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Alberto F. Alesina
Paola Giuliano

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ABSTRACT

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Alberto F. Alesina
Department of Economics
Harvard University
Cambridge, MA 02138
and NBER
aalesina@harvard.edu

Paola Giuliano
UCLA, Anderson School of Management
Los Angeles, CA 90095
and IZA
paola.giuliano@anderson.ucla.edu

Preferences for Redistribution*

Alberto Alesina and Paola Giuliano
Harvard University and UCLA

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Abstract

This paper discusses what determines the preferences of individuals for redistribution. We review the theoretical literature and provide a framework to incorporate various effects previously studied separately in the literature. We then examine empirical evidence for the US, using the General Social Survey, and for a large set of countries, using the World Values Survey. The paper reviews previously found results and provides several new ones. We emphasize, in particular, the role of historical experiences, cultural factors and personal history as determinants of preferences for equality or tolerance for inequality.

1 Introduction

Economists traditionally assume that individuals have preferences defined over their lifetime consumption (income) and maximize their utility under a set of constraints. The same principle applies to preferences for redistribution. It follows that maximization of utility from consumption and leisure and some aggregation of individual preferences determines the equilibrium level of taxes and transfers.[1] Note the inter-temporal nature of this maximization problem: preferences for redistribution depend not only on where people are today in the income ladder but also on where they think they will be in the future if redistributive policies are long-lasting.

The level of inequality of a society may affect some individuals' income indirectly. For instance the level of inequality may affect crime and some people may be more or less subject to the risk of criminal activities. But, in addition, individuals have views regarding redistribution that go beyond the current and future states of their pocketbooks. These views reflect different ideas about

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[1] See Persson and Tabellini (2002) and Drazen (2002) for a broad review of political economic models.

what an appropriate shape of the income distribution is: in practice, views about acceptable levels of inequality and/or poverty. Explaining the origin of these ideas (which eventually translate into policies via some mechanism of aggregation of preferences) implies bringing into the picture variables that go beyond the current and expected consumption (and leisure) of the individual consumer/worker/voter. Needless to say, standard neoclassical general equilibrium theory can accommodate altruism, i.e., a situation in which one agent cares also about the utility of somebody else. But altruism is not an unpredictable "social noise" to be randomly sprinkled over individuals. Altruism, or, to put it differently, preferences for redistribution that do not maximize private benefits strictly defined, has certain predictable and interesting features. Of course, this does not mean that we ignore individual income, which is indeed very important.

Where do different preferences for redistribution come from? Note that the question of whether or not a government should redistribute from the rich to the poor and how much is probably the most important dividing line between the political left and the political right at least on economic issues. Therefore, answering this question almost amounts to explaining where ideological preferences on economics issues come from, certainly an important, fascinating and difficult task. A few possibilities, non mutually exclusive of course, have been examined in the literature. First, different preferences may arise from individual history (as emphasized, for instance, by Piketty (1995)). A history of misfortune may make people more risk-averse, less optimistic about their future upward mobility and more inclined to equalize everybody's income, as noted by Giuliano and Spilimbergo (2008) with reference to historical events such as the Great Depression. Second, different cultures may emphasize in different ways the relative merits of equality versus individualism, an issue discussed in detail by Alesina and Glaeser (2004) with reference to a comparison between the US and Europe. Different historical experiences in different countries may lead to various social norms about what is acceptable or not in terms of inequality. Third, indoctrination (for instance, in communist dictatorships) may influence people's views, as emphasized by Alesina and Fuchs Schundeln (2007) with reference to Germany. Fourth, sometimes parents may purposely transmit "distorted" views about the reality of inequality and social mobility to their children in order to influence their incentives (Benabou and Tirole (2005)). Fifth, the structure and the organization of the family may make people more or less dependent and therefore favorable to government intervention in distributive matters (Todd (1985), Esping Andersen (1999), Alesina and Giuliano (2007)). Sixt, perception of fairness matters. Most people do seem to make a distinction between income acquired by "luck" (broadly defined) and income acquired by "effort" (broadly speaking) and this distinction matters in shaping preferences for redistribution (Alesina and Glaeser (2004), Alesina and Angeletos (2005a). Finally, the desire to act in accordance with public values, or to obtain high social standing could also play a critical role in the determination of preferences for redistributive policies (see Corneo and Gruner (2000, 2002)). We will document these differences and suggest explanations for the persistence of ideologies over time in this area.

In the first part of the paper, we provide a theoretical framework that helps

clarify all these various effects in a coherent way. In the second part, we review evidence discussed by others and provide novel results by using the General Social Survey (GSS) for the US and the World Value Survey (WVS) for international cross-country evidence. We begin by showing that individual income indeed matters: richer people are more averse to redistribution. Many other individual characteristics matter as well. In the US, race is an important determinant of preferences for redistribution, a finding consistent with many other previous studies.[2] An interesting observation is that, after controlling for a variety of individual characteristics, women tend to be more favorable to redistribution than men in many different countries and institutional settings. It is hard to reconcile this difference using only economic variables as explanations, while differences in personalities documented by psychologists may be broadly consistent with this empirical observation[3]. Education is an interesting variable. After controlling for income, it is not clear what one should expect. If more educated individuals prefer less redistribution, one may argue that they think about prospects of upward mobility resulting from higher education. On the other hand, education may bias people in favor of more pro-redistributive views as a result of ideology (left-wing views). We find that the first effect prevails in the US, but we investigate interesting interactions between education and political orientation.

We are interested specifically in the determinants of preferences for redistribution, but the modern welfare state has two main objectives: to redistribute from the richer to the poorer and to provide social insurance. Some aspects of the welfare state (think of the progressivity of the income tax) are primarily redistributive, others provide primarily, but not exclusively, social insurance (think of unemployment compensations), others (such as health insurance financed by progressive taxation) have both components, and one could go on. In theory, one can conceptually distinguish the two. Empirically, it is not so simple. Often, but not always, survey questions or any other method to extract individuals' preferences for redistribution cannot distinguish so clearly whether the subjects favor the latter or only social insurance. The problem (we feel) is serious from an empirical standpoint but not fatal, in the sense that preferences for the two are most likely very highly correlated.

The chapter is organized as follows: Section 2 presents some simple formalization that captures the effects sketched above in a reasonably exhaustive way. Section 3 reviews the available evidence on the explanations for preferences for redistribution. We organize the discussion around "variables," e.g., income, education and race, and we present evidence for the US, cross-national evidence and experimental evidence, whenever available, on each variable. The last section concludes.

[2] See Alesina and La Ferrara (2005), Alesina and Glaeser (2004) and the references cited therein.

[3] See Pinker (2006) for a survey.

2 Preferences for Redistribution: Theory

2.1 The Basic Model

The basic "workhorse" political economic model for preferences for redistribution is provided by Meltzer and Richards (1981), who built upon Romer (1975). In this well-known static model, individuals care only about their consumption (income) and have different productivities. The only tax and transfer scheme allowed is given by lump sum transfers financed with a linear income tax. The median voter theorem aggregates individual preferences and captures a very simple political equilibrium. The simplest possible illustration of this model is as follows. Consider a standard utility function with the usual properties:

$$u_i = u(c_i) \tag{1}$$

where one unit of labor is inelastically supplied and the individual productivity is α_i. Assume that the government uses a linear income tax t on income to finance lump sum transfers and that there is a wastage equal to wt^2 per person which capture the distortionary cost of taxation.[4] Using the government budget constraint, which establishes that every one receives the same lump sum transfer, and defining α^A the average productivity, one can write:

$$c_i = y_i = \alpha_i(1-t) + \alpha^A t - wt^2 \tag{2}$$

Equation (2) simply states that consumption is the sum of after tax labor income (the first term) plus the lump sum transfer obtained by the government (the second term) reduced by the waste of taxation (the third term).

The equilibrium tax rate is the one that maximizes consumption for the voter with median productivity (α^M):[5]

$$t = \frac{\alpha^A - \alpha^M}{2w} \tag{3}$$

The distance between average and median is, in this model, the critical measure of inequality. The tax rate (and therefore the level of the lump sum redistribution) is higher the larger the difference in productivities (or income, in simplified versions of the model like this one) between the average and the median voter[6].

[4] This is of course a simplified version of a model in which the distortionary cost of taxation emerge from an endogenous labor supply.

[5] The result that in this model the median voter result applies is due to Romer (1975).

[6] The level of taxation is also inversely related to the degree of wastage associated with tax distortions. Note that with no tax distorsions the tax level chosen by the median voter would be one.

This is only one particular measure of inequality. There are of course many others measured by different indicators, which would not affect the level of redistribution in this model. In addition the restriction of the type of redistributive scheme that can be used is also very stringent; a wider available set of policies would lead to different results. However, as we discuss more in the empirical section, the main failure of this model relies on the simplistic assumption about the policy equilibrium, namely the one person one vote rule and the median voter result. Alesina and Rodrik (1994) and Persson and Tabellini (1995) provide two different adaptations of this model to a dynamic environment with growth. In these extensions however the ranking of individuals does not change in the growth process, that is the profile of the income distribution is invariant over time and the Meltzer-Richards result extends directly.

2.2 Expected Future Income and Social Mobility

A departure from the basic model is one in which the ranking of individuals in the income ladder can change, i.e. a model where we allow for social mobility, as in Benabou and Ok (2001). In their model, individuals care about not only current but also future income. If redistributive policies are long-lasting, future income prospects which determine future positions in the income ladder matter in determining current preferences for redistribution. We need at least two periods in the utility function:

$$u_i = u(c_{i1,}c_{i2}) \tag{4}$$

where the second subscript indicates the periods. Individual income is now perturbed by shocks to individual productivity ($y_{i2} = \alpha_i + \varepsilon_{i2}$), where the properties of these shocks are discussed below. [7] The budget constraint for the consumer (ignoring discounting) is:

$$(y_{i1} + E(y_{i2}))(1-t) + ty_1^A + tE(y_2^A) - 2wt^2 = c_{i1} + c_{i2} \tag{5}$$

which generalizes (2) Note the assumption that the tax rate is decided at the beginning of period 1 and is fixed for period 2. Also period 2 income (productivity) is uncertain so individual i has to vote based upon his expectation about his income relative to average and median income of period 1, which are known, and of period 2, when his position in the income ladder is unknown. In particular, prospects of upward mobility should make somebody below the median of today's income be more averse to redistribution than otherwise. In principle, this effect could be counter-balanced by the prospect of downward mobility, but Benabou and Ok (2001) show that, under certain conditions, prospects

[7] If the shock in period 1 is known before voting for redistribution it is of course irrelevant for the analysis and we assume it away.

of upward mobility (POUM) reduce the demand for redistribution relative to the basic Meltzer-Richards case. They present not only a two period model but an infinite horizon one. The three key assumptions that deliver this result are: i) tomorrow's expected income is a concave function of today's income, ii) limited risk aversion and iii) skewed distribution of the random shocks to income. The concavity of the function of tomorrow's income relative to today's income implies that some of the families that are poorer than the median today will become richer than the median tomorrow, but this effect is declining at an increasing rate with today's income. The assumption on the income shocks prevents the distribution of income to degenerate. The role of low risk aversion is fairly obvious: excessive risk aversion makes too many people too worried about downward mobility.

There are two ways of interpreting the POUM hypothesis. One is as a reminder that people vote on redistribution not only based upon their current income but also based on expected income and that, therefore, social mobility deeply interacts with preferences for redistribution. This is an important point, and we will discuss social mobility extensively below and in the empirical part of this paper. The more stringent interpretation of the POUM hypothesis is an explanation based upon full rationality, and in the median voter spirit, that explains why redistribution is relatively limited despite a relatively poor median voter. This is harder to believe. There are many other reasons why redistribution is limited even in very unequal societies (like the US), and we will examine many of these reasons below. Also, the prediction of the theory seems to be based on a set of fairly restrictive assumptions and functional forms that are very difficult to test empirically. Even remaining in the context of social mobility, other explanations may be more appealing than the POUM hypothesis. One is over-optimism, driven by the fact that many people expect to be richer tomorrow than in a rational equilibrium. Another option is over-optimism as derived from self induced "indoctrination" to convince yourself (or your children) to work hard (Benabou and Tirole (2006)); third, over-optimism about upward mobility may be the result of social indoctrination precisely to prevent the adoption of excessive redistributive policies or the other way around (Alesina and Glaeser (2004)).

2.3 Inequality Indirectly in the Utility Function

A more radical departure from models in which individuals care only about their income/consumption is the one in which the utility function includes some measure of income distribution:

$$U_{it} = \sum_{t=p}^{T} u(c_{it}(\ldots Q_t))$$

where c_{it} is individuals' consumption, Q_t some measure of income inequality and the summation is taken from the present "p" to a final period (possibly in-

finity). In other words, consumption depends upon a host of standard variables (like labor supply or productivity) and inequality.

This argument in the utility function captures the fact that individual i does not care about inequality per se but only about its effect on her consumption flow. Two observations: First, the dependency of consumption over inequality might be much richer if the model were made dynamic: current consumption may depend on past inequality or even on expected future inequality, but the basic qualitative argument would not change. Second, different individuals may care differently about different measures of inequality, a very important theoretical consideration that will be very hard to take into consideration empirically. More generally, each individual consumption may depend on the entire shape of the income distribution, but for the sake of simplicity of exposition and (especially) of testing, we focus our attention on one specific measure of inequality, say the Gini coefficient.

What would be the sign of the first derivative of that function (i.e., the sign of $\frac{\partial C_t}{\partial Q}$ at different levels of C_t)? In particular, is it possible that even the "rich" may be affected negatively by inequality so that, purely for selfish reasons, they would vote for redistribution? Two arguments have been suggested to justify a negative derivative for the rich:

1) **Externalities in education**. Assume that the average level of education in a country increases the aggregate productivity in the country and that education has positive externalities. Also assume that more inequality implies that more people are below a level of income that does not allow them to acquire an education (an assumption about imperfection of credit markets is typically needed here). Then, even the rich may favor some redistribution because they would also benefit from an increase in the average level of education[8]. Strictly speaking, the rich should be in favor not of redistribution tout court but especially of publicly supported education, but these models can be also suggestive of conclusions to more general types of redistribution.[9]

2) **Crime and property rights.** A commonly held view is that more inequality leads to more crime, and therefore, by reducing it, the rich would have to spend less on security, since generally their property would be safer. Note that this argument implies that one should observe more redistributions than predicted by both the basic Meltzer-Richards model and its extensions with POUM. However, the implicit assumption to make this work is that it should costs less to the rich to redistribute than to increase spending on security.

3) **Incentive effects.** This channel goes in the opposite direction, that is more inequality has an aggregate social value. In fact one may argue that more inequality creates incentives to work hard and exercise more effort for most people below the top. To the extent that there are externalities in effort and education acquisition, this may work in favor of society as a whole, since the

[8] See Perotti (1999), Galor and Zeira (1993) and the survey by Benabou (1996) on the issue of redistribution and externalities in education.

[9] Lizzeri and Persico (2004) use a similar argument to justify why the "rich" allowed an extension of the franchise in nineteenth century England even though such extensions would have lead to more redistribution

aggregate level of effort/investment in education would go up. The strength of this incentive effect is, of course, a very hotly debated empirical question.

Whether channel 3) dominates or not on the other two is of course critical in determining the relationship between inequality and economic efficiency. If channel 3) dominates there is a trade off between equality and economic efficiency (aggregate level of income/consumption); if channel 1) and 2) dominate there is no such a trade off. Needless to say the trade off does not need to be neither linear nor monothonic, namely it may change shape and its derivative may change sign at different levels of inequality. For a model where this potential non linearities are important see Perotti (1993).

2.4 Inequality Directly in the Utility Function

Individuals may have views about "social justice," namely, what constitutes a justifiable level of inequality, or poverty or, generally speaking, views about the distribution of income above and beyond how the latter affects their own income.

One way of expressing these preferences that would be useful for our discussion is as follows:

$$U_i = \sum_{p=t}^{T} (\beta^t (u(c_{it}(\ldots Q_t)) - \delta_i (Q - Q_i^*)^2) \tag{6}$$

where Q_i^* represents the ideal level of inequality for individual i and δ_i his/her weight on deviations from it. Needless to say, the quadratic specification is used only for convenience of exposition. The first term in the utility function is the same as in the previous section.

Much of our empirical discussion will be on what determines Q_i^* and δ_i for different individuals. From a theoretical standpoint, we could characterize various possibilities:

a) a "libertarian" view $Q^* = Q^L$ considers a distribution of income (captured by a measure of inequality in short) as determined purely by the market and with no redistribution of any kind from the government.

b) an "efficieny maximizing view" $Q^* = Q^E$, where $Q^E \gtrless Q^L$ depending on which one of the three channels discussed in the previous section dominates.

b) a "communist view" $Q_i^C = 0$ considers everybody identical; that is this is the distribution obtained by a government who equalizes everybody's income with appropriate tax/transfer schemes.[10]

c) a "Rawlsian view" Q_i^{*R} is the distribution obtained ex post after the government has implemented all the policies that equalize everybody's utility behind a veil of ignorance.

[10] Needless to say, actual Communist regimes never achieved that and in fact guaranteed extreme privileges for party members.

Obviously a fascinating empirical question if what determines preferences, in particular what determines Q^*. We will devote much space to this point in the empirical section.

2.5 Trade Offs

Note that someone may face a trade off: on the one hand, excessively market-generated income inequality may reduce his consumption through the effects of $c_i(Q)$ in the first part of the utility function. But if he has the "libertarian" view he may be willing to give up some consumption to satisfy his ideological goals. In practice individuals often adjust their beliefs or views in ways that limit these trade offs. Rich people for instance are likely to believe strongly in the beneficial incentive effects of inequality so as to justify in terms of efficiency their preferences for less equality. The opposite applies for those less wealthy and/or left leaning individuals. They tend to disregard the incentive effects of inequality to justify their ideological preferences for equality. This is a more general phenomenon in which when there is uncertainty about the efficiency effects of certain policies, ideological preferences lead people to lean towards the estimates of certain economic parameters that justify their ideologies. For instance, right wingers tend to believe that the elasticity of labor supply to taxes is high and the other way around. A fascinating issue of causality here is obvious, and further research on this point at the border of economics and psychology would be fascinating.[11]

2.6 Fairness

Individuals' views about an acceptable level of inequality are often intertwined with a (possibly vague) sense of what is "fair" and "unfair." As we will show empirically below, people feel that there is a difference between wealth accumulated, for instance, by playing the roulette tables in Las Vegas and wealth accumulated by working one's way up from an entry-level job to a higher-level one with effort, long days at the office and short hours of sleep.

Suppose that individuals' income is due to a combination of effort (e) and luck (l), so that:

$$y_i = e_i + l_i \tag{7}$$

The overall measure of income inequality Q can now be decomposed in Q^e and Q^f, the inequality in the distribution of the effort and the luck parts of income, respectively. Therefore:

$$Q = F(Q^e, Q^f) \tag{8}$$

[11] The work by Benabou and Tirole (2006) is related to the issue of adopting certain beliefs because they are useful in order to increase efficiency.

that is the overall inequality is a function of inequality in income derived from effort and luck. In the previous subsection, we assumed that individuals had an ideal level of Q and no preferences over its two components. But it is also possible (and indeed, it will be the case empirically) that individuals have preferences defined over the two components for a sense of fairness, namely a sense that one is more entitled to retain the sources of his/her effort than income acquired by chance. In this case, we could rewrite the utility function of individual i as follows:

$$U_i = \sum_{t=p}^{T} (\beta^t (u(\ldots c_{it}(Q_t)) - \delta_i^e (Q^e - Q_i^{e*})^2 - \delta_i^l (Q^l - Q^{l*})^2) \tag{9}$$

where $Q_i^M \geq Q_i^{e*} > Q_i^{l*} \geq 0$ for some, and perhaps all, i. These inequalities capture the fact that, at least for some individuals (possibly all of them), a lower level of inequality induced by luck is deemed more desirable than inequality induced by effort. Also, possibly $\delta_i^e \geq \delta_i^l$, if individuals feel more strongly about deviations from optimality for one or the other type of inequality. Note that it makes sense to maintain total inequality in the first part of the utility function, since externalities due to, say, crime and education depend on total externality rather than its components.

Obviously, what is luck and what is effort is, in practice, an issue on which people may strongly disagree. Is being born smart purely luck? If so, how do we disentangle success in life that results from some combination of effort and intelligence? Being born in a wealthy family is luck, but what if the wealth accumulated by our parents (perhaps at the expenses of care given to us) is the result of great effort?

As we will see below, many people seem to consider this distinction (between effort and luck) relevant to their preferences about social policies and redistribution, even though, if one could investigate people's minds more thoroughly above and beyond simple survey questions, one would discover deep differences in definitions of luck and effort. In addition, the terms effort and luck need to be interpreted broadly. By effort, we mean all activities that require "pain" or a utility cost for the individuals, while luck represents all those factors that deliver income to the individuals without any pain or loss of utility to obtain it. Incidentally, social policies that depend on people's views about luck and effort may in turn create incentives for individuals to put forth more or less effort and therefore generate endogenously different shares of luck-dependent and effort-dependent income. This is the point raised by Alesina and Angeletos (2005a). They derive a multiple equilibria model that is meant to capture a low redistribution (US-style) equilibrium and a high redistribution (European-style) equilibrium. In the former, taxes are low, people invest more in effort/hard work, and a higher fraction of income differences amongst people is due to effort. Thus, in equilibrium, people want low redistribution and relatively low taxes. In the European equilibrium, taxes are high, effort and labor supply are low, a larger

fraction of income differences is due to differences in luck, and therefore, high taxes and large redistributions are desirable.[12] Note that in equilibrium beliefs about the share of luck and effort in the determination of income differences are correct: in the US the equilibrium tax is lower, effort is higher and a larger fraction of income is determined by effort rather than luck, and the other way around.

3 Empirical Evidence

The goal of this section is to study what determines preferences for redistribution illustrating what we know about the various channels and mechanisms highlighted above. We conduct our analysis using individual level data, as a result we do not provide any evidence on the aggregate relationship between inequality and economic outcomes. Our results focus mostly on the subset of channels with fewer preexisting research; we, however, review available evidence for the most studied determinants of preferences for redistribution. We present two sets of evidence: one for the United States based on results from the General Social Survey and cross-country evidence based on results from the World Value Survey. We begin by illustrating these two datasets.

3.1 Data

Starting from 1972, the General Social Survey interviewed a large number of individuals in the US, asking questions about a wide range of opinions, including political behavior, religious preferences and a wide range of economic beliefs, as well as standard demographics. Each year's sample is an independent cross-section of individuals living in the US, ages 18 and up. We use all data available from 1972 to 2004.

For the cross-country evidence, we use individual data from the World Value Survey (WVS). The WVS covers four waves (1981-84, 1990-93, 1995-97, 1999-2004) and provides questions on beliefs and a large set of demographic and socioeconomic variables. The number of countries varies by wave and goes from a minimum of 20 to a maximum of around 80. We choose questions similar to those in the GSS (exact wording is reported below).

Our variable on preferences for government redistribution is based on the following question from the General Social Survey:[13] "Some people think that the government in Washington should do everything to improve the standard of living of all poor Americans (they are at point 1 on this card). Other people think it is not the government's responsibility, and that each person should take care of himself (they are at point 5). Where are you placing yourself in this

[12] Alesina and Angeleots (2005b) present a different version of a similar model in which corruption and connections take the role of luck.

[13] This is the same variable used by many others for this purpose; see, for instance, Alesina and La Ferrara (2005).

scale?" We recode this question so that a higher number means one is more favorable to redistribution.

We measure preferences for redistribution in the World Value Survey by looking at several questions. The closest to the General Social Survey asks the respondent an opinion about the following statement (this question also has the largest coverage, since it has been asked in the last three waves).

a. "Now I'd like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between. 'People should take more responsibility to provide for themselves' (1) versus 'The government should take more responsibility to ensure that everyone is provided for' (10)."

We also rely on the following questions for the descriptive evidence (these questions have been asked only in the third wave of the World Values Survey):

b. "Why, in your opinion, are there people in this country who live in need? Here are two opinions: Which comes closest to your view? 'Poor because of laziness and lack of will power' (1) and 'Poor because of an unfair society' (2)."

c. "In your opinion, do most poor people in this country have a chance of escaping from poverty (1), or is there very little chance of escaping it (2)?"

d. "Do you think that what the government is doing for people in poverty in this country is about too much (1), the right amount (2) or too little (3)?"

3.2 Results

3.2.1 The basic model

The basic Meltzer-Richards model has received scant empirical support. Two papers by Alesina and Rodrik (1994) and Persson and Tabellini (1995) noted an inverse correlation between inequality and growth, and they derived this result from a dynamic version of the Meltzer-Richards model. However work by Benabou (1996) and Perotti (1996) confirmed the negative correlation but found very little evidence that the channel was indeed the tax and transfer scheme suggested by the Meltzer-Richards framework. In fact the US offers an interesting case in point. This is a country with much (and increasing) inequality and relatively little (and, if anything, decreasing) redistribution, at least until the time of this writing (winter 2009). Alesina and Glaeser (2004) and McCarty, Poole and Rosenthal (2007) discuss in detail the evolution of inequality and redistribution in the US and the political economy of these phenomena. These rejections, however, do not imply immediately that people care about something other than their current income. The political mechanism used by Meltzer and Richards (1981) could be too simplistic if not unrealistic. For instance, with campaign contributions, the rich could count more and tilt the one person/one vote rule in their favor. For recent theoretical and empirical discussions of this point, see Rodriguez (2004), Campante (2007) and Beremboim and Karabarbounis (2008). The latter paper documents how the basic Meltzer-Richards

model fails empirically because it does not account for the fact that the very rich may have more weight in the political process, above and beyond the one person/one vote rule and the very poor do not vote so they do not have a weight. However, the authors argue that the Meltzer Richards model could be a good approximation of the evolution of redistributive policies amongst the remaining part of the population.

To put it differently: the rejection of the Meltzer Richards model does not imply that income is not a strong determinant of preferences for redistribution. The relative failure of the model probably relies on the failure of the median voter assumption as an aggregator of social preferences. In fact in the next section we document that individual income is indeed a strong determinant of preferences for redistribution. As we will see, it is not the only one, and, at least for the US, other determinants, like race, are also important.

3.2.2 Individual characteristics

We start our analysis by examining the individual determinants of preferences for redistribution in the United States (Table 1). Column one presents our basic specification. All regressions are estimated using OLS for simplicity (similar results are obtained with ordered logit). Results of this type of regression are by now well known, but it is worth briefly reviewing some of the basic facts. First of all, the richer you are, the less you favor redistribution, which is, of course, not surprising. The second striking result from this regression is that, even after controlling for income, marital status, employment status, education and age, race has a very strong effect: blacks are much more favorable to redistribution than whites[14]. In order to get some sense of the size of the effect of these individual characteristics, note that a one standard deviation of the black dummy is associated with an increase of preference for redistribution of 17% of a standard deviation of this variable. An increase in a standard deviation of the educational variable (in particular of being in high school) implies an increase of 13% of a standard deviation of preferences for redistribution. Income has a similar impact (10%), while gender could explain only 6% (an increase in standard deviation in the unemployed and married dummy could decrease/increase roughly 2% of the standard deviation of preferences for redistribution.)

Women are more pro-redistribution then men, even though the effect of gender is much smaller than that of race. The fact that, in the US, women are more left-wing than men is well known[15], but note that the significant positive coefficient on women remains even when we control in column 3 for political ideology. Thus, there is something about women in addition to ideology that makes them more socially generous than men. The pro-redistributive behavior of women compared to men has also been confirmed in the experimental lit-

[14] The importance of race for redistributive policies in the US is well known, as discussed in detail in Alesina and Glaeser (2004) and many references cited therein.

[15] Alesina and La Ferrara (2005), Inglehart and Norris (2000), Montgomery and Stuart (1999), Shapiro and Mahajan (1986).

erature[16]. Differences in redistributive behavior, however, do not seem to be driven by differences in altruism. Andreoni and Vesterlund (2001) found that, when altruism is expensive, women are kinder, but when altruism is cheap, men are more altruistic. They also find evidence that men are more likely to be perfectly selfish or perfectly selfless, whereas women tend to be "equalitarians" who prefer to share evenly.

Even after controlling for income, education enters with a significant and negative coefficient: more educated individuals are more averse to redistribution. Perhaps this captures prospects for upward mobility: people invest more in education, holding income constant, to be upwardly mobile. More left-wing individuals are more pro-redistribution even after controlling for income, which already points in the direction of models highlighted above where an ideological dimension matters[17]. Holding income and education constant, people's view about an acceptable level of inequality vary; they care about inequality per se. The interaction between education and ideology is suggestive. Being more left-wing makes people more favorable to redistribution (column 2); moreover, when we do interact education with political ideology, the effect of education reinforces that of political orientation, i.e., having a higher level of education makes more left-wing people even more favorable to redistribution (column 3). Probably we are capturing here the left-wing wealthy Democrats made so "famous" in the recent Obama versus Clinton primary contest. Self-identified ideology also plays a role in determining giving behavior in experimental evidence, where right-wing individuals redistribute less and reduce efficiency losses caused by redistribution (Fehr et al. (1996)).

In column 1, unemployed individuals are more favorable to redistribution, but this effect is not robust to alternative specifications. The weakness of this result is interesting: it suggests that the American unemployed may not feel as trapped in poverty as those in other countries (see Alesina and Glaeser (2004) on this point). Age shows an inverted U curve. Individuals are first more favorable, then less favorable, to redistribution. Marital status has an insignificant coefficient.

3.2.3 Expected Future Income and Social Mobility

The first extension which we consider of the basic model is the fact that individuals may look at their future prospects of upward mobility. In Table 2, we look at rough proxies for prospects of upward mobility. All the individual controls of column 1 of Table 1 are included; moreover, in column 1, we control for the education of the father, in column 2, for the income of the family when the respondent was 16 and, in columns 3 and 4, for two different measures of

[16] For a review on experimental evidence on gender differences in preferences, see Crason and Gneezy (2004).

[17] Mc Carty Poole and Rosenthal (2007) argue emphatically that income is the only variable that matters in determining political orientation and, therefore, preferences for redistribution, but this result together with all the other significant coefficients in this regression suggests that reality is a bit more complicated.

social mobility, one based on differences in the years of education between the individual and his/her father and the other defined as a dummy if the occupational prestige of the individual is greater than the one of his/her father[18]. Having a highly educated father reduces the desire for redistribution; the same is true for having a higher income during youth. Social mobility appears to decrease preferences for redistribution, but only when measured by looking at occupational prestige; this result is also found in Alesina and La Ferrara (2002). The impact of father's education is lower than individual education and in the order of 4% of the standard deviation of preferences for redistribution (for a person with a father with a high school degree as compared to a person with a father with less than a high school degree). The impact of family income at 16 is similar (an increase in a standard deviation in the income of the family at 16 is associated with an increase of preferences for redistribution of 4% of a standard deviation of this variable). A one standard deviation increase in social mobility will also decrease preferences for redistribution by 3%.

An experimental test of the POUM hypothesis shows that the preferred taxation declines when the transition matrices are characterized by prospects of upward mobility (Checchi and Filippin (2003)). The authors show that a longer time horizon calls for reduced taxation, because individuals appreciate the freedom of changing the optimal tax when confronted with a different income in the future. Their results are robust when individual factors (such as risk aversion) and framing effects are taken into account.

A history of misfortune in the recent past can change people's views of redistribution. It may make them more risk-averse and less optimistic about upward mobility. This could be interpreted as a learning experience: people realize the importance of government intervention more after experiencing a negative shock. We explore this effect in Table 3. As always, we control for the basic individual determinants of column 1 of Table 1. We look at different negative experiences: a history of unemployment (defined as a variable equal to 1 if the person has been unemployed in the last 10 years) and two variables indicating the number of personal traumas (including death of a relative, divorce, unemployment and hospitalization) that the person experienced during the last year/last five years. All these variables always have a positive and significant coefficient. An increase in one standard deviation in the "unemployed in the last ten years" dummy is associated with a 5% decline in the standard deviation of preferences for redistribution; the magnitude of the number of traumas last year/last five years is 4% (3%), respectively.

3.3 Inequality Indirectly in the Utility Function

In this subsection of the theoretical discussion wee have highlighted several channels through which inequality may affect the level of income of some individuals and as a result the level of aggregate income for a country. The first channel we

[18] For a description of occupational prestige scores in the General Social Survey, see Hodge et al. (1990).

discussed was that of inequality on education. Perotti (1996) does indeed note a negative correlation in a cross sample of countries between inequality and secondary schooling, a correlation also verified by others especially for poorer countries (see Benabou (1996) for a survey.) The size of aggregate human capital externalities is a hotly debated issue that underlies much of the discussion in the literature on endogenous growth models and it goes beyond the scope of this paper to review this literature. To the extent that there are some positive externalities from aggregate education and if inequality reduces secondary education then this could be a channel of an inverse relationship between inequality and growth.[19]

The second channel emphasizes a direct causation between crime and inequality. Fajnzylber et al. (2002) review the literature and argue that indeed inequality is positively associated with crime. Beremboim and Campante (2008) use Brazilian data and try to disentangle causality. In their data they do indeed observe a correlation between crime and inequality, but the causality is open to debate. The reverse causality channel goes as follows: those who are more likely to be subject to criminal activities are those who cannot protect their property rights, perhaps the lower middle class or even the very poor (especially in poor countries most of the crime is amongst the poor.) As a result more crime may actually increases inequality because it does not affect the rich but impoverishes (directly and indirectly) some of the poor. This a topic which requires further original research.

The third channel emphasizes the incentive effects of inequality. While (almost) nobody would deny some beneficial effects of pay scales at the micro level, the fact that in the aggregate more inequality leads to more efficiency has received relatively little attention. Bell and Freeman (1999, 2001) present evidence on this point and argue that more inequality has lead to stronger incentives to work longer hours; they argue that this may be an explanation of the longer working hours in the US than in Europe.[20]

3.4 Inequality Directly in the Utility Function

Next we turn to the determinants of preferences for redistribution in which individuals care not only about their income but also about their ideal profile of inequality in society. We have already seen some indirect evidence of this effect in Table 1 when we discussed the role of ideological preferences. Left leaning individuals tend to prefer less inequality (in fact it is almost a definition of being left leaning rather than right leaning). But self proclaimed ideological preferences are only one of the possible determinants of the ideal level of inequality which we have labeled Q_i^* in our theoretical illustration. Other factors are at play and below we examine several of the possible determinants of Q_i^* .

[19] Rauch (1993) presents evidence consistent with large externalities. Opposite results are discussed in Acemoglu and Angrist (2000) and Rudd (2008) which also includes a survey of the literature. On British data see a recent contribution by Metcalfe and Sloane (2007)

[20] For an overview of the discussion on comparing work hours in the US and Europe see Alesina, Glaeser and Sacerdote (2005).

In particular we will focus our analysis on the importance of religion and race and other long lasting determinants of preferences for redistribution, such as differences in historical experiences and cultural differences more generally.

3.4.1 Religion

We begin with religion in Table 4. As above, we include all the individual determinants of column 1 of Table 1. We look not only at the respondent's religion but also at the religious denomination in which he or she was brought up. Overall, compared to atheists, Protestants appear to be less favorable to redistribution (column1). On the other hand, being raised Catholic or Jewish increases the desire for redistribution (but the effect is not significant). Being brought up religiously has the effect of increasing tastes for redistribution independently of the religious denomination (columns 3 and 4). Note that, when we control for political ideology, all religious denominations appear to be more favorable to redistribution (column 2); being Protestant still has a negative sign but not a significant one. An increase in the standard deviation in the Catholic dummy increases preferences for redistribution of 3% of a standard deviation of this variable. The impact of being raised religiously goes from 3% of a standard deviation of preferences for redistribution for Jewish and other religions to 6% for Catholic. Religious affiliation and participation in religious services (elicited with a multi-item questionnaire) yields no significant influence on social preferences in an experimental setting (Tan (2006)).

3.4.2 Race

A large body of experimental and statistical evidence shows that altruism travels less across racial and ethnic lines. In fact, as it tuns out, this is an extremely important determinant of preferences for redistribution. When the poor are disproportionately concentrated in a racial minority, the majority, coeteris paribus, prefer less redistribution. The underpinning of this observation relies in a perhaps unpleasant but nevertheless widely observed fact that individuals are more generous toward others who are similar to them racially, ethnically, linguistically, etc. (see also Luttmer (2001) and Fong and Luttmer (2008)). Evidence for the strength of this channel is quite striking simply looking at our previous regressions on individual characteristics: even after controlling for income, education, gender, age, etc., the race of the respondent is a critical (and large) determinant of preferences for redistribution. In the US the racial majority (whites) is much less favorable to redistribution than minorities. A large body of literature both in political science and in economics has documented this fact both with reference to the US and as an explanation for cross country comparisons. Alesina and Glaeser (2004) review this literature and make the racial argument a critical determinant of the differences in the more generous redistributive policies of more homogeneous European countries relative to the less racially homogeneous US. But even within the US the comparison of different redistributive policies in more or less racially homogeneous states is very telling

(see Alesina and Glaeser (2004)).

In the language of our approach the acceptable income inequality Q_i^* for individual i in the racial majority is higher if the lower tail of the income ladder is disproportionately filled by racial minorities. Note that this consideration has important consequences for the relationship between immigration and redistribution. To the extent that new immigrants are near the bottom of the income ladder, their arrival should decrease the desired level of redistribution for the locals. This has certainly been a phenomenon at work in the US (Alesina and Glaeser (2004)) but is also beginning to happen in Europe as well with new waves of immigration from Africa and the Middle East. The topic of immigration and redistribution is an excellent one for future research.

3.4.3 Cultural Norms and Differences in Macroeconomic Experiences

Preferences for redistribution display large differences across countries, as we discuss below. In this section, we focus on long lasting determinants of preferences for redistribution. In particular, we first focus on the general question of whether individuals bring with themselves the preferences for redistribution of their country of origin. Second, we look at some of the long term differences, including the importance of macroeconomic history or the structure of the family. We examine the importance of culture in the determination of preferences for redistribution by looking at the behavior of immigrants in the US. The approach of using immigrants' behavior has become a common way to isolate the importance of cultural norms.[21] We use as a measure of culture the preferences for redistribution in the immigrants' country of origin. We calculate the mean preferences for redistribution in the immigrant country of origin by using a similar question on preferences for redistribution from the World Values Survey. Table 5 presents a variety of specifications, controlling for the usual set of controls (column 1), father education (column 2), income of the family at 16 (column 3) and the two previously described measures of mobility (columns 4 and 5). We specifically control for family background, because a lower level of income or human capital could be the main omitted variable captured by preferences for redistribution in the country of origin. In all our specifications, culture appears to be an important variable in the determination of preferences for redistribution. Our results are in line with those by Luttmer and Singhal (2008), who specifically study the importance of culture in the determination of preferences for redistribution, using evidence drawn from the European Social Survey. A one standard deviation increase in preferences for redistribution in the country of origin is associated with an increase in the standard deviation of preferences for redistribution of about 4%.

Anecdotal evidence suggests that difficult times leave a mark in an individual's beliefs and attitudes. Moreover, research in social psychology points out

[21] See also Giuliano (2007), Alesina and Giuliano (2007), Antecol (2000), Carroll, Rhee and Rhee (1994) and Fernandez and Fogli (2005)

that differences in historical experiences, especially during youth, can leave a permanent mark in individuals' political and economic beliefs. In particular, social psychologists point out that there is a socialization period in the lives of individuals during which socializing influences have the most profound impact: values, attitudes and world-views acquired during this time period become fixed within individuals and are resistant to change. Evidence of significant socialization has been found between 18 and 25 years of age (the so-called "impressionable years hypothesis".) In order to investigate the validity of this position (that beliefs that are formed during the initial years of adulthood may change within a generation, but, at the same time, once past a critical age they are more difficult to modify), we follow Giuliano and Spilimbergo (2008) and test whether differences in a history of macroeconomic volatility during youth can have a permanent effect in the determination of preferences for redistribution. In order to do so, we match individual beliefs with the macroeconomic volatility of the region in which the person was living when she was 16. Using the information location of respondents during critical age (the GSS provides the location of the respondent at 16), we construct a measure of macroeconomic volatility during the "impressionable years" range (when the individual was between 18 and 25). For instance, we consider the macroeconomic volatility in New England in the fifties for an individual who was living in Boston at the age of 16 even if she/he is currently living in Los Angeles. A cohort of individuals shares a large amount of experiences, ranging from economic shocks to technological progress to a multitude of unobservable characteristics. This identification strategy, that mainly uses cross-regional variation in individual experiences during critical age, allows to distinguish the impact of a personally experienced macroeconomic history from unrestricted cohorts effects. Macroeconomic volatility, being specific to a given region, vary also within cohorts and not only across cohorts. The specification follows the one of the previous section but also adds "region at 16" fixed effects and clusters the standard errors at the "region at 16 level." In all different specifications, a history of macroeconomic volatility during youth appears to be an important component in the determination of preferences for redistribution. We repeat the same exercise for other age ranges[22]. Similarly to Giuliano and Spilimbergo (2008), we do not find evidence of an impact of macroeconomic volatility in the formation of beliefs when the person is older than 26. A one standard deviation increase in macroeconomic volatility during youth is associated with an increase of 3% of a standard deviation of preferences for redistribution (Table 6).

3.4.4 The Structure of the Family

The organization of the family varies a lot around the world. Family ties are strong in some countries, weak in others. In certain countries nuclear families have been the natural arrangement for decades, in other large families with several generations living together are more common. The relationship between

[22] The other age ranges considered are: 10-17, 26-33, 34-41. 42-49 and 50-57. We maintain a period lenght of 8 years for consistency with the "impressionable years range."

siblings can be more or less even or unequal[23] Different family structures can affect preferences of the desired level of government intervention in redistributive policies, directly or indirectly. Esping Andersen (1999) for instance argues that in societies with close family ties, certain welfare policies are internalized by the family rather than being delegated to the State. Unlucky or even "lazy" youngsters are supported by their parents more in certain societies than in others because of the different family structures. The same applies to impoverished elderly, the sick and disabled etc. Thus in societies where the family performs these functions the preferences for government intervention are different (i.e. there is less demand for it) than in countries where the family does not perform such functions. There is obviously an important issue of causality here but family traditions and cultural factors affecting family values are most likely more long lasting and certainly older than the modern welfare state, a post second World War phenomenon by and large. Alesina and Giuliano (2007) present evidence consistent with the role of family ties and preferences of government intervention.

In his fascinating work Todd (1985) argues that the structure of the family, in particular the nature of the hierarchal relations between parents and children, and the nature of the siblings relations is an important determinant of the tendency for certain societies to be more or less receptive of certain ideologies, say liberalism versus socialism. The latter has of course important implications on the preferences for redistribution. For instance Todd (1985) argues that it is not an accident that a communist dictatorship took a solid root in Russia rather than in other parts of western Europe. A family structure based on an authoritative head of the family but communal and egalitarian amongst siblings made it easier for a society based upon a dictator and egalitarian policies to be acceptable.

3.4.5 Fairness

The final effect which we emphasized in the theoretical part is the role of fairness and the perception of whether inequality emerges from efforts and ability of different individuals or luck, connections, perhaps corruption etc. In Table 7, we study the impact of attitudes toward the importance of work versus luck as a driver of success in life and the relevance of fairness in determing prefereces for redistribution. These two beliefs are measured using the following two questions: "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?" Hard work (1) or luck (3); the question takes the value of 2 if hard work and luck are considered equally important" and "Do you think most people would try to take advantage of you if they got a chance (2), or would they try to be fair (1)?". We add these variables to our basic specification of column 1 of table 1. Both beliefs seem to be relevant in determining preferences for redistribution when included separately. When included jointly, only the

[23] Todd (1985)

"work versus luck" variable remains significant. These results are consistent with those of Alesina and La Ferrara (2002) and Fong (2001). Obviously, the questions asked in the GSS do not allow us to disentangle exactly what part of income is attributable to luck or effort according to various individuals. Note also that, controlling for political ideology, does not change the importance of work and luck as a determinant of preferences for redistribution. On the other hand, it seems to undermine the relative importance of fairness, which becomes insignificant.[24] Extensive experimental literature shows that preferences for redistribution may be dictated by a sense of fairness or aversion to inequality (see Durante and Putterman (2007), Frohlich and Oppenheimer (1992), Cowell and Schokkaert (2001), Hoffman and Spitzer (1985)).

3.5 Evidence from the World Values Survey

In this section, we briefly look at preferences for redistribution using cross-country evidence. Figure 1 presents correlations among several measures of preferences for government redistribution (as defined in the data session) at the country level. All the measures are very strongly correlated; therefore, our results are not simply due to one specific question but are consistent across definitions. It is also apparent from the table that there is a consistent ranking of countries for preferences for redistribution. Eastern European countries are the most pro-government redistribution (a not surprising effect of left-wing ideology), followed by Latin America and Northern European countries. Asian countries, the US, Australia and New Zealand are in the bottom part of the distribution.[25]

As a final step, we perform a within-country analysis to generalize the results outside of the US context. By controlling for country and wave fixed effects, we can limit the possibility that some of the US results depend highly upon the social and historical context of this specific country. Results (reported in Table 8) broadly confirm the US evidence. Women, youth, the unemployed and left-wing people are more pro-redistribution. Income and education reduce the desire for redistribution, but, as in the US, education has a positive effect on redistribution when interacted with political ideology. Believing that luck is more important than work increases the desire for redistribution. Fairness also matters (whereas, in the US, the coefficient has the right sign, but it is not significant). The only measure of personal misfortune found in the World Value Survey asks the respondent if she has ever been divorced (this question was, however, asked only in one wave; therefore, we have a very limited number of observations). We do not find any effect of personal misfortune. Macroeconomic volatility is positively associated with preferences for redistribution but has an insignificant effect. Results for religious denomination are different than in the US. With the exception of the Orthodox, who are strongly pro-redistribution, all

[24] This could be due only to a difference in the sample, since when we restrict the sample to those observations for which we do have data on political ideology, fairness is not significant.

[25] Note that preferences for redistribution were not asked for many countries in Continental and Southern Europe.

the other religious denominations appear to be less favorable to redistribution than atheists.[26]

4 Conclusions

This paper provides a comprehensive review of the determinants of preferences for redistribution. Our analysis is guided by a theoretical framework and complemented by empirical evidence mostly for the US and (briefly) across countries. Within country analysis is much less likely to be subject to measurement error due to changes in institutional structures of redistributive policies. Preferences for redistribution are determined by personal characteristics such as age, gender, race and socioeconomic status, but they are also a product of history, culture, political ideology and a perception of fairness. In particular, women, youth and African-Americans appear to have stronger preferences for redistribution. Individuals who believe that people try to take advantage of them, rather than being fair, have a strong desire for redistribution; similarly, believing that luck is more important than work as a driver of success is strongly associated with a taste for redistribution.

Preferences for redistribution vary substantially across countries. We show that these differences could be the result of differences in religion, histories of macroeconomic volatility and more generally defined culture.

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Table 1.
Preferences for Redistribution and Individual Characteristics
General Social Survey 1972-2004

	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution
Age	0.061	0.069	0.068
	(0.029)**	(0.030)**	(0.030)**
Age squared	-0.014	-0.013	-0.013
	(0.003)***	(0.003)***	(0.003)***
Female	0.156	0.141	0.134
	(0.017)***	(0.017)***	(0.017)***
Black	0.588	0.560	0.565
	(0.026)***	(0.027)***	(0.027)***
Married	-0.049	-0.012	-0.004
	(0.018)***	(0.018)	(0.018)
Unemployed	0.111	0.073	0.072
	(0.052)**	(0.054)	(0.054)
High school	-0.308	-0.289	-0.464
	(0.025)***	(0.026)***	(0.079)***
College and more	-0.378	-0.375	-0.984
	(0.028)***	(0.029)***	(0.081)***
Family income	-0.043	-0.040	-0.041
	(0.004)***	(0.004)***	(0.004)***
Political ideology		0.152	0.082
		(0.007)***	(0.017)***
Political ideology* high school			0.044
			(0.019)**
Political ideology* college and more			0.155
			(0.019)***
Observations	19512	18135	18135
R-squared	0.09	0.12	0.13

Notes:
[1] Robust standard errors in parentheses. *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for year and region fixed effects
[2] Political ideology is a general measure of ideological self-placement on a 1-7 scale, where 1 is extremely conservative and 7 is extremely liberal.

Table 2.
Preferences for Redistribution, Family Background and Social Mobility
General Social Survey 1972-2004

	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution
Age	0.042	0.022	0.046	0.034
	(0.034)	(0.043)	(0.037)	(0.053)
Age squared	-0.013	-0.013	-0.014	-0.013
	(0.003)***	(0.004)***	(0.004)***	(0.005)**
Female	0.157	0.146	0.166	0.117
	(0.018)***	(0.022)***	(0.019)***	(0.027)***
Black	0.565	0.560	0.559	0.623
	(0.032)***	(0.038)***	(0.034)***	(0.046)***
Married	-0.059	-0.042	-0.059	-0.013
	(0.020)***	(0.024)*	(0.021)***	(0.031)
Unemployed	0.091	0.090	0.114	0.136
	(0.061)	(0.069)	(0.064)*	(0.088)
High school	-0.314	-0.328	-0.328	-0.284
	(0.030)***	(0.034)***	(0.034)***	(0.042)***
College and more	-0.347	-0.357	-0.377	-0.270
	(0.034)***	(0.039)***	(0.043)***	(0.049)***
Father with	-0.090	-0.081	-0.062	-0.080
high school	(0.022)***	(0.026)***	(0.030)**	(0.033)**
Father with	-0.129	-0.109	-0.080	-0.170
college and more	(0.029)***	(0.037)***	(0.045)*	(0.047)***
Family income	-0.047	-0.046	-0.047	-0.054
	(0.004)***	(0.005)***	(0.005)***	(0.006)***
Family income at 16		-0.052		
		(0.015)***		
Mobility (diff. in			0.006	
years of education)			(0.004)	
Mobility (diff. in				-0.078
occupational prestige)				(0.028)***
Observations	15339	10920	14104	7194
R-squared	0.09	0.09	0.09	0.09

Notes:

[1] Robust standard errors in parentheses. *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for year and region fixed effects

[2] Mobility measures are defined as a difference in the years of education between the individual and his/her father and as a dummy for whether the occupational prestige of the individual is greater than the one of his/her father

Table 3.
Preferences for Redistribution and a History of Misfortune
General Social Survey 1972-2004

	Preferences for Redistribution	Preferences for redistribution	Preferences for redistribution
Ever unemployed	0.121		
in the last ten years	(0.020)***		
Trauma last year		0.073	
		(0.018)***	
Trauma last 5 years			0.039
			(0.013)***
Age	0.060	0.028	0.021
	(0.031)**	(0.042)	(0.042)
Age squared	-0.012	-0.011	-0.010
	(0.003)***	(0.004)**	(0.004)**
Female	0.173	0.144	0.144
	(0.017)***	(0.023)***	(0.023)***
Black	0.579	0.595	0.599
	(0.028)***	(0.035)***	(0.035)***
Married	-0.047	-0.003	-0.002
	(0.019)**	(0.025)	(0.025)
Unemployed	0.053	0.069	0.091
	(0.055)	(0.075)	(0.074)
High school	-0.309	-0.278	-0.281
	(0.026)***	(0.033)***	(0.033)***
College and more	-0.377	-0.358	-0.359
	(0.029)***	(0.038)***	(0.038)***
Family income	-0.041	-0.049	-0.050
	(0.004)***	(0.005)***	(0.005)***
Observations	17811	9948	9948
R-squared	0.09	0.10	0.10

[1] Robust standard errors in parentheses. *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for year and region fixed effects

[2] Ever unemployed in the last 10 years is a dummy indicating whether the person has ever been unemployed in the last 10 years; trauma last year/last five years indicate the number of personal traumas (including death of a relative, divorce, unemployment and hospitalization) that the person experienced during the last year/last five years.

Table 4.
Preferences for Redistribution and Religion
General Social Survey 1972-2004

	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution	Preferences for Redistribution
Age	0.045	0.042	0.043	0.041
	(0.034)	(0.035)	(0.034)	(0.035)
Age squared	-0.013	-0.012	-0.013	-0.012
	(0.003)***	(0.004)***	(0.003)***	(0.004)***
Female	0.166	0.142	0.163	0.143
	(0.018)***	(0.019)***	(0.018)***	(0.019)***
Black	0.593	0.542	0.593	0.544
	(0.033)***	(0.034)***	(0.033)***	(0.034)***
Married	-0.049	-0.011	-0.052	-0.009
	(0.020)**	(0.020)	(0.020)***	(0.020)
Unemployed	0.080	0.048	0.092	0.055
	(0.061)	(0.064)	(0.061)	(0.064)
High School	-0.308	-0.288	-0.310	-0.288
	(0.030)***	(0.032)***	(0.030)***	(0.032)***
College and more	-0.351	-0.337	-0.354	-0.340
	(0.034)***	(0.035)***	(0.034)***	(0.035)***
Father with high school	-0.091	-0.084	-0.090	-0.084
	(0.022)***	(0.022)***	(0.022)***	(0.022)***
Father with college and more	-0.132	-0.131	-0.131	-0.132
	(0.029)***	(0.029)***	(0.029)***	(0.029)***
Protestant	-0.136	-0.035		
	(0.034)***	(0.034)		
Catholic	0.012	0.083		
	(0.036)	(0.036)**		
Jewish	0.059	0.058		
	(0.070)	(0.070)		
Other religion	0.080	0.098		
	(0.059)	(0.059)*		
Family income	-0.047	-0.046	-0.047	-0.046
	(0.004)***	(0.005)***	(0.004)***	(0.005)***
Ideology		0.155		0.155
		(0.008)***		(0.007)***
Protestant at 16			0.005	0.053
			(0.048)	(0.048)
Catholic at 16			0.129	0.154
			(0.050)***	(0.050)***
Jewish at 16			0.271	0.210
			(0.080)***	(0.080)***
Other religion at 16			0.166	0.158
			(0.079)**	(0.079)**
Observations	15301	14283	15278	14260
R-squared	0.09	0.12	0.09	0.12

[1] Robust standard errors in parentheses. *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for year and region fixed effects

Table 5.
Preferences for Redistribution and Cultural Origin
Immigrants' Regressions
General Social Survey 1972-2004

	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution	Preferences for Redistribution
Preferences for redistrib.	0.063	0.059	0.057	0.067	0.068
in the country of origin	(0.032)*	(0.031)*	(0.032)*	(0.031)**	(0.036)*
Age	0.043	0.009	-0.025	-0.010	0.022
	(0.033)	(0.037)	(0.050)	(0.042)	(0.062)
Age squared	-0.013	-0.010	-0.008	-0.008	-0.013
	(0.004)***	(0.004)**	(0.005)	(0.005)	(0.006)**
Female	0.145	0.143	0.147	0.165	0.109
	(0.025)***	(0.030)***	(0.034)***	(0.034)***	(0.039)***
Black	0.360	0.365	0.637	0.428	0.807
	(0.114)***	(0.167)**	(0.182)***	(0.216)*	(0.174)***
Married	-0.011	-0.031	0.011	-0.027	0.005
	(0.039)	(0.035)	(0.040)	(0.040)	(0.040)
Unemployed	0.201	0.203	0.192	0.222	0.201
	(0.102)*	(0.084)**	(0.087)**	(0.086)**	(0.096)**
High school	-0.271	-0.232	-0.255	-0.252	-0.199
	(0.050)***	(0.062)***	(0.068)***	(0.063)***	(0.085)**
College and more	-0.313	-0.230	-0.222	-0.261	-0.115
	(0.041)***	(0.042)***	(0.055)***	(0.046)***	(0.063)*
Family income	-0.055	-0.055	-0.056	-0.054	-0.059
	(0.006)***	(0.006)***	(0.007)***	(0.007)***	(0.011)***
Father with high school		-0.079	-0.111	-0.046	-0.122
		(0.041)*	(0.045)**	(0.041)	(0.043)***
Father with college and		-0.110	-0.133	-0.053	-0.259
more		(0.033)***	(0.040)***	(0.039)	(0.051)***
Family income at 16			-0.046		
			(0.025)*		
Mobility (diff. in years of				0.006	
education)				(0.004)	
Mobility (diff. in					-0.109
occupational mobility)					(0.036)***
Observations	7005	5650	4149	5216	2928
R-squared	0.05	0.05	0.05	0.05	0.05

[1] Standard errors are clustered at the country of origin level. *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for year and region fixed effects

[2] Preferences for redistribution in the country of origin are defined as the average at the country level of the following World Value Survey question: "Now I'd like you to tell me your views on various issues. How would you place your views on this scale? People should take more responsibility to provide for themselves (1) vs The government should take more responsibility to ensure that everyone is provided for (10)"

Table 6.
Preferences for Redistribution and a History of Macroeconomic Volatility during Youth
General Social Survey 1972-2004

	Preferences for redistribution	Preferences for redistribution	Preferences for Redistribution	Preferences for redistribution	Preferences for redistribution
Macro-volatility	0.740	0.653	0.671	0.736	1.222
during 18-25	(0.286)***	(0.315)**	(0.377)*	(0.322)**	(0.637)*
Age	0.044	0.059	0.085	0.015	0.046
	(0.078)	(0.087)	(0.109)	(0.090)	(0.233)
Age squared	-0.009	-0.012	-0.018	-0.007	-0.005
	(0.010)	(0.012)	(0.015)	(0.012)	(0.036)
Female	0.180	0.200	0.196	0.201	0.177
	(0.020)***	(0.021)***	(0.026)***	(0.022)***	(0.034)***
Black	0.562	0.555	0.526	0.550	0.578
	(0.030)***	(0.038)***	(0.045)***	(0.040)***	(0.057)***
Married	-0.075	-0.073	-0.051	-0.079	-0.014
	(0.021)***	(0.023)***	(0.029)*	(0.024)***	(0.037)
Unemployed	0.061	0.038	0.051	0.050	0.076
	(0.057)	(0.066)	(0.075)	(0.069)	(0.101)
High school	-0.287	-0.312	-0.283	-0.336	-0.286
	(0.034)***	(0.042)***	(0.049)***	(0.045)***	(0.063)***
College and more	-0.392	-0.410	-0.375	-0.449	-0.358
	(0.037)***	(0.044)***	(0.051)***	(0.048)***	(0.067)***
Family income	-0.038	-0.044	-0.038	-0.042	-0.050
	(0.005)***	(0.005)***	(0.006)***	(0.006)***	(0.008)***
Father with high		-0.062	-0.075	-0.047	-0.070
school		(0.022)***	(0.027)***	(0.022)**	(0.034)**
Father with		-0.077	-0.114	-0.048	-0.191
college and more		(0.068)	(0.087)	(0.069)	(0.138)
Family income at 16			-0.080		
			(0.017)***		
Mobility (diff. in				0.012	
years of education)				(0.003)***	
Mobility (diff. in					-0.023
occupational mobility)					(0.035)
Observations	12754	10136	6907	9677	4210
R-squared	0.09	0.09	0.09	0.09	0.08

[1] Standard errors are clustered at the "region of residence at 16" level. *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for year, actual region of residence and region of residence at 16 fixed effects
[2] Macro-economic volatility is measured as the standard deviation of the regional income when the person was between 18 and 25 years old.

Table 7.
Preferences for Redistribution, Work versus Luck as a Driver of Success, and Fairness
General Social Survey 1972-2004

	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution	Preferences for redistribution
Fairness	0.038	0.029			0.027	0.027
	(0.019)**	(0.019)			(0.026)	(0.026)
Age	0.066	0.074	0.006	0.009	0.015	0.019
	(0.030)**	(0.031)**	(0.042)	(0.042)	(0.043)	(0.044)
Age squared	-0.014	-0.014	-0.008	-0.007	-0.009	-0.009
	(0.003)***	(0.003)***	(0.004)*	(0.004)*	(0.004)**	(0.004)*
Female	0.158	0.142	0.131	0.115	0.126	0.109
	(0.017)***	(0.017)***	(0.024)***	(0.023)***	(0.024)***	(0.024)***
Black	0.587	0.557	0.560	0.544	0.561	0.536
	(0.027)***	(0.028)***	(0.036)***	(0.037)***	(0.037)***	(0.038)***
Married	-0.052	-0.014	-0.022	0.005	-0.031	-0.003
	(0.019)***	(0.019)	(0.026)	(0.026)	(0.026)	(0.026)
Unemployed	0.113	0.075	0.109	0.119	0.121	0.129
	(0.055)**	(0.057)	(0.076)	(0.076)	(0.079)	(0.080)
High school	-0.303	-0.286	-0.371	-0.359	-0.365	-0.351
	(0.026)***	(0.027)***	(0.036)***	(0.037)***	(0.037)***	(0.038)***
College and more	-0.375	-0.373	-0.430	-0.427	-0.427	-0.420
	(0.029)***	(0.030)***	(0.039)***	(0.040)***	(0.041)***	(0.042)***
Family income	-0.043	-0.041	-0.040	-0.039	-0.041	-0.041
	(0.004)***	(0.004)***	(0.006)***	(0.006)***	(0.006)***	(0.006)***
Ideology		0.150		0.128		0.130
		(0.007)***		(0.009)***		(0.010)***
Work and luck			0.074	0.056	0.070	0.053
			(0.017)***	(0.017)***	(0.017)***	(0.017)***
Observations	18224	16961	9130	8784	8565	8263
R-squared	0.09	0.12	0.10	0.12	0.10	0.12

[1] Robust standard errors in parentheses. *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for year and region fixed effects

[2] *Fairness* is a categorical variable that is the answer to the question: "Do you think most people would try to take advantage of you if they got a chance (2), or would they try to be fair (1); *Work versus luck* is a categorical variable that is the answer to the 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? Hard work (1), hard work and luck equally important (2), Luck most important (3)

Table 8.
Determinants of Preferences for Redistribution
World Values Survey

	Pref. for redistribution	Pref. for redistribution	Pref. for redistribution	Pref. for redistribution	Pref. for redistribution	Pref. for redistribution	Pref. for redistribution	Pref. for redistribution
Age	0.067	0.026	0.025	0.023	-0.003	0.014	0.161	0.067
	(0.025)***	(0.028)	(0.028)	(0.028)	(0.037)	(0.068)	(0.075)**	(0.025)***
Age squared	-0.007	-0.003	-0.003	-0.003	0.002	-0.005	-0.014	-0.007
	(0.003)***	(0.003)	(0.003)	(0.003)	(0.004)	(0.007)	(0.007)**	(0.003)***
Female	0.181	0.155	0.154	0.158	0.134	0.144	0.188	0.159
	(0.013)***	(0.015)***	(0.015)***	(0.015)***	(0.019)***	(0.034)***	(0.036)***	(0.029)***
Married	-0.064	-0.060	-0.060	-0.052	-0.089	-0.019	-0.071	-0.042
	(0.015)***	(0.018)***	(0.018)***	(0.018)***	(0.023)***	(0.042)	(0.056)	(0.029)
Unemployed	0.305	0.304	0.305	0.300	0.363	0.152	0.404	0.325
	(0.026)***	(0.030)***	(0.030)***	(0.030)***	(0.043)***	(0.057)***	(0.083)***	(0.046)***
High school	-0.385	-0.363	-0.279	-0.369	-0.315	-0.212	-0.189	-0.386
	(0.018)***	(0.021)***	(0.050)***	(0.021)***	(0.032)***	(0.044)***	(0.044)***	(0.118)***
College and more	-0.542	-0.509	-0.715	-0.513	-0.490	-0.330	-0.389	-0.520
	(0.021)***	(0.024)***	(0.059)***	(0.024)***	(0.035)***	(0.052)***	(0.054)***	(0.141)***
Income	-0.258	-0.238	-0.237	-0.237	-0.242	-0.215	-0.329	-0.246***
	(0.009)***	(0.010)***	(0.010)***	(0.010)***	(0.013)***	(0.023)***	(0.026)***	(0.039)
Ideology		0.112	0.110	0.011	0.122	0.063		
		(0.004)***	(0.005)***	(0.004)***	(0.005)***	(0.008)***		
Ideology*			-0.016					
high school			(0.008)*					
Ideology*			0.038					
college and more			(0.010)***					
Roman Catholic				-0.068				
				(0.024)***				
Protestant				-0.210				
				(0.030)***				
Orthodox				0.174				
				(0.042)***				
Jews				-0.106				
				(0.120)				
Muslim				-0.040				
				(0.051)				
Hindu				-0.053				

				(0.098)				
Buddhist				-0.121				
				(0.070)*				
Other religion				-0.144				
				(0.038)***				
Hard work					0.076			
					(0.004)***			
Fairness						0.026		
						(0.037)		
Ever been divorced							-0.046	
							(0.067)	
Macrovolatility								0.032
during youth (18-25)								(0.273)
Observations	193956	146166	146166	141285	84028	29556	23320	125128
R-squared	0.12	0.13	0.13	0.13	0.15	0.11	0.09	0.11

[1] Robust standard errors in parentheses (clustered at the country level in the last column). *significant at 10%; **significant at 5%; *** significant at 1%; all regressions control for wave and country fixed effects.

[1] *Preferences for redistribution* are measured using the following question (on a scale from 1 to 10): "People should take more responsibility to provide for themselves (1) vs The government should take more responsibility to ensure that everyone is provided for (10)". *Ideology* measures the political orientation of the respondent (on a scale from 1 to 10) and it is an answer to the following question: "In political matters, people talk of the left and the right. How would you place your views on this scale, generally speaking? Right (1) versus Left (10). *Work versus luck* is a categorical variable (on a scale from 1 to 10) that is the answer to the question: "Now I would like to tell me your views on the following statement: In the long run, hard work usually brings a better life (1) versus Hard work does not generally bring success – it is more a matter of luck and connections". *Fairness* is a categorical variable that is the answer to the question: "Do you think most people would try to take advantage of you if they got a chance (2), or would they try to be fair (1).

Figure 1. Preferences for redistribution and beliefs about the poor

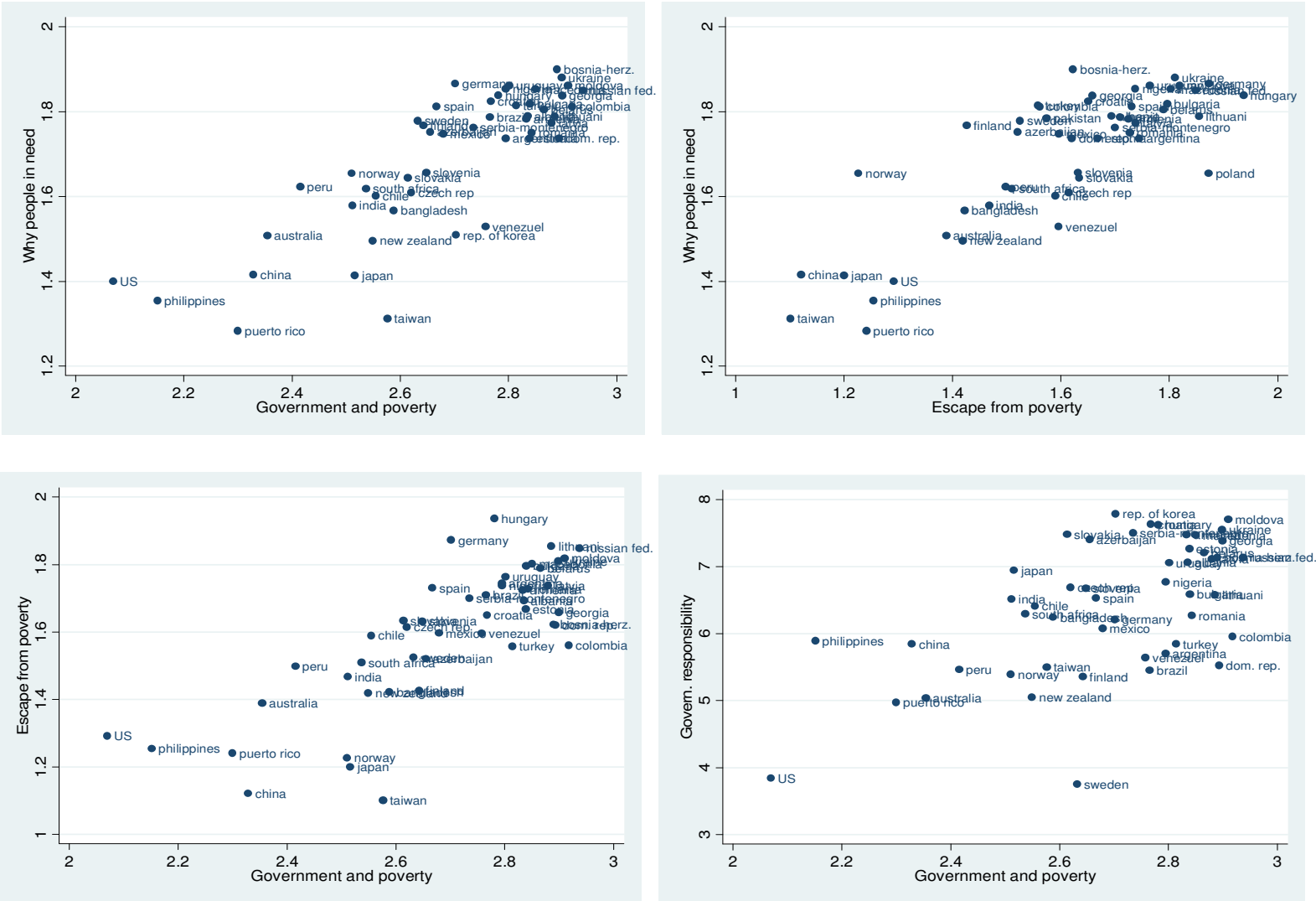

Table A1
Descriptive Statistics
General Social Survey 1972-2004

Variable	Obs	Mean	Std. Dev.	Min	Max
Preferences for redistribution	19512	3.12	1.18	1	5
Age	19512	44.54	16.93	18	89
Female	19512	0.55	0.50	0	1
Black	19512	0.13	0.34	0	1
Married	19512	0.54	0.50	0	1
Unemployed	19512	0.03	0.17	0	1
High School	19512	0.53	0.50	0	1
College and more	19512	0.27	0.44	0	1
Income	19512	10.10	2.77	1	12
Polit. Ideology	18135	3.88	1.35	1	7
Father with high school	15339	0.36	0.48	0	1
Father with college and more	15339	0.16	0.37	0	1
Income at 16	13620	2.79	0.86	1	5
Mobility (diff. in years of educ.)	14401	2.64	3.87	-16	20
Mobility (diff. in occupat. prestige)	7724	0.47	0.50	0	1
Protestant	19464	0.60	0.49	0	1
Catholic	19464	0.25	0.43	0	1
Jewish	19464	0.02	0.14	0	1
Other religion	19464	0.03	0.18	0	1
Protestant at 16	19432	0.63	0.48	0	1
Catholic at 16	19432	0.28	0.45	0	1
Jewish at 16	19432	0.02	0.14	0	1
Other religion at 16	19432	0.02	0.14	0	1
Fairness	18224	1.39	0.49	1	2
Work and luck	9130	1.45	0.71	1	3
Unemployed in the last ten years	17811	0.32	0.47	0	1
Number of traumas last year	9948	0.47	0.65	0	4
Number of traumas in the last 5 years	9948	1.07	0.88	0	4
Macrovolatility during youth	12754	.0855	.0423	0	.179
Pref. for redistr. in the country of origin	7005	4.99	.667	3.476	7.50

Table A2
Descriptive Statistics
World Values Survey

Variable	Obs	Mean	Std. Dev.	Min	Max
Preferences for redistribution	193956	5.80	3.04	1	10
Age	193956	41.27	15.94	15	99
Female	193956	0.51	0.50	0	1
Married	193956	0.65	0.48	0	1
Unemployed	193956	0.08	0.27	0	1
High school	193956	0.33	0.47	0	1
College and more	193956	0.17	0.38	0	1
Income	193956	1.97	0.79	1	3
Ideology	146166	5.43	2.29	1	10
Roman Catholic	141285	0.34	0.47	0	1
Protestant	141285	0.14	0.35	0	1
Orthodox	141285	0.08	0.27	0	1
Jews	141285	0.01	0.09	0	1
Muslim	146166	0.11	0.31	0	1
Hindu	146166	0.03	0.16	0	1
Buddhist	146166	0.01	0.12	0	1
Other religion	146166	0.06	0.24	0	1
Work and luck	84028	4.35	2.84	1	10
Fairness	29556	1.59	0.49	1	2
Ever divorced	23320	0.08	0.27	0	1