Individual Preferences for Redistribution in Western Europe: Self-Interest, Political Articulation, Altruism and Identity

David Rueda

(University of Oxford)

and

Jonas Pontusson

(Princeton University)

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Many politicians would agree that an individual's relative income (i.e., whether she is rich or poor) affects her political behavior. Income differentials and the increase in inequality experienced in recent years seem to be an important part of electoral politics in circumstances as diverse as the 2008 presidential election in the USA and the parliamentary election in Japan in August of last year. In political science, there is an influential literature on how pocketbook issues (Downs 1957, Key 1966, Fiorina 1981) and class (Lipset 1960, Evans 1999, Brooks and Manza 1997), both strongly related to relative income, influence voting choice.

This paper's analysis wishes to address one the assumptions underlying most arguments about the importance of economic circumstances to political outcomes. If relative income matters to individual political behavior, it seems reasonable to assume that it does so through its influence on redistribution preferences. These redistribution preferences may (or may not) then be reflected on party positions and, eventually, government policy. It seems to us that the determinants of redistribution preferences is a topic in need of further analysis.

We want to make two related points. First, we argue for a re-examination of the influence of relative income on redistribution preferences. We propose an extended version of the model proposed by Romer (1975) and Meltzer and Richard (1981). We take self-interest seriously and argue that a significant determinant of redistribution preferences is the difference between an individual's income and the mean in her country. The lower below the mean the income, the more an individual gains from redistribution and the stronger we expect her support to be. The higher above the mean the income, the

more an individual loses from redistribution and the stronger we expect her opposition to be. Second, we accept that self-interest is not the only relevant motivation behind redistribution preferences but we argue that there is a hierarchy within these motivations. We believe a number of factors (including altruism, the political articulation of interests, and identity) matter to redistribution but we will show below that they matter to the rich more than to the poor. To anticipate our argument and our findings, we propose that the material benefits of redistribution dominate the preferences of the poor. For the rich, on the other hand, other factors always matter (it is not the case that all rich people will oppose redistribution) and we will show that some macro variables (namely, aggregate income inequality and group homogeneity) magnify or limit the importance of material self-interest. In making this distinction between the poor and the rich, our arguments challenge some influential approaches to the politics of inequality.

1. Framing discussion

This paper's analysis explores four distinct approaches to the formation of preferences for redistribution. The first one relies on the idea that the level of redistribution preferred by a given individual is fundamentally a function of her relative income or, more specifically, a function of the distance between her own income and the average income of the population covered by the polity in which she resides. The second approach emphasizes the importance of political articulation and it proposes that the significance of relative income as a source of redistribution preferences depends on whether parties or other organizations, such as trade unions, pursue "class-based"

political agendas. The third approach maintains that other-regarding concerns matter. In this framework, it is the arguments about altruism that matter the most to our paper's topic. Altruistic individual derive utility not only from their own material gains but also from those of other people. The final idea is, in our minds, closely related to the third but it emphasizes identity and in-group solidarity, arguing that ethnic, national or religious fractionalization reduces overall support for redistribution and also mitigates the connection between relative income and support for redistribution.

In the following pages, we will analyze in more detail these frameworks and elucidate this paper's claims. In essence, we accept the importance of these non-material factors but propose that they matter most to those in less material need. Political articulation, altruism and identity, we will argue, set the contextual baseline from which individual relative income effects emerge and are particularly influential to the affluent and rich.

A. Relative income

The theoretical model proposed by Romer (1975) and developed by Meltzer and Richard (1981), figures very prominently in recent literature on the comparative political economy of redistribution and also informs our own analysis. To recapitulate very briefly, the RMR model assumes that the preferences of the median voter determine government policy and that the median voter seeks to maximize current income. If there are no deadweight costs to redistribution, all voters with incomes below the mean maximize their utility by imposing a 100% tax rate and receiving a lump sum payment equal to the average income. Conversely, all voters with incomes above the mean prefer

a tax rate of zero. When taxation is costly, i.e. when taxation reduces average income, voters with incomes above the mean still prefer a tax rate of zero, but the self-interested calculation of voters with incomes below mean becomes more complicated. With the particular disincentive function used by Meltzer and Richard, voters at the bottom of the income distribution still prefer 100% taxation, but voters in a certain range below the average income must trade gains from redistribution against the decline in average income. Holding the disincentive effects of taxation constant, the preferred tax rate (or level of redistribution) of such voters becomes a function of the distance between their own income and the average income. Needless to say perhaps, the RMR model assumes, quite reasonably, that the range of the income distribution where preferences vary by relative income encompasses the median voter.

Much of the existing literature interprets the RMR model to say that more inequality should be associated with more redistribution. The consensus on the empirical side of this literature also seems to be that there is either no association between market inequality and redistribution or, contrary to the core prediction of the RMR model, less market inequality is associated with more redistribution. In our view, this consensus (and the underlying interpretation of the RMR model) is quite problematic.

To begin with, the consensus in the existing literature focuses on cross-sectional variation, showing that it is not the case that more inegalitarian countries tend to have more redistributive government, and ignores the fact there exists a fairly consistent within-country association between growth of inequality and increases in redistribution over the period 1975-2000 (see Milanovic 2000, Kenworthy and Pontusson 2005). Arguably, analyzing change over time represents a more appropriate test of the core

prediction of the RMR model, for the model surely does not imply that inequality is the sole determinant of redistributive policy.

A second problem with most of the recent literature that purports to evaluate the RMR model is that it relies on macro-comparative empirical analyses (with redistribution as the dependent variable) and does not pay much attention to individual preferences. As commonly noted (e.g., McCarthy and Pontusson 2009, Alesina and Giuliano 2009), the RMR model involves two separate propositions: a "demand-side" proposition, concerning the preferences of voters in general and the median voter in particular ("distance to the mean determines demand for redistribution") and a "supply-side" proposition, concerning the aggregation of preferences ("the preferences of the median voter will prevail"). If the RMR model indeed fails to predict patterns of inequality and redistribution, we would want to know whether its shortcomings stem from the demand side or the supply side. Like Finseeras (2009), we seek to evaluate the demand-side of the RMR model by analyzing survey data on preferences for redistribution.

Yet a third problem with the existing literature concerns the measure of inequality. Virtually all of this literature seeks to test the RMR model by establishing whether or not there is a positive association between aggregate inequality, typically measured by the Gini coefficient, and redistributive effects of government policy. But the critical variable in the RMR model is the distance of the income of the median voter to the mean income. While it is likely that the distance between the median voter and the mean income increases with aggregate inequality, it is by no means certain that this is the case. Setting aside the question of how income inequality affects voter turnout, it is possible to imagine any number of scenarios in which falling relative incomes at the

bottom of the distribution are offset by increasing relative incomes at the top, such that median and mean incomes remain constant. In what follows, we provide a more direct test of the RMR model by measuring income as absolute distance to the mean income.[1]

We depart from the standard RMR framework by positing that income distance affects preferences for redistribution across the entire income distribution. In our view, there is no obvious reason to suppose that there exists some cutoff point below which the disincentive effects of taxation no longer matter to the cost-benefit calculus of rational voters. On the other hand, it is more or less self-evident that an individual in, say, the 10th percentile of the income distribution benefits more from the RMR redistributive scheme (lump-sum payments financed by a linear income tax) than an individual in the 30th percentile. As a result, we would expect the former individual to prefer a higher tax rate than the latter.

To reconcile the RMR logic with the notion that preferences for redistribution vary among individuals with incomes above the mean income is less straightforward. After all, all of these individuals always want a tax rate of zero in the RMR framework. At the same time, however, the converse of the point that someone in the 10th percentile gains more from a given tax rate than someone in the 30th percentile surely holds for the upper end of the income distribution: at any given tax rate, someone in the 90th percentile will lose a larger share of his income than someone in the 70th percentile under the RMR scheme. It seems odd to suppose that the difference in relative losses is not relevant to

[1] This measure of income is one of the main things that distinguish our analysis from Finseeras (2009), who converts the ESS income bands into a continuous variable ranging from 1 to 12 and then interacts his individual-level measure of income with a macro-level measure of income inequality. Our alternative approach allows us to distinguish between effects of inequality that operate through the self-interested logic of the RMR model and effects that operate through altruism, identity or political articulation motives (more on this below).

the policy preferences of these two individuals or, alternatively, to their political behavior. Arguably, both individuals would like the tax rate to be zero, but the *intensity* of this preference varies between the two individuals. The individual in the 90th percentile should be willing to devote more money or effort to defeating a proposal to increase the tax rate than the individual in the 70th percentile. Similarly, we might expect the individual in the 90th percentile to assign greater importance to zero taxation, relative to other policy preferences, than the individual in the 70th percentile.

In short, we conceive preferences for redistribution as a continuum and hypothesize that income distance to the mean plays an important role in determining where individuals fall on this continuum. Specifically, we analyze responses to a survey question that asks individuals whether or not they agree that "the government should take measures to reduce differences in income levels." The survey provides respondents with five options: "strongly agree," "agree," "neither agree nor disagree," "disagree" or "strongly disagree." For ease of interpretation, our main results are based on a binomial logistical model in which the dependent variable takes the value of 1 if the respondent agrees with the statement (strongly or not) and otherwise takes the value of zero. These results allow us to capture the notion of a continuum of preferences by calculating predicted probabilities of supporting redistribution for individual at different positions in the income distribution.

The main implication of our departure from the standard RMR framework is that we expect a mean-preserving increase in inequality to translate into a polarization of preferences by income, in addition to the standard RMR expectation that a mean-preserving increase in inequality will increase the tax rate preferred by the median voter

or, more precisely, the median income-earner. For the purposes of this paper, we bracket the question of the extent to which government policy is responsive to the policy preferences of individuals located at either end of the income distribution. As it seems plausible to suppose that elected and unelected government officials are particularly responsive to the preferences of high-income citizens, however, we shall pay particular attention to the effects of relative income on policy preferences in the right-hand tail of the income distribution.[2]

B. Class mobilization

The paragraphs above speak to the effect of income distance to the mean (and material self-interest) on redistribution preferences. As mentioned before, however, we understand these effects to be strongest among the poor. As the importance of the gains from redistribution become less important (or become losses), we believe that other factors will become more relevant. We start with political articulation.

Sometimes labeled "power resources theory," a prominent theoretical strand of comparative political economy emphasizes power relations between labor and business and different historical configurations of class politics as a key source of differentiation among advanced industrial states. Kumlin and Svallfors (2007) bring this theoretical tradition to bear on the question of explaining individual attitudes towards redistribution and, more broadly, the public provision of social welfare. Using data from the European

[2] See Gilens (2005) on disproportionate responsiveness to the policy preferences of high-income citizens in the US. The larger project of which this paper forms a part emphasizes that there is a lot of variation across advanced industrial states in government responsiveness to the policy preferences of low-income citizens. In large measure, we think, this variation has to do with whether or not these citizens are mobilized to participate in politics (in the first instance, whether or not they vote) and to the dominant role of different, more or less "class-oriented" parties (see Pontusson and Rueda 2008, and Forthcoming).

Social Survey, Kumlin and Svallfors establish that the relevance of class-occupational categories for support for redistributive government policies and for trade unions varies a lot across countries. Adding a "social constructivist" twist to power resources theory, they argue persuasively that "class differences in attitudes grow larger where class issues are more clearly *articulated* in the political and organizational arenas… When intermediate organizations provide citizens with more arguments and information about redistributive issues, citizens are more likely to discover their own position in the stratification system, and more likely to develop attitudes consistent with that position" (italics in the original).[3]

As evidence in support of this argument, Kumlin and Svallfors' show that union density and the salience of socio-economic issues in party politics (measured by the percentage of party manifestos devoted to these issues) condition the effects of social class on attitudes or, in our terminology, redistribution preferences. At higher levels of union density, manual workers are more likely to support redistributive policies and the differences in support for redistribution between manual workers and members of "service class 1" are significantly larger. Similarly, support for redistribution among manual workers and class differences in support for redistribution increase with the salience of socio-economic issues in party politics.

Kumlin and Svallfors also find that class differences in attitudes/preferences tend to be larger in countries with a more equal distribution of disposable household income. Consistent with the overall thrust of their argumentation, they attribute this result to feedback effects of existing public policy provisions: "low levels of inequality are typically intertwined with encompassing welfare and labour market policies… The more

[3] Quote from pre-publication typescript (p. 4).

class-redistribution that is achieved through public policy, the more unprivileged citizens and their political representatives think about remaining inequalities. Furthermore, in groups with stronger market positions highly redistributive institutions tend to promote resistance against further redistribution."[4]

Though Kumlin and Svallfors's empirical analysis focuses on the relationship between class position and support for redistribution, their basic argument would appear to be equally relevant to the relationship between relative income and support for redistribution. Setting the question of whether (or how) party politics condition the relationship between income and preferences aside for the time being,[5] we want to distinguish between two possible effects of union membership and macro-inequality: a self-interested one and an altruistic one.

The self-interest side of this argument was implicit in the paragraphs before. Without abandoning our RMR conception of individuals who care about relative income and the gains (or losses) from redistribution, it is easy to integrate the effects of political articulation as information provision. In this view, as suggested by Kumlin and Svallfors, individual are more aware of their own position in the income distribution and of their redistributive preferences in countries with powerful unions and class-based parties (which articulate these issues) as well as generous welfare states (where redistribution is more public). The empirical implication of this argument is that a higher degree of preference polarization will exist in countries with more political articulation. Unions, class parties and a public welfare state will make the poor more pro-redistribution and the rich more anti-redistribution.

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[4] Quote from pre-publication typescript (p. 25).
[5] The next iteration of this paper will address conditioning effects of party politics.

A second interpretation of the effects of unions and class parties is possible. This alternative explanation is closely related to approaches that emphasize altruism, so we will take it up in the following section.

C. Altruism

The importance of other-regarding preferences has received increasing amounts of attention in the recent political economy literature. In laboratory experiments, individuals have been shown to have concerns for the welfare of others (see, for example, Charness and Rabin 2002 and Fehr and Gächter 2000). A number of alternative models have been presented to analyze different kinds of other-regarding concerns (for reviews, see Fehr and Schmidt 2006 and DellaVigna 2009).

The dimension of altruism that is most relevant to our argument pertains to the willingness of individuals to make sacrifices in order to realize welfare gains for fellow citizens who are worse off than themselves. The kind of altruism we are interested in, therefore, is not characterized as unconditional kindness (which would imply that an individual's utility increases as the material gains received by any other individual increase). It is rather defined as a conditional form of altruism that has been termed *positive inequity aversion*.[6] Fehr and Schmidt (2006) argue that an "individual is inequity averse if, in addition to his material self-interest, his utility increases if the allocation of material payoffs becomes more equitable" (2006: 620).[7]

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[6] For a similar analysis focusing on trade policy preferences that looks at both positive and negative inequity aversion, see Lü, Scheve and Slaughter (2010).

[7] For the moment, we are setting aside a possible second dimension of altruism involving legitimacy and norms. It seems quite clear that support for redistribution is closely related to beliefs about fairness and prospects for upward mobility based on hard work or, in other words, perceptions of the legitimacy of existing income differentials (see, among others, Alesina and Glaeser 2004, Benabou and Tirole 2006, Osberg and Smeeding 2006). As suggested by Alesina and Giuliano (2009), the perception that income

To integrate this approach to altruism with the influence of material gains we return once more to the idea of a hierarchy among these preferences. Our conception that altruistic concerns will be trumped by material ones for the poor is compatible with previous work on material and non-material incentives. Levitt and List (2007) present a model in which individuals maximize their material gains (wealth) but:

> "when the wealth-maximizing action has a moral cost associated with it, the agent will deviate from that action to some extent towards an action that imposes a lower moral cost. The greater is the social norm against the wealth maximizing choice, or the greater the degree of scrutiny when the wealth-maximizing action has a social cost, the larger the deviation from that choice. In both cases, we envision the agent trading-off morality and wealth. When individuals follow different moral codes, they will generally make different choices when faced with the same decision problem. Typically, we expect that as the stakes of the game rise, wealth concerns will increase in importance relative to fairness concerns (…)" (p. 157).

In our argument, these higher stakes (i.e., the need for the benefits of redistribution) increase the importance of income distance to the mean. Lower stakes for the rich (there are material costs to increasing redistribution, but for the rich they do not involve dramatic consequence comparable to those for the poor) mean that altruistic concerns will be more important.

D. Identity and in-group solidarity

A large literature has recently emerged on the role of identities other than class in the formation of preferences for redistribution. We consider this approach to be closely related to the altruism arguments analyzed in the previous section. While positive inequity aversion implies that an individual's utility will increases as the poor benefit from more redistribution, identity arguments emphasize that this may be dependent of the

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differences are undeserved and illegitimate may itself be an important motive behind support for redistribution.

identity of the poor. Perceiving the poor as different, these arguments suggest, detracts from altruism.

There can be little doubt that racism has served as an obstacle to redistributive politics in the American case (e.g., Gilens 2000, Luttmer 2001). Alesina and Glaeser (2004) argue persuasively that the US is not an exceptional case in this respect. While US is a more fractionalized society than most other advanced industrial states, ethnic and/or religious fractionalization is consistently associated with less support for redistribution across countries according to Alesina and Glaeser (see also Amat and Wibbels 2009). The crucial variable of interest in this literature is not fractionalization *per se*, but rather the concentration of minorities among the poor.[8] However, the empirical measures of fractionalization developed by Alesina and others fail to capture this point.

Following the existing literature, we expect heterogeneity among the poor to be associated with less support for redistribution. In our view, however, the more interesting question is whether (or how) heterogeneity conditions the relationship between income and support for redistribution. Much of the existing literature seems to posit that ethnic, national and religious identities and cleavages matter more to the preferences of low-income citizens than to the preferences of high-income citizens or, in other words, that "identity politics" diverts low-income citizens from the pursuit of rational self-interest.[9]

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[8] Alesina and Glaeser (2004) agree: in their words, the crucial variable is whether "there are significant numbers of minorities among the poor," in which case "the majority population can be roused against transferring money to people who are different from themselves" (134).

[9] This claim needs to be backed up by a more careful discussion of the existing literature. A couple of references must suffice for the time being. Shayo (2009) argues explicitly that national identity is a more valuable alternative to class identity for members of the lower classes. Similarly, Scheve and Stasavage (2006) hypothesize that the psychic benefits of religiosity are greater for low-income citizens, though they never actually test this hypothesis.

If this argument is correct, we should observe a larger decline in support for redistribution among low-income respondents than among high-income respondents as fractionalization increases.

An alternative is possible. We argue that identity considerations should be integrated into the altruism logic outlined in the previous section. A number of authors have argued that individuals belonging to the same group share affinities and sympathies. As summarized by Habyarimana et al, "individuals may attach positive utility to the welfare of fellow ethnic [national or religious] group members but no utility (or negative utility) to the welfare of non-group members" (2007: 710).[10] If group homogeneity promotes altruism, our expectations for ethnic and religious fragmentation are similar to those explained in the previous section. Since, again, we expect altruism to be trumped by material incentives for the poor, we expect an increase in fragmentation will make altruism more difficult for the rich.

Exploring the theoretical approaches

To explore the theoretical alternatives summarized above, we will consider the effects of income distance at the individual level and of two macro variables: inequality and heterogeneity among the poor. Income distance is meant to capture the effects of material preferences, heterogeneity among the poor the influence of in-group altruism and inequality the influence of political articulation and/or altruism. We follow Kumlin and Svallfors and use of inequality as a proxy of a number of articulating factors. The

[10] There are other reasons, not related to altruism, that could be at work. Information sharing and communication is promoted by group homogeneity. This could be related to the concept of "communities of communication" (Deutch 1966), the sharing of technologies (Habyarimana et al 2007, Spolaore and Wacziarg 2009), etc. For an analysis, see Habyarimana et al 2007.

influence of class-based parties, unions and the public nature of the welfare state is reflected in low levels of macro inequality.

Our first expectation is that income distance will be a significant determinant of redistribution preferences. We also expect, however, that increasing levels of inequality and decreasing levels of heterogeneity among the poor will make the rich more altruistic.

2. Data, variables and methodology

A. Source and coverage of survey data

Our analysis draws on individual-level data from the surveys administered by the European Social Survey (ESS) in 2002, 2004, 2006 and 2008. Relative to similar survey data from the International Social Survey Programme (ISSP), there are two noteworthy drawbacks to using the ESS: ISSP surveys cover a longer time period than ESS surveys and include the US and other non-European advanced capitalist countries of interest. On the other hand, the advantage of the ESS is that the surveys use consistent measures of income. By contrast, income measures reported by the ISSP vary not only between countries within each wave, but also, for many countries, between waves. As a reliable measure of income is essential for this paper's purposes, this feature outweighs the aforementioned disadvantages of the ESS relative to the ISSP.

In contrast to Finseeras (2009), but following Kumlin and Svallfors (2007), we restrict our analysis to West European countries or, in other words, we exclude the former communist countries from our analysis. The main motivation for this restriction is that

we are interested in how contextual variables affect the relationship between income distance and preferences for redistribution. There are good reasons to believe, we think, that several of the contextual variables that interest us take on a different meaning in a post-communist setting.

The analysis encompasses the following 51 country-years: Austria (only for 2002, 2004 and 2006), Belgium, Denmark, Finland, Germany, Greece (2002, 2004), Ireland (2004, 2006), Italy (2002, 2004), Luxembourg (2002, 2004), the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom.[11]

B. Dependent variable

ISSP surveys in the "Role of Government" module include a larger battery of questions tapping into attitudes towards the public provision of social welfare, redistribution and taxation than ESS surveys, but the ESS surveys include one item that seems perfectly suited for our purposes. In this item, respondents are shown a statement declaring that "the government should take measures to reduce differences in income levels," and then they are asked if they strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with this statement.[12] Discarding don't-knows and non-responses (as we also do in our empirical analysis), Table 1 shows the overall distribution of responses in all the countries and years included in our analysis.

[Table 1]

[11] We do not include France because ESS documentation states very clearly that the income measures for France are not comparable to those of the other countries.

[12] The ISSP version of this item elicits responses to the statement that ""it is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes." See Jaeger (2006) an argument about the semantic superiority of the ESS version.

The high level of overall support for redistribution among West Europeans is surely the most striking feature of Table 1. While 67% of the respondents either agree or strongly agree with the statement that the government should take measure to reduce income differences, only about 16% explicitly express opposition to redistribution. Given the apparent consensus in support of redistribution, however, it seems quite appropriate to interpret neutrality ("neither agree not disagree") as another, less overt, expression of opposition. The ambiguity of the a survey item with respect to the status quo also deserves to be noted: quite likely, many who agree with the statement that the government should take measure to reduce income differences think that the government is already taking such measures. In other words, it is not obvious that the survey item in question actually taps into dissatisfaction with the status quo.

[Table 2]

While Table 1 is informative, it does not illustrate the two things our argument is about: the existence of country-year variation in support for redistribution and the difference between rich and poor. Table 2 shows us the general level of support (i.e., the percentage of agrees and strong agrees) for redistribution in each of our country-years, and the level of support for redistribution among those individuals with household incomes 10,000 PPP-adjusted 2005 US dollars below the country-year mean (the poor) and among those individuals with household incomes 30,000 PPP-adjusted 2005 US dollars above the mean (more on this measure of income below).

Table 2 shows a remarkable amount of both cross-national and temporal variation. Support for redistribution is generally high in countries like Spain, Finland, Greece, Ireland and Italy. It is generally low in countries like Denmark, Great Britain and the

Netherlands. The support of among the rich and the poor mirror these general trends, but the differences between poor and rich are also interesting. For example, in Sweden and Norway, where the general support for redistribution is relatively high, the difference between rich and poor is large (around 23 percentage points). In Austria, where the general support for redistribution is again relatively high, the difference between rich and poor is only around 7 percentage points. There are countries with large differences between the rich and poor that have high general levels of support (like Finland) and that have low levels of support (like the Netherlands). The analysis we develop below will help us explain some of these patterns.

C. Our measure of relative income

The key variable of interest in our analysis is the distance between the income of respondents and the mean income in their country (at the time of the survey). We construct our measure of this variable based on respondents' answers to the following survey question: "Using this card, if you add up the income from all sources, which letter describes your household's total net income? If you don't know the exact figure, please give an estimate. Use the part of the card that you know best: weekly, monthly or annual income."[13] Two different cards are shown to respondents, depending on the year of the survey. In the surveys from 2002 to 2006, the card then places the respondent's total household income into 12 categories associated with different weekly, monthly or annual ranges. These are the annual ranges associated to each letter category:

J: Less than €1,800
R: €1,800 to under €3,600

[13] The wording of this question in 2008 is a bit different, but the meaning remains the same. In 2008, "after tax and compulsory deductions" replaces "net."

C: €3,600 to under €6,000
M: €6,000 to under €12,000
F: €12,000 to under €18,000
S: €18,000 to under €24,000
K: €24,000 to under €30,000
P: €30,000 to under €36,000
D: €36,000 to under €60,000
H: €60,000 to under €90,000
U: €90,000 to under €120,000
N: €120,000 or more

The surveys for 2008, on the other hand, offer only 10 categories which represent the deciles in the country income distribution.

This scheme poses several challenges for our purposes. To begin with, the 2002-2006 income bands identified above cover very different income ranges. While category R, for example, contains a range comprising €2,400 (€1,800 to €3,600), the range for category U is €30,000 (€90,000 to €120,000). There is an additional problem. Our argument about the effects of relative income implies the appropriate measure for income is the difference between an individual's income and the country mean income but, if we were to use these categories, this measure would be meaningless. The problem can be illustrated with an example. Some countries are concentrated in the lower categories, while some have a more expansive distribution. There are countries, therefore, where the mean is category D, but there are others where the mean category is F. In the former case, being one category lower than the mean in the first country would mean the difference between an income in the €30,000 to €36,000 range and one in the €36,000 to €60,000 range. In the second case, being one category lower than the mean would mean the difference between an income in the €6,000 to €12,000 range and one in the €12,000 to €18,000 range.

The transformation of categories into deciles in 2008 addresses some of the concerns above, but it still makes it difficult to capture the absolute distance between an individual's household income and the country-year mean (the measure we are after). To address all these issues, we transform the income bands into their common-currency mid points. For the 2002-2006 surveys, this means that after this transformation, category J (Less than €1,800), for example, becomes mid-point €900 and category R (€1,800 to under €3,600) becomes €2,700. For the 2008 surveys we do the same (even though this is slightly more complicated since the categories are now country-specific deciles).

Using midpoints has been recognized for some time as an appropriate way to create scores for income categories and has been used extensively in the American politics literature analyzing GSS (General Social Survey) data.[14] The problem is defining a midpoint for the open-ended top category (which is undefined since this category has no upper limit). In this paper we extrapolate from the next-to-last category's midpoint using the frequencies of both the next-to-last and last (open-ended) categories, using the formula suggested in Hout (2004). [15]

For each individual respondent, we then calculate the distance between her household income (i.e., the mid-point of the income band to which she has assigned herself) and the mean income of country-year survey to which this respondent belongs.

This still leaves us with one remaining problem, namely that the purchasing power of a certain amount of money varies across the countries included in our analysis. Simply put, the meaning of being €10,000 below the mean is different in Switzerland

[14] We thank Lucy Barnes for directing us to this literature.

[15] We calculate midpoints as: $M_{top} = L_{top} \frac{V}{V-1}$ where $V = \frac{\ln(f_{top-1}+f_{top})-\ln(f_{top})}{\ln(L_{top})-\ln(L_{top-1})}$ and L_{top} is the lower limit of the top category, L_{top-1} is the lower limit of the category before the top one, f_{top} is the frequency in the top category, and f_{top-1} is the frequency of the category before the top one.

than in Greece. We address this problem by converting Euro-denominated distances to the mean into PPP-adjusted 2005 US dollars.

D. Macro variables

As indicated above, our analysis includes two "macro variables," i.e., variables that are measured at the level of country-years rather than individuals. We are interested in the direct effects of these variables, but also in the way that the condition the relationship between income distance and support for redistribution.

First, we include Gini coefficients for individual income as a measure of overall income inequality.[16] Second, we calculate heterogeneity among the poor as the percentage of self-defined ethnic minority members below the income mean.[17] To measure ethnic heterogeneity we could also use the measure in Alesina *et al* (2003). But there are two complications: these figures are time invariant (either from late 1990s or early 2000s) and they refer to the probability that two individuals drawn at random from the general population (not the poor) will belong to different ethnic groups. We therefore stick to the variable created from the surveys.

[Figures 1 and 2]

We will develop more systematic tests of our hypotheses in the analysis below, but we can take an initial look at the relationships among our macro variables and support for redistribution in a graphic way. Figure 1 plots levels of general support for redistribution (the percentage of agrees and strong agrees in Table 2) against macro inequality values. The figure shows that higher levels of inequality are correlated with

[16] This variable was obtained from Eurostat. Some years are missing and the values were linearly interpolated. We interpolate 10 out of our 51 observations.
[17] The questions asked is "Do you belong to a minority ethnic group in [country]?"

stronger support for redistribution. While in low inequality countries like Sweden, Norway and the Netherlands support hovers around 60% of all respondents, in high inequality countries like Portugal, Greece, Italy and Spain support ranges from 80% to 90%. It is, however, Figure 2 that contains information more relevant to our claims. This figure plots the difference in support for redistribution between rich and poor against the levels of macro inequality. The relationship is the opposite of that in Figure 1. Higher levels of inequality are associated with smaller differences between the rich and the poor in their support for redistribution.

[Figures 3 and 4]

We repeat the exercise in Figures 3 and 4, but focus now on the effects of ethnic diversity within the poor. As most of the literature of ethnic fragmentation would predict, Figure 3 reveals that higher levels of ethnic diversity within the poor are associated with less general support for redistribution. While in countries where ethnic minorities are a small proportion of the poor (like Italy and Finland, where it is below 2%), support is very high, in countries where ethnic minorities are a larger proportion of the poor (like Great Britain, Luxembourg and the Netherlands, where it is higher than 8%) support is much lower. Once again, it is the second figure that contains information interesting to our claims. Figure 4 shows that higher proportions of minorities among the poor are associated with greater differences between the rich and the poor in their support for redistribution. As was the case with inequality, those countries with highest general levels of support for redistribution have the smallest difference between rich and poor and those countries with lowest general levels of support for redistribution have the largest difference between rich and poor.

It is also important to remark that these two macro variables are picking up very different things. Their effects are similar, but it is simply not the case that those countries with low inequality have low levels of ethnic diversity among the poor and those countries with high inequality have high levels of ethnic diversity. The correlation between our two macro variables is very low (only 0.0571). And we can see from Figures 1-4 that there are countries where inequality in high and ethnic diversity is low (Portugal, Italy), there are countries where inequality is low and ethnic diversity is low (Finland, Sweden), there are countries where inequality is high and ethnic diversity is high (Great Britain), and there are countries where inequality is low and ethnic diversity is high (the Netherlands).

E. Individual-level control variables

In what follows, we present the results of estimating three different models. The first model includes only relative income, the two macro variables identified above, and the micro-macro interactions. For each subsequent model, we add individual-level control variables and, since we are interested in how the macro variables affect income differences, we always interact all individual level variables with the macro variables.

Model 2 is our main model and it includes the most common individual-level control variables. This model includes age (measured in years), gender (a dummy for female), and education (a dummy for more than a secondary education). While we do not have any strong prior expectations regarding the effects of age, the existing literature strongly suggests that women are more likely to support redistribution than men.[18] As

[18] Previous analyses of individual preferences using more or less the same battery of controls include Corneo and Grüner 2002, Blekesaune, and Quadagno 2003 Cusack *et al* 2006, Iversen and Soskice 2001, and Kitschelt and Rehm 2006.

suggested by Alesina and Giuliano (2009), higher levels of education are likely to be associated with greater prospects for upward mobility and, for this reason, we expect education to be negatively associated with support for redistribution even when we control for relative income.

Model 2 also includes a dummy for being a union member. We expect this variable to be positively associated with support for redistribution. From earlier research (e.g., Kwon and Pontusson 2006), we know that, controlling for income, survey respondents who identify themselves as union members are more likely to support social spending and redistributive policies than survey respondents who identify themselves as not being union members. Finally, Model 2 includes a measure of church attendance (a dummy equal to 1 if respondent attends religious services at least once a week), which we expect to be negatively associated with support for redistribution (following Scheve and Stasavage 2006).

Model 3 is designed to test whether our results regarding the effects of relative income when we control for the effects of social class.[19] To this end, we rely on the six-category version of the Erikson-Goldthorpe social class scheme (Erikson and Goldthorpe 1992). Indentified by dummies, the six classes are: service class I (higher level controllers and administrators), service class II (lower-level controllers and administrators), routine non-manual employees, skilled workers, unskilled workers, and the self-employed. In addition, Model 3 includes dummy variables for being a student and being retired, which Jaeger (2006) refers to as "transfer classes."

[19] On the importance of social class as a determinant of preferences for redistribution, see Svallfors 1997, Linos and West 2003, and Edlund 2007 as well as Kumlin and Svallfors 2007.

F. Methodology

Again, we use a binary dependent variable to facilitate the interpretation of our results. This variable takes the value of 1 if the respondent indicates that she either "agrees" or "strongly agrees" that "the government should take measures to reduce differences in income levels" (and otherwise takes the value of zero). The binary nature of the dependent variable means that ordinary least squares (OLS) estimation is not appropriate. Instead, we estimate a logistic model.

Thinking in terms of logits is not easy, so it is common to transform the coefficient into odds ratios. Once the logit has been transformed into an odds ratio, it can be interpreted as a percent increase in the odds. The odds ratio is the probability of the event represented in the outcome variable divided by the probability of the non-event. Since odd ratios have a much more intuitive interpretation than coefficients, we report them instead of coefficients in the analysis below. We also report significance tests for the reported odds ratios.

The data used in the analysis has a multi-level structure (one level, the individual, is nested within the other, the country-year). Developing an analysis that ignores the multi-level nature of the data could create a number of statistical problems (clustering, non-constant variance, underestimation of standard errors, etc). Multilevel (or hierarchical) models allow us to explicitly estimate the differences in support for redistribution that emerge from the contextual variables we have selected. They correct for dependence of observations within country-years and make adjustments to parameter estimates for the clustered nature of the data.

To test the claims explained in previous section, therefore, we run some logit random intercept multilevel maximum likelihood models. In these models, an individual-specific random intercept is included in the general equation as a function of macro inequality and the proportion of ethnic minorities within the poor.[20]

3. Empirical results

Table 3 presents the main results of our multilevel logistical analysis. The numbers in bold are odds ratios (as explained above), while the numbers in italics are standard errors. Statistical significance is denoted the usual way (* if the estimates are statistically significant at the 95% level of confidence, ** if significant at the 99% level).

[Table 3]

The most important result in Table 3 concerns income distance. We will spend most of the rest of this section analyzing in detail what the results for income distance mean to our theoretical claims. At this stage, however, we can mention that the results in Table 3 make clear the importance of relative income to redistribution preferences. The distance between an individual's household income and the country-year mean (measured in 2005 PPP-corrected $1,000) and its interaction with macro inequality and ethnic minorities among the poor are all highly significant. The two macro variables also have significant direct effects (although ethnic diversity among the poor is only significant in model 1). It is difficult to interpret the meaning of the odd ratios when there are interactions in the model, but the tables suggest that the effect on income distance on

[20] For more details about maximum likelihood estimation of random intercept multilevel models, see Rabe-Hesketh, Skrondal and Pickles (2005).

redistribution is negative, the effect of inequality is positive and the effect of increasing proportions of minority members within the poor is negative. These findings are remarkably consistent, no matter what model we use (the odds ratio gets smaller as we throw in more control variables, but the main result holds).

Although not the focus of our analysis, Table 3 also shows some of our individual-level variables to be significant determinants of redistribution preferences. Age is positively associated to support for redistribution, women are more likely to support redistribution than men, and higher educational attainment is associated with a decrease in the likelihood to support redistribution (although this direct effect becomes insignificant once we control for class). Being a union member increases the likelihood of agreeing that the government should reduce income differences, but attending religious services has no effect over redistribution preferences. We also find one class category to be significant (being in services class 1[21] makes a respondent less likely to support redistribution).

The odds ratios reported in our main results are meaningful but a complementary explanation of the variables' effects is needed to be able to address the claims we have presented in this paper. Using the estimated coefficients, we can calculate the probability that an individual with a particular set of values in all the independent variables has preferences in favour of redistribution. By looking at the probabilities associated with some combinations, we get a more intuitive impression of the effect of the explanatory variables. We will use the estimates from our second model.

[21] Service class 1 includes higher-grade professionals, administrators, and officials; managers in large industrial establishments; and large proprietors. See Erikson and Goldthorpe 1992.

We will first focus on the effects of our main variable of interest. The only factor that changes in our comparison of predicted probabilities, therefore, is income distance to the mean. We assign the modes, medians, or means to all other variables in our model. Our typical respondent is a female, 47 years of age, with up to a secondary education; attends religious services less than once a week; and is not a union member.[22]

[Figure 5]

Figure 5 presents the predicted probabilities (and 95% confidence intervals) for income distances ranging from $50,000 (in 2005 PPP-corrected dollars) below the mean (close to the minimum in our sample) to $200,000 above the mean (a very high income in most of our countries, but not close to the sample maximum). The table makes clear that support for redistribution is at its highest when an individual is poor. The likelihood to agree or strongly agree that governments should reduce income differences for those at the lowest level of income is more than 80%. As income goes up, support for redistribution is dramatically reduced. For those individuals with incomes at the mean, the likelihood to support redistribution is 74%, for those $50,000 above the mean it is 64%, and for those $100,000 it is 52%. The material self-interest approach contained in our transformation of the MRM framework receives a remarkable amount of support from the results in Figure 5. Our first message, therefore, is that an expanded version of the MRM logic explains a great deal when we want to understand the determinants of individual redistribution preferences.

We, however, went on to argue that (1) the effects of income distance would be stronger on the poor because (2) the effects of altruism, political articulation and identity

[22] The macro variables are set at the mean of the sample and the year selected. See Appendix 1 for summary statistics of all variables in the analyses.

would be more relevant to the rich. To the address these claims we turn to the effects of macro inequality.

[Figure 6]

Figure 6 presents predicted probabilities conditional on income levels in the highest and lowest inequality country-years in our sample. The value selected to represent high inequality is 38. This is the Gini coefficient[23] in Portugal in 2004 and 2006. The value selected to represent low inequality is 23. This is the Gini coefficient in Sweden in 2002 and 2004.

The results in Figure 6 show that (as preliminarily suggested by Figure 1) macro income inequality increases the support for redistribution. Both the poor and the affluent have a much higher likelihood of agreeing or strongly agreeing that the government should reduce income differentials when they are in a high macro-inequality country. The differences between low and high inequality outcomes are statistically significant whether we look at the poor (below the mean of 0) or the affluent (above 0). The more interesting finding in Figure 6, however, is that the difference between high and low inequality country-years gets much larger as income grows. The affluent and rich are much less likely to support redistribution when inequality is low. To illustrate, while the likelihood to support redistribution for those with incomes $100,000 above the mean is 82% in high inequality countries, it is only 33% in low inequality countries.

The results in Figure 6 introduce a degree of doubt into the political articulation approach. Kumlin and Svallfors (2007) social constructivist interpretation of power resources would suggest that parties, unions and the public nature of the welfare state

[23] Eurostat provides Gini coefficients multiplied by 100, so they range from 0 to 100 (rather than from 0 to 1).

would make income differences more important. This would be the result of the political articulation of these differences which would then make the poor more aware of what they have to gain from redistribution (and the rich more aware of what they have to lose from redistribution). Countries with low inequality are characterized by powerful unions, class-based parties and large welfare states and Figure 6 shows that the differences between rich and poor are larger than in countries with high inequality. But political articulation does not seem to explain this difference since the poor are less likely to support redistribution in low inequality countries. If the political articulation arguments were correct, we would expect the poor in low inequality countries to have a higher likelihood of supporting redistribution than the poor in high inequality countries (just like the rich in low inequality countries have lower redistribution preferences than those in high inequality countries).

What explains the larger effects of income in low macro-inequality? In our discussion of altruistic approaches we argued that lower stakes for the rich (there are material costs to increasing redistribution, but for the rich they do not involve dramatic consequence comparable to those for the poor) mean that altruistic concerns would be more important. Altruism should be most obvious when we look at the preferences of the affluent, since they have no material self-interested reason to support redistribution (they pay for it). The “moral” gains from supporting redistribution are most obvious to the rich in countries characterized by high levels of inequality.

[Figure 7]

Figure 7, finally, presents the relationship between income distance and redistribution preferences at two levels of ethnic fragmentation among the poor. As we

mentioned above, our main results showed that higher levels of religious fragmentation decrease the general support for redistribution. In this figure, we select 0.24 to represent low ethnic fragmentation. This is the percentage of poor people who define themselves as being members of an ethnic minority in Italy in 2002. The value selected to represent high ethnic fragmentation is 9.85. This is the percentage of poor people who define themselves as being members of an ethnic minority in the Netherlands in 2006.

The results in Figure 7 show that (as preliminarily suggested by Figure 3) ethnic fragmentation among the poor decreases the support for redistribution. Both most of the poor and all the affluent have a lower likelihood of agreeing or strongly agreeing that the government should reduce income differentials when they are in a country where a high percentage of the poor consider themselves members of an ethnic minority. The differences between low and high ethnic fragmentation outcomes are statistically significant when we look at the affluent (above the mean of 0) and the 95% confidence bounds only overlap for the very poor. Once again, however, the more interesting finding in Figure 7 is that the difference between high and low ethnic fragmentation country-years gets much larger as income grows. The affluent and rich are much less likely to support redistribution when ethnic minorities are a larger proportion of the poor. To illustrate, while the likelihood to support redistribution for those with incomes $100,000 above the mean is 67% in countries low ethnic fragmentation among the poor, it is only 28% in high ethnic fragmentation countries.

Our findings are interesting in two respects. First, they confirm the conventional wisdom about the effects of fragmentation. Second, and more important, they question the logic behind this conventional wisdom. As we mentioned above, these arguments rely

on the assumption that fragmentation diverts low-income individuals from pursuing their rational self-interest. The poor know that they gain from redistribution, but they may not support it if they do not share an identity with other poor individuals. We have argued for an alternative explanation integrating identity considerations into a general altruism logic. Arguing that group homogeneity would promote altruism, our expectation was that an increase in ethnic fragmentation among the poor would make altruism more difficult for the rich. This seems to be supported by the results Figure 7.

4. Conclusions

[To be written..]

TABLE 1

THE DISTRIBUTION OF RESPONSES IN THE SAMPLE AS A WHOLE
("THE GOVERNMENT SHOULD TAKE MEASURES TO REDUCE DIFFERENCES IN INCOME LEVELS")

STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
23.49	**44.39**	**15.55**	**13.96**	**2.61**

Notes: Data from European Social Survey, Rounds 1, 2, 3 and 4.

Table 2: Support for Redistribution (General, among Poor and among Rich)

Country	Year	General Agree	Rich Agree	Poor Agree
AT	2002	66.9	65.2	71.8
AT	2004	67.8	67.0	74.6
AT	2006	70.3	69.7	77.6
BE	2002	70.4	64.3	80.2
BE	2004	65.7	62.9	72.1
BE	2006	68.2	58.2	77.6
BE	2008	69.8	60.2	74.8
DE	2002	58.2	51.2	66.4
DE	2004	59.2	54.2	68.5
DE	2006	64.2	58.5	77.6
DE	2008	68.3	59.2	78.4
DK	2002	43.4	38.3	48.1
DK	2004	38.0	28.2	44.9
DK	2006	39.5	34.7	48.6
DK	2008	41.6	35.1	47.2
ES	2002	79.8	76.1	85.5
ES	2004	79.6	75.4	86.4
ES	2006	83.9	82.5	89.1
ES	2008	79.7	77.0	86.8
FI	2002	76.7	61.4	82.5
FI	2004	66.5	48.4	73.3
FI	2006	73.5	57.9	77.9
FI	2008	74.5	56.0	81.1
GB	2002	62.6	51.1	70.5
GB	2004	60.1	52.8	68.4
GB	2006	56.9	51.7	65.8
GB	2008	58.8	43.8	68.8
GR	2002	90.2	90.6	93.0
GR	2004	93.2	91.0	93.7
IE	2004	72.4	66.3	78.2
IE	2006	70.0	63.9	77.3
IT	2002	79.6	77.9	85.3
IT	2004	80.7	77.7	84.4
LU	2002	65.3	59.4	72.2
LU	2004	62.9	56.6	71.2
NL	2002	59.1	50.8	67.8
NL	2004	57.5	51.5	70.9
NL	2006	59.3	46.9	69.5
NL	2008	56.0	43.1	68.5
NO	2002	70.3	57.5	74.9
NO	2004	64.2	46.0	67.9
NO	2006	60.8	50.6	68.3
NO	2008	59.8	45.7	67.2
PT	2002	89.2	89.3	90.5
PT	2004	86.0	84.1	87.7
PT	2006	85.5	85.8	85.8
PT	2008	90.0	89.6	95.3
SE	2002	68.7	48.0	77.9
SE	2004	66.6	49.8	75.5
SE	2006	67.6	53.2	76.7
SE	2008	64.0	47.6	71.5

Table 3:

	(1)		(2)		(3)	
	Odds Ratios	**S.E.**	**Odds Ratios**	**S.E.**	**Odds Ratios**	**S.E.**
Individual Level Variables:						
Income Distance	**0.978****	*0.002*	**0.982****	*0.002*	**0.986****	*0.002*
Age			**1.030****	*0.004*	**1.037****	*0.006*
Gender			**1.970****	*0.248*	**1.620****	*0.221*
Education			**0.514****	*0.076*	**0.767**	*0.127*
Attends Religious Services			**1.272**	*0.279*	**1.200**	*0.264*
Union Member			**2.604****	*0.423*	**2.478****	*0.416*
Class:						
Service 1					**0.286****	*0.099*
Service 2					**0.662**	*0.209*
Non-manual					**1.135**	*0.338*
Self-employed					**0.048**	*0.090*
Skilled Worker					**1.143**	*0.376*
Worker					**0.936**	*0.288*
Retired					**0.886**	*0.198*
Student					**1.521**	*0.423*
Macro-Variables:						
Inequality	**1.107****	*0.018*	**1.164****	*0.021*	**1.163****	*0.024*
Ethnic Fragmentation	**0.904****	*0.030*	**0.950**	*0.035*	**0.951**	*0.040*
Micro-Macro Interactions:						
Income Distance*Ineq	**1.000****	*0.000*	**1.000****	*0.000*	**1.000****	*0.000*
Age*Inequality			**0.999****	*0.000*	**0.999****	*0.000*
Gender*Inequality			**0.990***	*0.004*	**0.996**	*0.005*
Education*Inequality			**1.006**	*0.006*	**1.000**	*0.006*
Religious*Inequality			**0.990**	*0.007*	**0.993**	*0.007*
Union*Inequality			**0.979****	*0.006*	**0.979****	*0.006*
Class:						
Service 1*Inequality					**1.027***	*0.012*
Service 2*Inequality					**1.012**	*0.011*
Non-manual*Inequality					**0.999**	*0.010*
Self-employed*Inequality					**1.133**	*0.082*
Skilled*Inequality					**1.004**	*0.011*
Worker*Inequality					**1.009**	*0.010*
Retired*Inequality					**1.003**	*0.008*
Student*Inequality					**0.980***	*0.010*
Income Distance*Ethnic	**0.999****	*0.000*	**0.999****	*0.000*	**0.999****	*0.000*
Age*Ethnic			**0.999***	*0.000*	**0.999***	*0.000*
Gender*Ethnic			**0.981***	*0.008*	**0.986**	*0.009*
Education*Ethnic			**1.026****	*0.010*	**1.019**	*0.011*
Religious*Ethnic			**1.006**	*0.013*	**1.004**	*0.013*
Union Member*Ethnic			**0.997**	*0.010*	**1.002**	*0.010*
Class:						
Service 1*Ethnic					**1.034**	*0.023*
Service 2*Ethnic					**0.978**	*0.019*
Non-manual*Ethnic					**0.995**	*0.019*
Self-employed*Ethnic					**0.884**	*0.074*
Skilled Worker*Ethnic					**0.979**	*0.021*
Worker*Ethnic					**1.017**	*0.020*
Retired*Ethnic					**1.012**	*0.015*
Student*Ethnic					**1.018**	*0.018*
Random Effects:						
Variance	0.228**	*0.046*	0.237**	*0.048*	0.236**	*0.048*
Observations	78,259		77,670		77,670	
Country-years	51		51		51	

Logit results. Numbers in bold are odds ratios, numbers in italics are standard errors.
* if statistically significant at 95% level of confidence, ** at 99% level (two-tailed tests).
See text for details.

Figure 1: Macro Inequality and General Support for Redistribution

Figure 2: Macro Inequality and Difference in Support for Redistribution between Rich and Poor

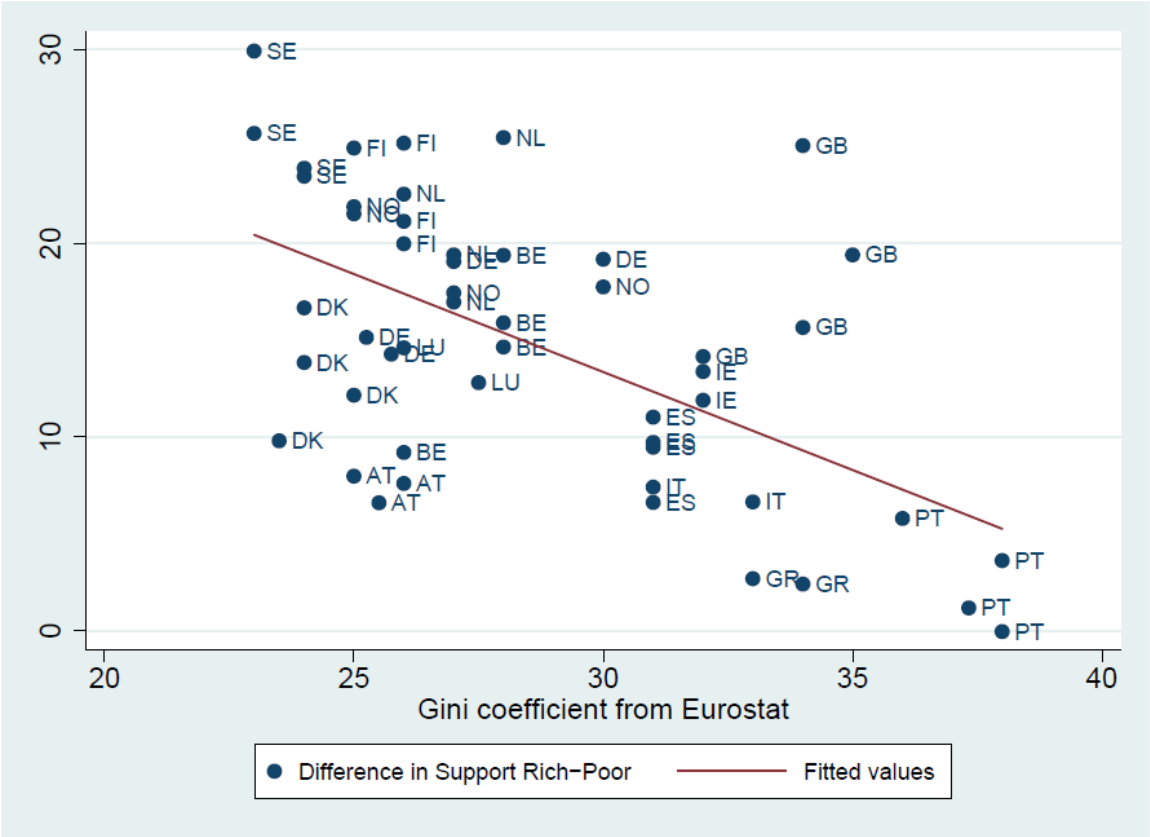


Figure 3: Ethnic Minority within Poor and General Support for Redistribution

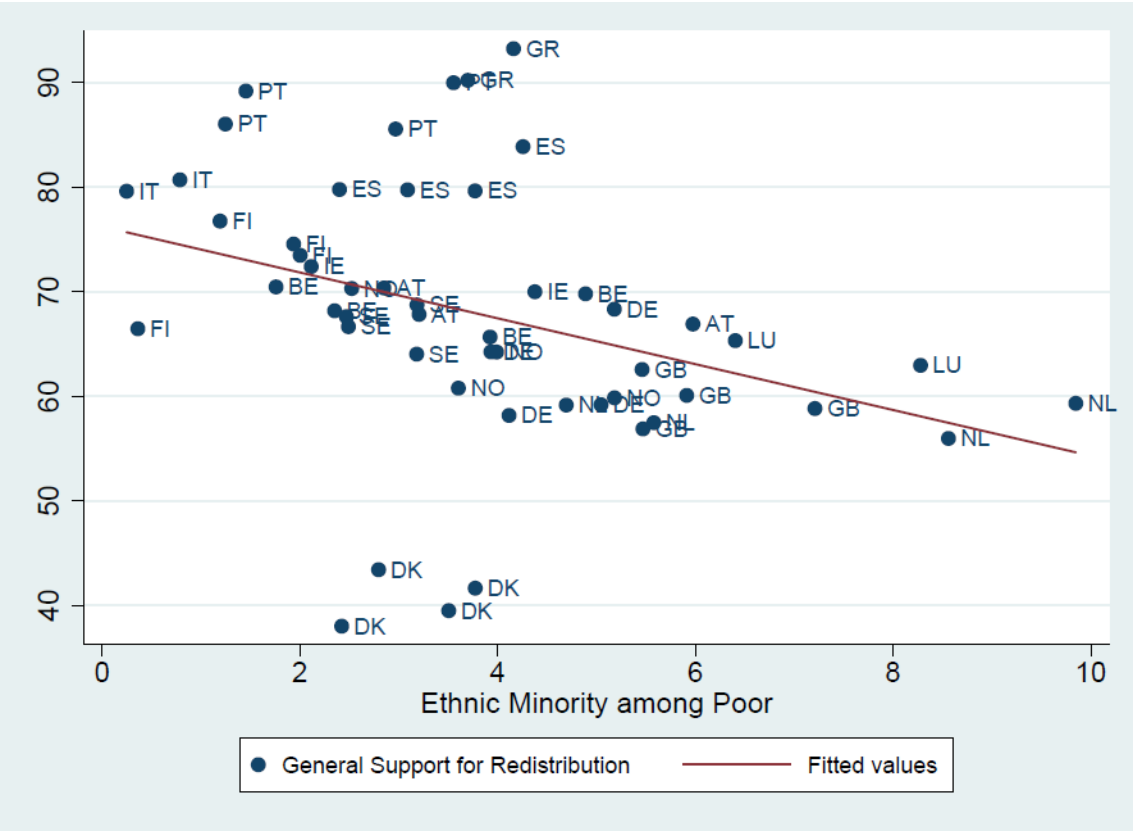
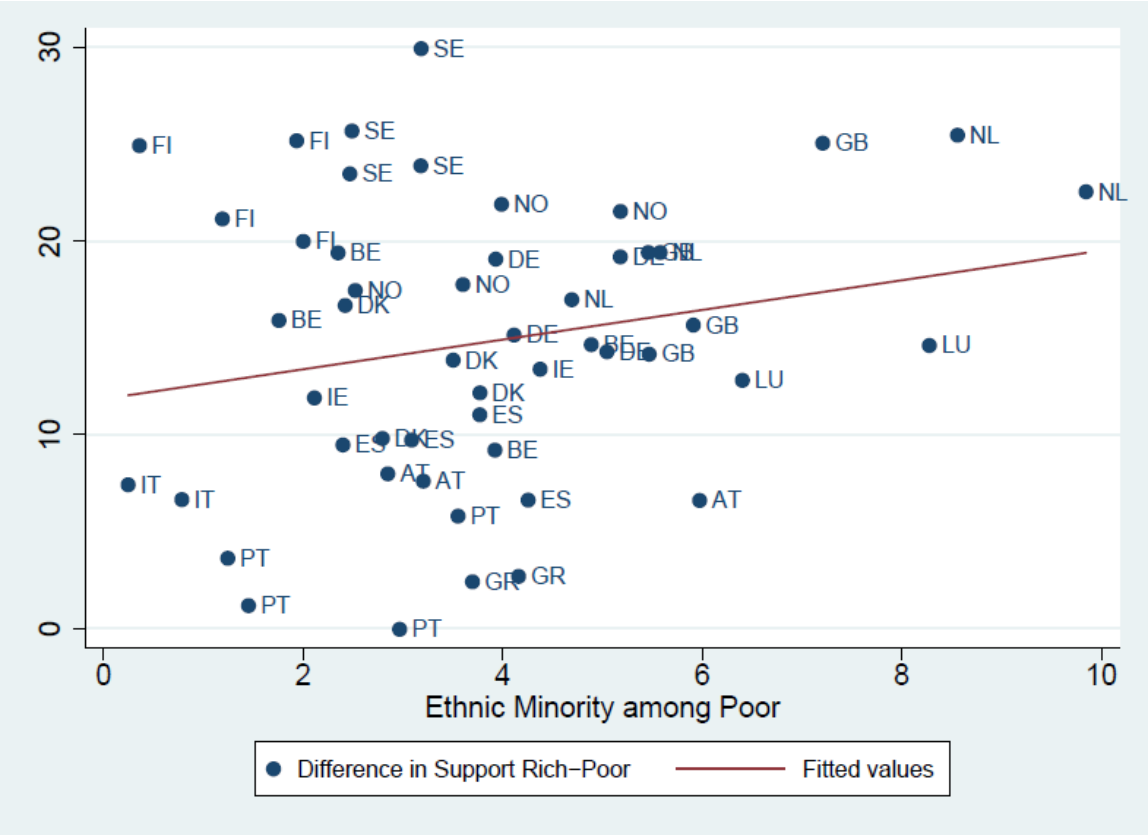


Figure 4: Ethnic Minority within Poor and and Difference in Support for Redistribution between Rich and Poor



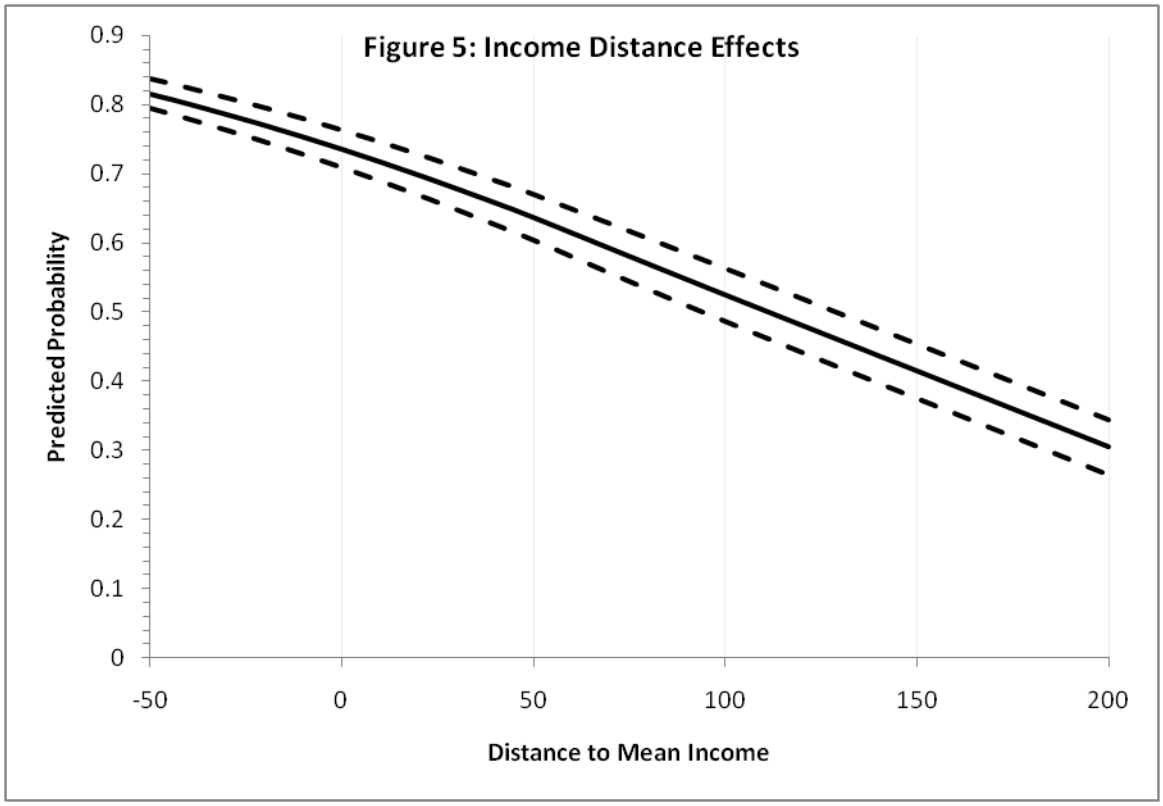


Figure 5: Income Distance Effects
Predicted Probability
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-50
0
50
100
150
200
Distance to Mean Income

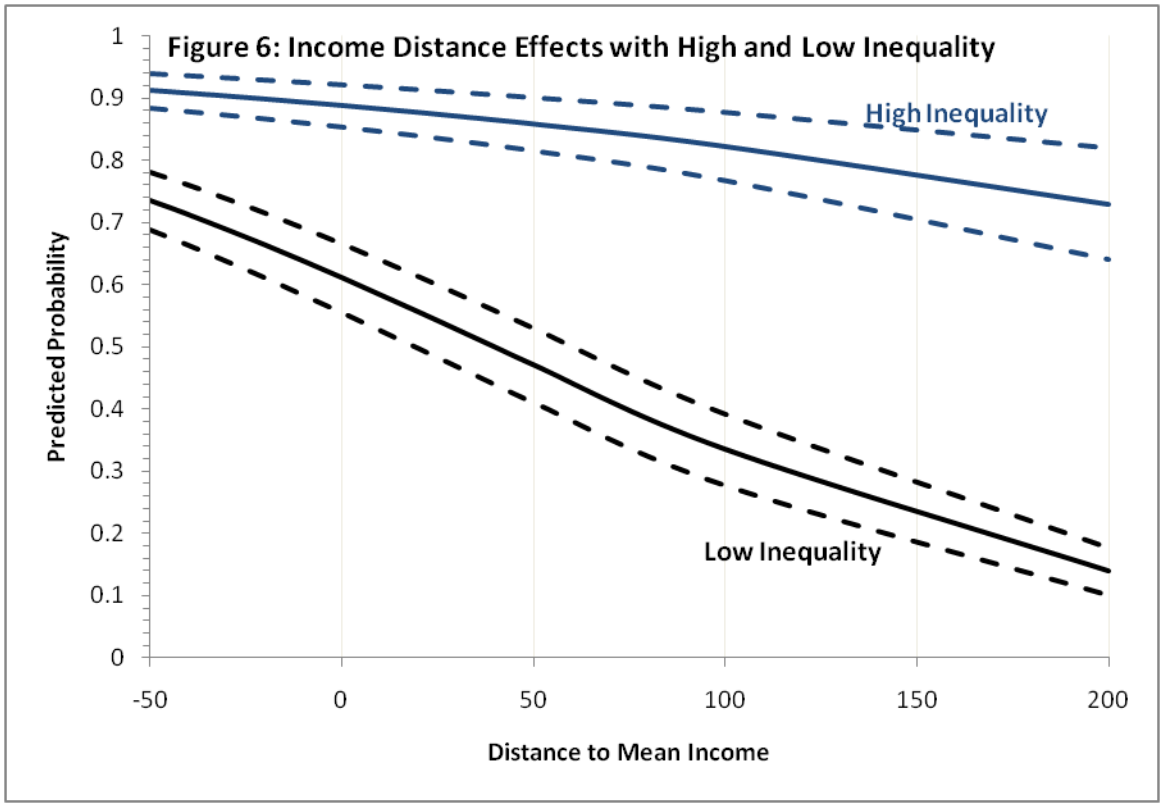


Figure 6: Income Distance Effects with High and Low Inequality
High Inequality
Low Inequality
Predicted Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-50
0
50
100
150
200
Distance to Mean Income

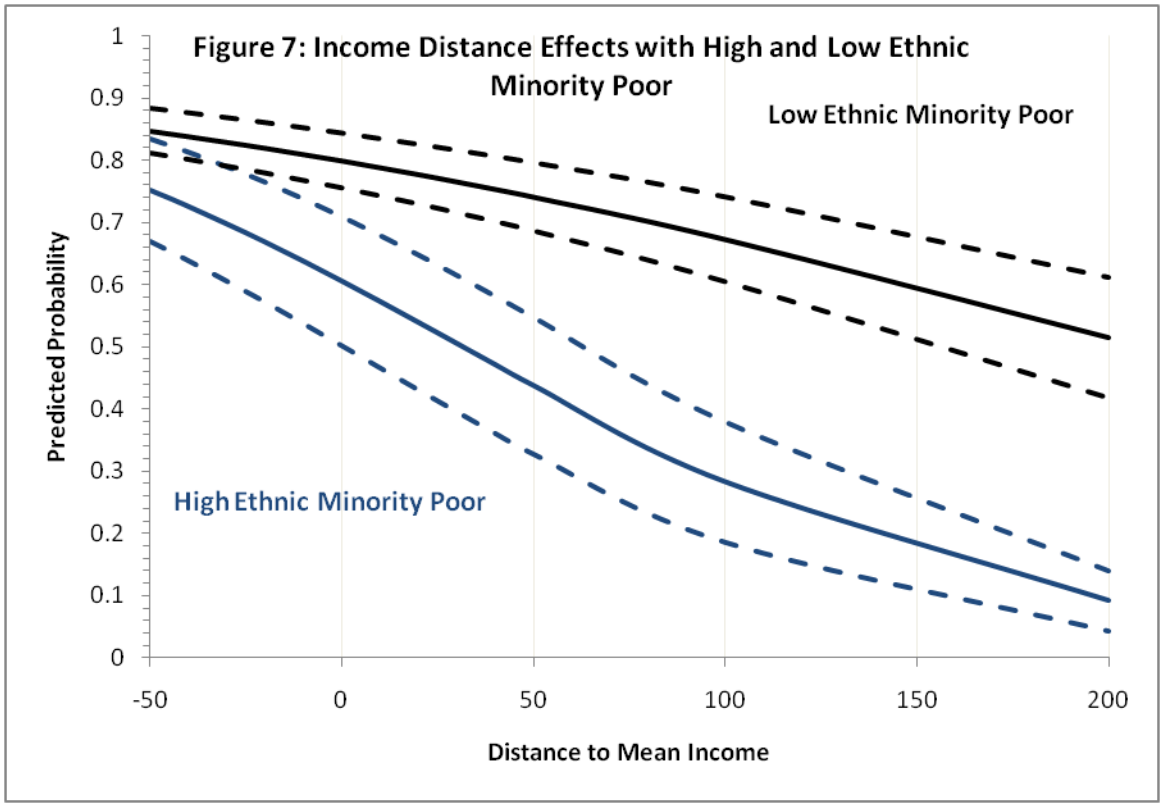


Figure 7: Income Distance Effects with High and Low Ethnic Minority Poor
Low Ethnic Minority Poor
High Ethnic Minority Poor
Predicted Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-50
0
50
100
150
200
Distance to Mean Income

Appendix 1: Descriptive Statistics

	Mean	Standard Deviation	Min	Max
Support for Redistribution	0.68	0.47	0.00	1.00
Income Distance	0.17	27.32	-51.46	389.63
Age	47.77	17.67	14.00	123.00
Gender	0.51	0.50	0.00	1.00
Education	0.34	0.47	0.00	1.00
Church attendance	0.13	0.34	0.00	1.00
Union Member	0.31	0.46	0.00	1.00
Class:				
Service 1	0.11	0.31	0.00	1.00
Service 2	0.22	0.41	0.00	1.00
Non-manual	0.26	0.44	0.00	1.00
Self-employed	0.00	0.04	0.00	1.00
Skilled Worker	0.13	0.33	0.00	1.00
Worker	0.21	0.41	0.00	1.00
Retired	0.23	0.42	0.00	1.00
Student	0.08	0.27	0.00	1.00
Macro-Variables:				
Inequality	28.32	3.97	23.00	38.00
Ethnic Fragmentation	3.86	1.95	0.25	9.85

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