The result concerning whites' relative aversion to redistribution, possibly perceived as favoring racial minorities, is supported among others by Gilens (1999), Kinder and Sanders (1996) and Alesina, Glaeser and Sacerdote (2001).

<sup>&</sup>lt;sup>36</sup>In these regressions we drop the "help others" variable and the religious variables because they would restrict significantly the number of available observations.

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 five years, and is the same order of magnitude of being a high school dropout.

# [Insert figures 3 and 4]

To get some insights on how support for redistribution is affected by future income prospects it is useful to look at figures 3 and  $4.^{37}$  Figure 3 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 our index Prob(7-10 decile) varies between 0 and 1. Figure 4 does the same with the Expected income variable. In both cases it is clear that 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 highest (support = 7) categories are markedly increasing and decreasing, respectively, in our two measures of future income prospects. In other words, the expectation of being a future net loser from redistribution seems to affect especially the preferences of the 'extremists', and only marginally changes the opinion of the moderates.

#### [Insert table 7]

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 five 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 6th 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 one year and five 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

 $<sup>^{37}</sup>$ The predicted probabilities of figures 3 and 4 are based on the estimated coefficients of columns 1 and 2, respectively, in Table 6. All controls but the indexes on the horizontal axis are held at the sample means.

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

#### [Insert Table 8]

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 one year (columns 1-3) and five years (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 eleven out of twelve cases our indexes remain significant at the 5 percent level.

# [Insert table 9]

In Table 9 we perform further sensitivity analysis. The first column of Panel A excludes the influential observations using the DF beta method.<sup>38</sup> 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 one 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 three-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 we retain our baseline specification for the individual controls and

<sup>&</sup>lt;sup>38</sup>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  $abs(DFbeta) > 2/\sqrt{\#obs}$  (see e.g., Belsley et al. (1980), p.28).

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 percent 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 off the 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.<sup>39</sup> 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.<sup>40</sup> Despite the fragility of the expected income variable, the relative robustness of the probability of moving above the 6th decile (which remains significant when we introduce deciles dummies<sup>41</sup>) 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  $\operatorname{Prob}(J - 10 \text{ decile})$  index. In particular, we have computed the index (9) looking at the probability of moving to deciles 6 to 10, or 5 to 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

<sup>&</sup>lt;sup>39</sup>We thank a referee for suggesting this.

<sup>&</sup>lt;sup>40</sup>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 -.307 (.034), and those on expected income are -.006 (.001).

<sup>&</sup>lt;sup>41</sup>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 1st 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 1st decile in California may be more mobile than the 1st decile in Alabama. Analogous arguments apply to variation in mobility within deciles over the years.

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.<sup>42</sup>

# [Insert table 10]

Finally, in Table 10 we consider measures of income mobility that differ from our indexes  $\operatorname{Prob}(7-10 \text{ decile})$  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 Fields-Ok index (10), the Spearman mobility index (11), and King's index (12) with parameters  $\gamma = 1$  and  $k = -0.1.^{43}$  We compute them both for the one-year and for the five-years 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 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, as implied by the Meltzer and Richards model. Nevertheless, in this section we explore different GSS questions concerning the broad issue of redistributive policies.

The GSS contains four other questions that could potentially be used as proxies for attitudes towards redistribution. One is the variable Eqincome, which

<sup>&</sup>lt;sup>42</sup>More precisely, the estimated ordered probit coefficient is .156, with a standard error of .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 .04, and the mean starting from deciles 3 and above is .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.

<sup>&</sup>lt;sup>43</sup>There is no clear criterion for choosing parameter values for King's index, and we don't 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.

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.<sup>44</sup> 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, Ribar and Wilhelm (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 we shall see below, some variants on this question generate similar results to ours, others do not.

## [Insert Table 11]

Ordered probit estimates are reported in table 11.<sup>45</sup> 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 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

<sup>&</sup>lt;sup>44</sup>In addition to the different coverage over the years, there is one additional feature that would make an aggregation of EQWLTH and EQINCOME into a single dependent variable somewhat problematic: the former is on a 7 point scale, while the latter ranges from 1 to 5.

<sup>&</sup>lt;sup>45</sup>In all cases the original GSS variables have been rescaled so that they are *increasing* in individual support for redistribution. See the appendix for more details.

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 with the fact that the dependent variables in columns 5 to 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 similar to those of Moffit, Ribar and Wilhelm (1998). These authors relate the response to this variable to a host of 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, policial 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 of 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 attitudes 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 (2003) 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 overreporting 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 women should stay home) both education and our indexes of future income prospects become insignificant.<sup>46</sup>

# 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 are 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 individuals' beliefs 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.

Previous work by Fong (2001) suggests that beliefs about the sources of economic success have an independent effect on individual redistributive preferences. Apart from differences in data source and coverage, our analysis differs from Fong's from a methodological point of view. Fong controls for "self-interest" in redistribution by including current socioeconomic variables, among which current income. We explicitly construct measures of future income prospects that are not simply linear combinations of current characteristics, because by construction our transition matrixes allow current characteristics to have a different effect on future mobility depending on the state or the year in which the respondent lives.<sup>47</sup> Furthermore, our data spans more than a decade (as opposed to Fong who uses one year), so we can look at variation in the demand for redistribution both across states and over time.

Before turning to our estimates, it is useful to recall from section 2 that the effect of beliefs in equal opportunities on the demand for redistribution is not unambiguous ex ante. On the one hand, one may argue that opportunities are not equal because of innate differences in ability, or in "entrepreneurial capacity",

<sup>&</sup>lt;sup>46</sup>Results available upon request.

<sup>&</sup>lt;sup>47</sup>For example, two identical individuals living in different states have the same "self-interest" in Fong's analysis but have different mobility prospects in ours. In other words, our approach could be compared to Fong's from a statistical point of view if she had introduced, in addition to current individual characteristics, both state fixed effects and interaction terms between states and individual characteristics. She did neither. Controlling for state fixed effects seems to us crucial in that many redistributive measures (e.g., AFDC nominal benefit levels) are set by state legislatures.

so that redistribution is viewed as penalizing the most productive members of society. On the other hand, if one believes that differences in opportunities are due to "unfair" features of society, then he or she should favor redistribution as a way of correcting for unfair starting points.

## [Insert Table 12]

Table 12 contains our main results on this point. 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.<sup>48</sup> 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 points 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 point more likely to be totally in favor and 3 percentage point less likely to be totally against redistribution. The effects of future income prospects can be assessed by comparing 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  $\operatorname{Prob}(7-10 \text{ decile})$  are similar but smaller in magnitude.

<sup>&</sup>lt;sup>48</sup>The variable GETAHEAD appears in the specification of Moffitt et al. (1998).

To further explore the role of beliefs in equal opportunities we turn to another set of GSS questions that 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 have to rely on a smaller sample and we can exploit only cross state variation in future income prospects. Our results are reported in Table 13.

# [Insert Table 13]

Each row refers to a separate ordered probit regression that includes all the basic controls listed in column 4 of table 4, plus our measure of future income prospects and a dummy regarding beliefs about equal opportunities. The specific question used to assess equal opportunities is reported in the first column. The second shows how the responses to each question are split in the yes/no alternative, and, generally, the split is very close to the middle. The next two columns report the coefficients on the equal opportunity variable and on expected income, respectively. The results are mixed. In 8 out of 10 answers the coefficients on equal opportunities have the expected sign and are statistically significant. In the remaining two cases the sign is the one expected but the coefficient is negative and significant in 7 out of 10 cases, and is not significantly different from zero in the remaining ones. When we employ Prob(7-10 decile) instead of expected and the coefficients on Prob(7-10 decile) are negative but not statistically significant.

Based on the predicted probabilities from table 13, those who believe that class differences are due to ability and education are 4 percentage points less likely to declare maximum support for redistribution and 3 percentage points more likely to declare the minimum. Those who believe that "social differences in the US are justified" have a 7 percentage points lower probability being totally favorable to redistribution and a 5 points higher probability of being totally against it. On the other hand, individuals who think that class differences are due to outside factors or that they persist (the latter being phrased as "In the US traditional divisions between owners and workers still remain. A person's social standing depends upon whether he/she belongs to the upper or lower class") are, respectively, 7 and 4 percentage points less likely to favor it the least. The remaining questions in rows 7 to 11 refer to what factors the respondent considers "important for getting ahead in life". Those who believe it is important to "come from a wealthy family", to "know the right people", and that "not everyone in the US has an opportunity to obtain an education corresponding to their abilities and talents" are generally more supportive of government intervention, with a peak in magnitude for the "important who you know" variable.

Overall, the above results suggest 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

Today's poor favor redistributive policies and today's rich oppose them. However, several other factors affect individual support for redistribution in a non-trivial way. This paper has estimated the impact of individual and society-wide attributes on preferences for government redistribution. In addition to considering individual demographic and socio-economic 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, attitudes 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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# Appendix

# Data sources and coverage

The data sources are abbreviated as follows: GSS stands for "General Social Survey, cumulative file 1972-94"; PSID refers to the Panel Study of Income Dynamics individual or family files, downloaded from *http://www.isr.umich.edu/src/psid/*. In all cases, "no answer", "do not know", "no opinion", and "not applicable" were coded as missing values.

The PSID sample we use is restricted to household heads aged 21-59 between any two consecutive years in the period 1968-93. For these individuals we employ three definitions of income, labelled in the PSID as:

a) Total taxable income of Head and Wife

b) Total taxable income of Head and Wife, including Other Family Unit Members (OFUM)

c) Average hourly earnings of Head

Definitions a) and b) include both labor income (labor part of farm income, labor part of business income, wages, bonuses, overtime, commissions, income from professional practice or trade, labor part of market gardening income, labor part of roomers and boarders income), and income from assets (asset part of farm income, asset part of unincorporated business income, asset part of market gardening, asset part of income from roomers and boarders, alimony, income from rent, interest, dividends, etc.). Definition c) includes labor income of Head, and takes value zero if Head did not work for money.

For all three income definitions we construct inter-deciles transition matrices over a 1-year and a 5-year interval, i.e. we look at the decile to which the income of the Head (or of the Head's family) belongs between t and t + 1, or between tand t + 5, respectively. Starting from these matrices, we construct the mobility measures defined in the text. These indices take on different values depending on the decile to which the individual belongs in year t. We therefore need to assign our GSS respondents to the appropriate decile in the PSID.

The matching between GSS and PSID data is done as follows. For each GSS respondent in any give year t we know both the respondent's own "earnings, before taxes" (GSS variable: 'RINCOME') and the "total family income, from all sources, before taxes" (GSS variable: 'INCOME'). For each transition matrix constructed in the PSID from t to t + 1 we know the thresholds of each decile by row, i.e. the minimum and maximum incomes of the individuals belonging to a given decile in year t. We assign each GSS respondent to the appropriate decile by comparing INCOME to the thresholds of the transition matrices constructed from family income –definitions a) and b) above– and RINCOME to the thresholds of the

transition matrices constructed from individual earnings –definition c).<sup>49</sup>

# Variable definition

The following is a list of the variables we use and of their sources, followed by summary statistics. Unless otherwise stated, the source of a variable is authors' calculation on GSS data. For all GSS variables, "Dont' know" and "No answer" were coded as missing values.

**REDISTR**: Categorical variable varying on a 7 point scale from 1=against redistribution to 7=in favor of redistribution. Original GSS survey question: "Some people think that the government in Washington ought to reduce the income differences between the rich and the poor, perhaps by raising the taxes of wealthy families or by giving income assistance to the poor. Others think that the government should not concern itself with reducing this income difference between the rich and the poor. Here is a card with a scale from 1 to 7. Think of a score of 1 as meaning that the government ought to reduce the income differences between rich and poor, and a score of 7 meaning that the government should not concern itself with reducing income differences. What score between 1 and 7 comes closest to the way you feel?". Prompted answers coded in the GSS variable 'EQWLTH' on a scale of 1 to 7, where 1=Government should do something to reduce income differences; 7=Government should not concern itself.; 8=Don't know; 9=No answer. Our variable is rescaled as (8 - EQWLTH), i.e. it is increasing in individual support for redistribution.

**REDISTR01**: dummy equal to 1 if respondent thinks that the government should reduce income differences between the rich and the poor. Original GSS variable 'EQWLTH' (see description of the variable 'REDISTR'). REDISTR01 takes value 1 if EQWLTH<4 and zero otherwise.

WELFARE: Categorical variable varying on a 3 point scale from 1=against welfare spending to 3=in favor of welfare spending. Original GSS survey question: "We are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one I'd like you to tell me whether you think we're spending too much money on it, too little money, or about the right amount. Are we spending too much money, too little money, or about the right amount on welfare?". Prompted answers coded in the GSS variable 'NATFARE' on a scale of 1 to 3, where 1=Too little; 2=About

<sup>&</sup>lt;sup>49</sup>Though the transition matrix is constructed on average *hourly* earnings, the matching is done on *annual* labor income (PSID variable: Total labor income of Head) because the variable RINCOME in the GSS is on an annual basis. On the other hand, average hourly earnings in the PSID are obtained simply by dividing total labor income of Head for the number of hours worked in a year.

right; 3=Too much; 8=Don't know; 9=No answer. Our variable is rescaled as (4 - NATFARE), i.e. it is increasing in individual support for welfare.

ASSISTANCE TO/ CARING FOR THE POOR: Same as the variable WELFARE, but constructed combining the original GSS questions 'NATFAREY' and 'NATFAREZ' where the word "welfare" is replaced, respectively, by "assistance to" and "caring for" the poor.

**SOCIAL SECURITY**: Same as the variable WELFARE, but constructed combining the original GSS question 'NATSOC' where the word "welfare" is replaced by "social security".

Age: age of respondent in years.

Married: dummy equal to 1 if respondent is married.

**Female**: dummy equal to 1 if respondent is female.

Black: dummy equal to 1 if respondent is African American.

Educ<12 yrs: dummy equal to 1 if respondent has less than 12 years of education.

Educ>16 yrs: dummy equal to 1 if respondent has more than 16 years of education.

Children: dummy equal to 1 if respondent has children.

**In(real income)**: logarithm of respondent's household income (constant 1995 US\$). The construction of the original GSS income variable, REALINC, is documented in E. Ligon, "The Development and Use of a Consistent Income Measure for the General Social Survey", GSS Methodological Report No. 64, September 1989.

Self-employed: dummy equal to 1 if respondent is self-employed.

**Unemp. last 5 yrs**: dummy equal to 1 if respondent has been unemployed in the last 5 years.

**Protestant**: dummy equal to 1 if respondent is Protestant.

**Catholic**: dummy equal to 1 if respondent is Catholic.

Jewish: dummy equal to 1 if respondent is Jewish.

**Other religion**: dummy equal to 1 if respondent is religious but not Protestant, Catholic, or Jewish.

Help others: dummy equal to 1 if respondent says that helping others is the most important value for a child. Original GSS survey question: "If you had to choose, which thing on this list would you pick as the most important for a child to learn to prepare him or her for life?". Prompted answers coded in the GSS variable 'HELPOTH'. Our variable takes value 1 if respondent picks "helping others" as the first most important thing, and zero otherwise.

**Prestige**>father's: dummy equal to 1 if respondent's prestige score (variable 'PRESTIGE' and 'PRESTG80' in the GSS) is higher than father's (variable 'PAPRES16' and 'PAPRES80'). For a detailed definition of the GSS occupational

prestige scores, see Nakao et al. (1990a,b).

Education-father's: years of education of the respondent minus years of education of the father.

**Prob** (7-10 decile): index defined by expression (9) in the text. In the State-specific transition matrix, the income thresholds for the t + 1 deciles are calculated on the whole US population, because the relative gains from federal redistributive programs depend on the nation-wide distribution of income. The State-level dimension depends on the fact that the cells of the transition matrix are "filled" only with people living in the given States. Source: authors' calculations on PSID.

**Expected income**: expected future income of the respondent defined by expression (8) in the text. Source: authors' calculations on PSID.

**Fields-Ok**: per capita mobility index proposed by Fields and Ok (1996a) and defined in expression (10) in the text. Source: authors' calculations on PSID.

Fields-Ok (logs): same as Fields-Ok, but uses the logarithm of the relevant income variable.

**Spearman mobility:** index defined by expression (11) in the text. Source: authors' calculations on PSID.

**King:** index defined by expression (12) in the text. Source: authors' calculations on PSID.

HARDWORK: dummy equal to 1 if respondent thinks that hard work is the most important reason why people get ahead. Original GSS survey question: "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". Prompted answers coded in the GSS variable 'GETAHEAD': 1=Hard work most important; 2=Hard work, luck equally important; 3=Luck most important; 8=Don't know; 9=No answer. Our variable takes value 1 if GETAHEAD=1 and zero otherwise.

LUCK/HELP: dummy equal to 1 if respondent thinks that luck or help from others are the most important reason why people get ahead. Original GSS survey question: "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". Prompted answers coded in the GSS variable 'GETAHEAD': 1=Hard work most important; 2=Hard work, luck equally important; 3=Luck most important; 8=Don't know; 9=No answer. Our variable takes value 1 if GETAHEAD=3 and zero otherwise.

**CLABEDU**: dummy equal to 1 if respondent thinks that class differences depend on one's ability and education. Original GSS survey question: "America has an open society. What one achieves in life no longer depends on one's family background, but on the abilities one has and the education one acquires". Prompted answers coded in the GSS variable 'USCLASS3': 1=Strongly agree; 2=Somewhat agree; 3=Somewhat disagree; 4=Strongly disagree; 8=Don't know; 9=No answer. Our variable takes value 1 if USCLASS3<3 and zero otherwise.

**CLFAM**: dummy equal to 1 if respondent thinks that class differences depend on family background. Original GSS survey question: "In the United States there are still great differences between social levels, and what one can achieve in life depends mainly upon one's family background". Prompted answers coded in the GSS variable 'USCLASS2': 1=Strongly agree; 2=Somewhat agree; 3=Somewhat disagree; 4=Strongly disagree; 8=Don't know; 9=No answer. Our variable takes value 1 if USCLASS2<3 and zero otherwise.

**CLOUT**: dummy equal to 1 if respondent thinks that class differences depend on factors outside one's control. Original GSS survey question: "What one gets in life hardly depends at all on one's own efforts, but rather on the economic situation, job opportunities, union agreements, and the social services provided by the government.". Prompted answers coded in the GSS variable 'USCLASS4': 1=Strongly agree; 2=Somewhat agree; 3=Somewhat disagree; 4=Strongly disagree; 8=Don't know; 9=No answer. Our variable takes value 1 if USCLASS4<3 and zero otherwise.

**CLSTAY**: dummy equal to 1 if respondent thinks that class differences persist. Original GSS survey question: "In the United States traditional divisions between owners and workers still remain. A person's social standing depends upon whether he/she belongs to the upper or lower class". Prompted answers coded in the GSS variable 'USCLASS1': 1=Strongly agree; 2=Somewhat agree; 3=Somewhat disagree; 4=Strongly disagree; 8=Don't know; 9=No answer. Our variable takes value 1 if USCLASS1<3 and zero otherwise.

**CLJUSTIF**: dummy equal to 1 if respondent thinks that class differences are justified. Original GSS survey question: "All in all, I think social differences in this country are justified". Prompted answers coded in the GSS variable 'USCLASS8': 1=Strongly agree; 2=Somewhat agree; 3=Somewhat disagree; 4=Strongly disagree; 8=Don't know; 9=No answer. Our variable takes value 1 if USCLASS8<3 and zero otherwise.

**CLACCOPP**: dummy equal to 1 if respondent thinks that class differences are justified. Original GSS survey question: "Differences in social standing between people are acceptable because they basically reflect what people

made out of the opportunities they had.". Prompted answers coded in the GSS variable 'USCLASS7': 1=Strongly agree; 2=Somewhat agree; 3=Somewhat disagree; 4=Strongly disagree; 8=Don't know; 9=No answer. Our variable takes value 1 if USCLASS7<3 and zero otherwise.

**OP\_EDU**: dummy equal to 1 if respondent thinks that not everyone has opportunity to acquire education corresponding to their talent. Original GSS survey

question: "Does everyone in this country have an opportunity to obtain an education corresponding to their abilities and talents?". Prompted answers coded in the GSS variable 'EDUCOP': 1=Yes; 2=No; 8=Don't know; 9=No answer. Our variable takes value 1 if EDUCOP=2 and zero otherwise.

**OP\_KNOW**: dummy equal to 1 if respondent thinks that knowing the right people is very important to get ahead in life. Original GSS survey question: "How important you think it is for getting ahead in life knowing the right people?". Prompted answers coded in the GSS variable 'OPKNOW': 1=Essential; 2=Very important; 3=Fairly important; 4=Not very important; 5=Not important at all; 8=Can't choose; 9=No answer. Our variable takes value 1 if OPKNOW<3 and zero otherwise.

**OP\_PARED**: dummy equal to 1 if respondent thinks that one needs educated parents to get ahead in life. Original GSS survey question: "How important you think it is for getting ahead in life having well educated parents?". Prompted answers coded in the GSS variable 'OPPARED': 1=Essential; 2=Very important; 3=Fairly important; 4=Not very important; 5=Not important at all; 8=Can't choose; 9=No answer. Our variable takes value 1 if OPPARED<3 and zero otherwise.

**OP\_WLTH**: dummy equal to 1 if respondent thinks that one needs to come from a wealthy family to get ahead in life. Original GSS survey question: "How important you think it is for getting ahead in life coming from a wealthy family?". Prompted answers coded in the GSS variable 'OPWLTH': 1=Essential; 2=Very important; 3=Fairly important; 4=Not very important; 5=Not important at all; 8=Can't choose; 9=No answer. Our variable takes value 1 if OPWLTH<4 and zero otherwise.

	Mean	Std. Dev.	No. obs.
REDISTR	4.364	1.953	11125
REDISTR01	.606	.489	8907
WELFARE	1.720	.784	6443
ASSIST/ CARE FOR POOR	2.592	.640	4168
SOCIAL SECURITY	2.500	.615	6869
Age	44.348	17.393	11125
Married	.568	.495	11125
Female	.552	.497	11125
Black	.139	.346	11125
Educ<12 yrs	.260	.439	11113
Educ>16 yrs	.195	.397	11113
Children	.411	.492	11051
ln(real income)	10.249	.956	11125
Self-employed	.114	.318	10497
Unemp. last 5 yrs	.230	.421	11055
Protestant	.638	.481	11109
Catholic	.248	.432	11109
Jewish	.020	.139	11109
Other religion	.020	.140	11109
Help others	.123	.329	5651
Job prestige >father's	.466	.499	8943
Education - father's	2.798	3.863	8178
Expect better life	.716	.451	1396
Prob(7-10decile), t+1	.379	.369	11125
Prob(7-10decile), t+5	.304	.298	11028
Prob(7-10decile), t+1 (hourly earnings of head)	.494	.344	11125
Prob(7-10decile), t+5 (hourly earnings of head)	.405	.305	10904
Prob(7-10decile), t+1 (head+wife+ofum)	.362	.354	11125
Prob(7-10decile), t+5 (head+wife+ofum)	.295	.281	11028
Expected income, t+1	41.053	27.385	11125
Expected income, t+5	45.021	25.885	11125
Expected income, t+1 (hourly earnings of head)	36.775	20.230	11125
Expected income, t+5 (hourly earnings of head)	38.828	19.801	11028
Expected income, t+1 (head+wife+ofum)	41.501	27.548	11125
-			

 Table A1: Summary statistics

Table A1 (continued)

	Mean	Std. Dev.	No. obs.
Spearman mobility, t+1	.108	.108	10781
Spearman mobility, t+5	.248	.093	10904
Fields-Ok, t+1	9676.82	2385.53	11125
Fields-Ok, t+5	17068.35	4664.21	11125
Fields-Ok (logs), $t+1$	.323	.075	11125
Fields-Ok (logs), $t+5$	.502	.117	11125
King, t+1	.182	.041	11101
King, $t+5$	.278	.056	11101
· HARDWORK	.662	.473	5885
LUCK/HELP	.130	.337	5885
CLABEDU	.411	.492	1278
CLFAM	.439	.496	1277
CLOUT	.416	.493	1270
CLSTAY	.702	.458	1257
CLJUSTIF	.524	.500	1289
CLACCOPP	.747	.435	1255
OP_EDU	.295	.456	1283
OP_KNOW	.448	.497	1421
OP_PARED	.423	.494	1413
OP_WLTH	.511	.500	1399

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

Table 1: Transition matrix for US (t,t+1), average 1972-92

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

Table 2: Transition matrix for US (t, t+5), average 1972-87

Should govt.	reduce	e inco	me d	ifferer	nces b	etwee	n rich a	and poor ?
	1	$\mathcal{Z}$	$\mathcal{B}$	4	5	<b>6</b>	$\gamma$	Dummy
	NO						YES	redistr01
Full sample	.13	.07	.12	.20	.17	.11	.20	.59
By year								
1978	.12	.08	.11	.21	.17	.11	.19	.61
1980	.16	.07	.13	.20	.17	.09	.17	.55
1983	.15	.08	.11	.18	.16	.11	.20	.58
1984	.12	.08	.13	.17	.15	.12	.21	.60
1986	.12	.06	.11	.21	.17	.09	.23	.62
1987	.12	.06	.12	.21	.17	.09	.23	.62
1988	.12	.08	.12	.20	.18	.10	.20	.60
1989	.11	.07	.11	.20	.20	.13	.18	.63
1990	.11	.06	.09	.22	.18	.12	.21	.66
1991	.09	.08	.12	.20	.17	.13	.20	.63
1993	.12	.08	.12	.18	.19	.12	.18	.60
1994	.15	.08	.15	.21	.16	.09	.15	.51
By region								
West	.16	.09	.13	.18	.17	.10	.16	.53
Midwest	.11	.07	.13	.20	.19	.11	.20	.62
North-Est	.11	.07	.12	.20	.18	.10	.21	.62
South	.14	.07	.11	.21	.15	.10	.20	.59

 Table 3: Attitudes toward redistribution

Dependent variables:	REDISTR						redistr01		
		Ord	lered Pr	obit		$\Pr$	$\operatorname{obit}$		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]		
Age	003**	002**	002**	004**	006	002**	0005		
	(.001)	(.001)	(.001)	(.001)	(.004)	(.001)	(.002)		
Married	.020	.025	.019	.003	015	.004	014		
	(.020)	(.020)	(.030)	(.023)	(.066)	(.018)	(.058)		
Female	$.130^{**}$	.137**	$.142^{**}$	$.130^{**}$	.094	.090**	.076		
	(.027)	(.028)	(.028)	(.030)	(.078)	(.014)	(.056)		
Black	.439**	$.451^{**}$	$.445^{**}$	.400**	$.317^{**}$	.195**	$.162^{*}$		
	(.056)	(.059)	(.058)	(.056)	(.112)	(.028)	(.083)		
Educ<12	.291**	$.288^{**}$	$.257^{**}$	.331**	$.177^{**}$	.158**	.036		
	(.023)	(.023)	(.057)	(.028)	(.090)	(.025)	(.106)		
Educ>16	$186^{**}$	$192^{**}$	$179^{**}$	220**	$215^{**}$	088**	.007		
	(.029)	(.028)	(.032)	(.032)	(.097)	(.023)	(.075)		
Children	005	006	.012	008	020	001	003		
	(.021)	(.021)	(.029)	(.021)	(.069)	(.017)	(.055)		
$\ln(\text{real income})$	$159^{**}$	$158^{**}$	$153^{**}$	$158^{**}$	$174^{**}$	083**	$059^{*}$		
	(.012)	(.012)	(.017)	(.013)	(.045)	(.013)	.033		
Self-employed	$179^{**}$	$180^{**}$	$113^{**}$	$184^{**}$	112	117**	134		
	(.033)	(.033)	(.032)	(.041)	(.111)	(.025)	(.085)		
Unemp. last 5 yrs	$.140^{**}$	.139**	$.117^{**}$	$.156^{**}$	.073	.092**	.043		
	(.022)	(.023)	(.030)	(.025)	(.108)	(.017)	(.054)		
Protestant		088*							
		(.050)							
Catholic		010							
		(.047)							
Jewish		099							
		(.076)							
Other religion		.224**							
		(.079)							
Help others			.149**						
			(.050)						
Job prestige>father's				047**	061	005	.043		
				(.021)	(.073)	(.016)	(.055)		
Educ - father's				.018**	.028**	.006**	.009		
				(.002)	(.010)	(.002)	(.008)		
Expect better life					245**		105**		
			47		(.056)		(.051)		
No. obs.	11352	11339	6217	8396	980	$436\overline{0}$	502		
$R^2_{M\&Z}$	.11	.11	.10	.10	.14	.18	.18		
$R_{Count}^2$	.25	.25	.24	.23	.25	.66	.66		

# Table 4: Individual determinants of preference for redistribution

Notes: \* denotes significance at the 10 percent level, \*\* at the 5 percent level.

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

# Table 5: Predicted probabilities

Should govt. reduce income diff	ference	$es \ be$	twee	en ri	ch a	nd p	oor ?
	1	$\mathcal{2}$	$\mathcal{B}$	4	5	6	$\gamma$
	NO						YES
Observed, full sample	.13	.08	.13	.19	.18	.11	.18
Predicted, full sample	.12	.08	.14	.20	.19	.11	.16
By DACE							
	10	00	14	01	10	11	15
white	.12	.08	.14	.21	.18	.11	.15
Black	.06	.05	.10	.18	.20	.14	.26
By gender							
Male	.13	.08	.15	.21	.18	.11	.14
Female	.10	.07	.13	.20	.19	.12	.18
By education							
Less than 12 yrs	.06	.05	.11	.18	.20	.14	.25
16 yrs or more	.17	.10	.16	.21	.17	.09	.11

Notes: Based on estimates of col. 4 in table 4.

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

Dependent variables:		RED	ISTR		redistr01					
		Ordered	d Probit			Probit				
	1	Fransitic	on Matri	x	Transition Matrix					
	By :	state	By	y ear	By :	state	By	year		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		
	004**	00.4**	00.4**	00.4**	001**	001*	001**	001*		
Age	004***	004***	004***	004***	001	001*	001***	001*		
ъл. · .	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.0006)	(.0006)		
Married	.018	.011	.018	.013	.006	.002	.006	.003		
	(.025)	(.025)	(.025)	(.025)	(.019)	(.019)	(.019)	(.019)		
Female	.116**	.116**	.116**	.117**	.081**	.082**	.081**	.082**		
	(.031)	(.031)	(.031)	(.031)	(.017)	(.016)	(.017)	(.016)		
Black	.398**	.400**	.398**	.400**	.190**	.192**	.190**	.191**		
	(.057)	(.058)	(.057)	(.058)	(.030)	(.030)	(.030)	(.030)		
Educ<12	.310**	.317**	.311**	.316**	.144**	.146**	.144**	.146**		
	(.031)	(.031)	(.031)	(.031)	(.026)	(.026)	(.026)	(.026)		
Educ>16	223**	211**	223**	214**	099**	095**	099**	094**		
	(.030)	(.030)	(.030)	(.030)	(.024)	(.024)	(.024)	(.024)		
Children	007	008	007	009	.004	.004	.004	.003		
	(.022)	(.022)	(.022)	(.021)	(.018)	(.018)	(.018)	(.018)		
$\ln(\text{real income})$	089**	050**	095**	464	$044^{**}$	029	$046^{**}$	015		
	(.024)	(.024)	(.025)	(.032)	(.021)	(.024)	(.021)	(.025)		
Self-employed	201**	191**	201**	191**	119**	114**	119**	115**		
	(.042)	(.041)	(.042)	(.041)	(.028)	(.028)	(.028)	(.028)		
Unemp. last 5 yrs	.153**	.154**	.153**	.155**	.090**	.091**	.090**	.091**		
	(.026)	(.027)	(.026)	(.026)	(.017)	(.018)	(.018)	(.017)		
Prestige >father's	044*	046**	044*	047**	.001	000	001	001		
0	(.023)	(.023)	(.023)	(.022)	(.017)	(.017)	(.017)	(.017)		
Education - father's	.018**	.018**	.018**	.018**	.006**	.006**	.006**	.006**		
	(.003)	(.003)	(.003)	(.003)	(.002)	(.002)	(.002)	(.002)		
Prob(7-10 decile)	219**	()	192**	( )	108**		098**	( )		
	(.023)		(.058)		(.045)		(.042)			
Expected income $^{(a)}$	(1020)	- 004**	(1000)	- 004**	(1010)	- 002**	()	- 002**		
Expected meenic		(001)		(001)		(001)		(001)		
		(.001)		(.001)		(.001)		(.001)		
No. obs.	7537	7537	7537	7537	3885	3885	3885	3885		
$\mathbf{R}^2_{M\&Z}$	.11	.11	.11	.11	.18	.18	.18	.18		
$R_{Count}^2$	.23	.24	.24	.24	.66	.66	.66	.66		
Notes: see notes to Table	» /I		49							

# Table 6: Preferences for redistribution and future income prospects

Notes: see notes to Table 4.

(a) Coefficient and std. error multiplied by 10<sup>3</sup> in columns 2, 4, 6, 8.

Table 7: Different income definitions and time horizons
---

				Family	v income
	Family income	Hourly	earnings of head	(incl.	OFUM)
	t,t+5	$_{\rm t,t+1}$	t,t+5	$_{t,t+1}$	$_{t,t+5}$
	[1]	[2]	[3]	[4]	[5]
COEFFICIENT ON:					
Prob(7-10 decile)	321**	062	027	247**	·404**
	(.083)	(.047)	(.060)	(.067)	(.099)
Expected income <sup>(a)</sup>	004**	003**	004**	004**	·005**
-	(.001)	(.001)	(.001)	(.001)	(.001)

Ordered Probit. Dependent variable = REDISTR

Notes: see notes to Table 4.

Controls include: Age, Married, Female, Black, Educ<12, Educ>16, Children, ln(real income), Self-employed, Unemp. last 5 yrs, Prestige>father's, Educ-father's, STATES, YEARS.

STATES, TEARS.

(a) Coefficient and std. error multiplied by  $10^3$ .

## Table 8: Transition matrix by Age, Education, Race

Oraerea Prooit. Dep	penaeni i	variable =	= REDIS	ΓR			
		t+1		t+5			
	Age	Educ	Race	Age	Educ	Race	
	[1]	[2]	[3]	[4]	[5]	[6]	
COEFFICIENT ON:							
Prob(7-10  decile)	178**	206**	185**	323**	$193^{**}$	305**	
	(.054)	(.066)	(.059)	(.076)	(.084)	(.096)	
Expected income <sup><math>(a)</math></sup>	002**	0015**	002**	003**	001	003**	
	(.001)	(.0006)	(.001)	(.001)	(.001)	(.001)	

Ordered Probit. Dependent variable = REDISTR

Notes: see notes to Table 4.

Controls include: Age, Married, Female, Black, Educ<12, Educ>16, Children, ln(real income), Self-employed, Unemp. last 5 yrs, Prestige>father's, Educ-father's, STATES, YEARS.

(a) Coefficient and std. error multiplied by  $10^3$ .

# Table 9: Sensitivity analysis

Panel A $^{(b)}$			
	No influential	No migrants	Avg. income
	observations		(t-1,t,t+1)
	[1]	[2]	[3]
COEFFICIENT ON:			
Prob(7-10 decile)	249**	205**	147**
	(.055)	(.057)	(.047)
Expected income <sup><math>(a)</math></sup>	005**	004**	004**
	(.001)	(.001)	(.001)
Panel B	Linear	Cubic	Deciles for
- All indiv. controls $-^{(c)}$	current inc.	current inc.	current inc.
	[4]	[5]	[6]
COEFFICIENT ON:			
Prob(7-10 decile)	107**	083	169**
	(.047)	(.079)	(.064)
Expected $income^{(a)}$	002	001	0002
Expected income	002	(.002)	( 002)
	(.001)	(.002)	(.002)
Panel C	Linear	Cubic	Deciles for
- Income only $-^{(d)}$	current inc.	current inc.	current inc.
v	$\left[ 7 ight]$	[8]	[9]
COEFFICIENT ON:			
Prob(7-10  decile)	211**	.020	211**
	(.035)	(.055)	(.058)
		0.01	000
Expected income <sup>(a)</sup>	004**	001	002
	(.001)	(.002)	(.002)

#### Ordered Probit. Dependent variable = REDISTR

Notes: see notes to Table 4.

(a) Coefficient and standard errors multiplied by  $10^3$ .

(b) Controls in Panel A include: Age, Married, Female, Black, Educ<12, Educ>16, Children, ln(real income), Self-employed, Unemp. last 5 yrs, Prestige>father's, Educ-father's, STATES, YEARS.

(c) Controls in Panel B include: Age, Married, Female, Black, Educ<12, Educ>16, Children, Self-employed, Unemp. last 5 yrs, Prestige>father's, Educ-father's, STATES, YEARS, and 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.

# Table 10: Other mobility measures

 $Ordered \ Probit.$   $Dependent \ variable = REDISTR$ 

	t+1	t+5
COEFFICIENT ON:		
[1] Spearman mobility	037	.226
	(.185)	(.141)
[2] Fields-Ok	003	005
	(.010)	(.006)
[3] Fields-Ok (logs)	025	117
	(.165)	(.115)
[4] King	.460	023
	(.342)	(.199)

Notes: see notes to Table 4.

Controls include: Age, Married, Female, Black, Educ<12, Educ>16, Children, ln(real income), Self-employed, Unemp. last 5 yrs, Prestige>father's, Educ-father's, STATES, YEARS.

# Table 11: Different redistributive policies

Ordered Probit. Depe	endent variables:		ASSISTANCE TO/	SOCIAL		
	REDISTR	WELFARE	CARE FOR POOR $^{(a)}$	SECURITY		
	[1] [2]	[3] [4]	[5] [6]	[7] [8]		
Age	004**004**	001001	009**009**	007**007**		
	(.001) $(.001)$	(.002) $(.001)$	(.001) $(.001)$	(.001) $(.001)$		
Married	.018 .011	084**079**	012011	.015 .011		
	(.025) $(.025)$	(.038) $(.038)$	(.049) $(.049)$	(.050) $(.049)$		
Female	.116** .116**	.022 .022	.186** .185**	.199** .200**		
	(.031) $(.031)$	(.029) $(.029)$	(.041) $(.041)$	(.025) $(.026)$		
Black	.398** .400**	.631** .630**	.836** .837**	.348** .349**		
	(.057) $(.058)$	(.087) $(.089)$	(.157) $(.157)$	(.076) $(.077)$		
Educ<12	.310** .317**	$.120^*$ $.116^*$	.287** .286**	.173** .176**		
	(.031) $(.031)$	(.071) $(.071)$	(.100) $(.099)$	(.048) $(.048)$		
Educ>16	223**211**	.113** .108**	184**184**	388**384**		
	(.030) $(.030)$	(.050) $(.048)$	(.051) $(.050)$	(.036) $(.036)$		
Children	0070008	.016 .016	.027 .028	.109** .107**		
	(.022) $(.022)$	(.031) $(.031)$	(.042) $(.042)$	(.037) $(.037)$		
$\ln(\text{real income})$	089**050**	233**242**	072*065	032024		
	(.024) $(.024)$	(.029) $(.036)$	(.042) $(.054)$	(.040) $(.034)$		
Self-employed	201**191**	087*091**	185**186**	226**220**		
	(.042) $(.041)$	(.046) $(.046)$	(.051) $(.052)$	(.040) $(.040)$		
Unemp. last 5 yrs	.153** .154**	.179** .179**	.114* .113*	.110* .112**		
	(.026) $(.027)$	(.039) $(.038)$	(.061) $(.061)$	(.043) $(.042)$		
Prestige >father's	044*046**	$017^{*}$ $016$	028027	.011009		
	(.023) $(.023)$	(.030) $(.030)$	(.043) $(.043)$	(.035) $(.035)$		
Education - father's	.018** .018**	.006 .007	.011* .011*	$.015^{**}$ $.014^{**}$		
	(.003) $(.003)$	(.004) $(.004)$	(.006) $(.006)$	(.005) $(.005)$		
Prob(7-10 decile)	219**	.147	.041	143		
(1)	(.060)	(.090)	(.091)	(.094)		
Expected income <sup>(b)</sup>	004**	.002**	0002	002**		
	.001	(.001)	(.002)	(.001)		
			2001 2001			
No. obs.	7537 7537	4442 4442	2891 2891	4707 4707		
$\mathbb{R}^{2}_{M\&Z}$	.11 .11	.13 .13	.14 .15	.12 .12		
R <sub>Count</sub>	.24 .24	.53 .53	.66 .66	.60 .60		

Notes: 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. Cofficient (standar  $5^3$  rror) on the dummy are .082 (.151) and .083 (.151)

for columns [5] and [6], respectively.

(b) Coefficient and std. error multiplied by  $10^3$  in columns 2, 4, 6, 8.

# 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	082**	081**	082**	081**					
	(.031)	(.031)	(.031)	(.031)					
Get ahead: luck/help					$.152^{**}$	$.152^{**}$	.152**	.151**	
					(.045)	(.045)	(.046)	(.045)	
Prob(7-10 decile)	132**		116**		$139^{**}$		122**		
	(.057)		(.055)		(.058)		(.055)		
Expected income <sup>(a)</sup>		002**		003**		003**		003**	
		(.001)		(.001)		(.001)		(.001)	
N	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.49	
NO. Obs.	4042	4042	4042	4042	4042	4042	4042	4042	
$R^2_{M\&Z}$	.12	.12	.12	.12	.12	.12	.12	.12	
$R_{Count}^2$	.24	.24	.24	.24	.24	.24	.24	.24	

Notes: see notes to Table 4.

Controls include: Age, Married, Female, Black, Educ<12, Educ>16, Children, ln(real income), Self-employed, Unemp. last 5 yrs, Prestige>father's, Educ-father's, STATES, YEARS.

(a) Coefficient and std. error multiplied by  $10^3$  in columns 2, 4, 6, 8.

Should govt. reduce income differences	beti	veen	rich	n an	$d pool}$	or ?	
	1	$\mathcal{Z}$	$\mathcal{Z}$	4	5	6	$\gamma$
	NO						YES
Get ahead by hard work? <sup>(a)</sup>							
No	.11	.07	.14	.21	.18	.12	.16
Yes	.12	.08	.15	.21	.18	.11	.14
Get ahead by Luck/help? <sup>(b)</sup>							
Yes	.09	.07	.14	.20	.19	.13	.18
No	.12	.08	.15	.21	.18	.11	.15
Prob $(7-10)$ decile <sup>(c)</sup>							
Mean for 1st decile	.11	.07	.14	.21	.18	.12	.16
Mean for 10th decile	.13	.08	.15	.21	.17	.11	.14
Expected income <sup><math>(d)</math></sup>							
Mean for 1st decile	.10	.07	.14	.21	.18	.12	.17
Mean for 10th decile	.15	.09	.16	.21	.17	.10	.12

# Panel B: Average predicted probabilities

Notes: Independent veriables other than those listed are calculated at the mean.

(a) Based on estimates of cols. 1,2,3,4 in table 12 panel A.

(b) Based on estimates of cols. 5,6,7,8 in table 12 panel A.

(c) Based on estimates of cols. 1,3,5,7 in table 12 panel A.

(d) Based on estimates of cols. 2,4,6,8 in table 12 panel A

	1			
		Fraction of Yes	Coeff. on "Equal opportunities"	Coeff. on Expected income
"Equ	ial opportunities" measured as:			
[1]	Class differences due to ability & educ. (CLABEDU)	.40	$175^{**}$ (.066)	005** (.002)
[2]	Class differences due to	.45	.200**	005**
[3]	Class differences due to outside factors (CLOUT)	.43	$.264^{**}$ (.072)	005** (.002)
[4]	Class differences persist (CLSTAY)	.70	.191** (.058)	006** (.002)
[5]	Class differences are justified (CLJUSTIF)	.52	$317^{**}$ (.058)	005**
[6]	Class differences acceptable, reflect opportunities (CLACCOPP)	.75	110 (.129)	005*** (.002)
[7]	Not everyone has opportunity to get educated (OP_EDU)	.28	$.186^{**}$ $(.063)$	006** (.002)
[8]	Important who you know (OP_KNOW)	.44	$.229^{**}$ (.072)	.001 $(.002)$
[9]	Important educated parents (OP_PARED)	.42	$.036 \\ (.078)$	.001 $(.002)$
[10]	Important to come from wealthy family (OP_WLTH)	.52	$.107^{*}$ $(.063)$	.001 (.002)

# Table 13: Different questions on equal opportunities

Ordered Probit. Dependent variable: REDISTR

Notes: see notes to Table 4.

Controls include: Age, Married, Female, Black, Educ<12, Educ>16, Children, ln(real income), Self-employed, Unemp. last 5 yrs, Prestige>father's, Educ-father's, STATES.



Figure 1: Probability of moving above the 6<sup>th</sup> decile for the median voter



(a) Probability of moving above the 6<sup>th</sup> decile (Prob 7-10 decile<sub>5</sub>)



(b) Expected income, 1995 US\$ (EXPINC<sup>t</sup><sub>5</sub>)

Figure 2: Time profile of future income prospects for the median voter



Figure 3: Support for redistribution and Probability of moving above the 6<sup>th</sup> decile



Figure 4: Support for redistribution and Expected income