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Income Growth and Inequality as Joint Determinants of Preferences of Redistribution in Europe

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ABSTRACT:

This paper explores how income growth affects preferences for redistribution and how income growth conditions citizens' responses to rising inequality. We hypothesize that robust income growth reduces demand for redistribution among high-income as well as low-income citizens and reduces their propensity to respond to rising inequality by demanding more redistribution. Drawing on the European Social Survey, our main empirical analysis covers 17 European countries from over the period 2002-18 and yields results that are consistent with our core hypotheses. In addition, we explore causal mechanisms by analyzing data from the Inequality and Politics Survey, an original cross-national survey carried out in 2019. The latter analysis yields suggestive evidence that income growth dampens support for redistribution by reducing expectations of downward income mobility in the top three income quartiles. Furthermore, we find that income growth tends boost belief in hard work as an important determinant of income differences among respondents in the lower half of the income distribution and that rising inequality depresses such beliefs among all respondents.

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This paper explores how income growth affects preferences for redistribution and how income growth conditions citizens' responses to rising inequality. It is commonplace these days to frame studies of the politics of inequality and redistribution in terms of the following puzzle: Why is it that democratically elected governments have done so little to compensate low- and middle-income citizens for rising income inequality over the last two or three decades? One prominent strand of scholarship invokes income bias in political representation in answering this question, demonstrating that elected representatives are particularly responsive to the preferences of affluent citizens and suggesting that this bias has increased with income inequality (e.g., Gilens 2012, Bartels 2016 and Mathisen *et al* 2021).[1] Starting with Kenworthy and McCall (2008), other scholars instead highlight the stability of public support for redistribution in OECD countries since the 1980s. In this latter vein, Gimpelson and Treisman (2018) argue that people commonly misperceive their own position in the income distribution and also tend to underestimate the extent of inequality (or the extent to which it has increased). Another strand of research that builds on the observation that public support for redistribution has not increased in response to rising inequality emphasizes the need to take fairness considerations and perceptions of the poor (and the rich) into account (e.g., Alesina and Guiliano 2011, Cavaillé and Trump 2014, Scheve and Stasavage 2016, Trump 2018, Cavaillé 2021). Even if citizens accurately perceive rising inequality, they may consider it to be fair from a normative point of view ("just deserts") or they may believe that increasing rewards for hard work and creativity generates economic growth and thus, in the long run, benefits everybody.[2]

[1] See Elkjaer and Klitgaard (2022) for a comprehensive review (and critique) of studies that advance arguments in this vein.

[2] Yet a third solution to the aforementioned puzzle focuses on the disconnect between preferences for redistribution and vote choice: citizens may perceive rising inequality and demand compensatory redistribution, but other political issues may be equally or more salient to them and the platforms offered by political parties may constrain their ability to express their preferences for redistribution at the ballot box (see Rosset and Kurella 2021, Lascombes 2022).

Setting aside the question of how parties and governments respond to the citizens' policy preferences, our paper speaks to the literature on preferences for redistribution. While mindful of the insights of scholars who emphasize subjective perceptions and fairness norms, we argue that "objective conditions" matter to redistributive policy preferences and that they do so, in part, through their effects on fairness perceptions (as distinct from fairness norms). Inspired by several recent studies (Mérola and Helgason 2016, Burgoon *et al* 2019 and Weisstanner 2022), our theoretical framework posits that income growth conditions responses to changes in income inequality.

It must be noted at the very outset that the conventional framing of the "puzzle of rising inequality" is quite misleading. Measured by the Gini coefficient for disposable household income, inequality did indeed increase in most (but not all) rich democracies in the 10-15 years prior to the global financial crisis of 2007-08. However, disposable income inequality has risen less consistently and less sharply since 2008. Indeed, there are many rich democracies in which disposable income inequality actually fell during the crisis years of 2008-10 and/or in the 2010s. The question before us is not simply how preferences for redistribution respond to rising inequality, but also (conversely) how they respond to declining inequality.

We hypothesize that income growth mitigates the sense of relative deprivation among low-income earners and also boosts expectations of upward mobility or, in other words, their belief that they may become net contributors to redistribution in the future. In the upper half of the income distribution, income growth reduces worries about negative externalities of inequality as well as worries about downward mobility. In addition, we hypothesize that income growth boosts positive assessments of the macroeconomy and that positive assessments of the macroeconomy in turn make high-income earners more inclined to believe that low-income earners ought to be able to manage on their own. For different reasons, then, we expect robust income growth to reduce the propensity of high-income citizens as well

as low-income citizens to demand more redistribution when inequality increases and to reinforce their propensity to demand less redistribution when inequality decreases.

Drawing on the European Social Survey (ESS), our empirical analysis of preferences for redistribution covers 17 European countries from over the period 2002-18. Sorting survey respondents into income quartiles, based on self-declared disposable household income, we show there is a good deal of variation over time, as well as cross-national variation, in public support for redistribution. Against this background, we proceed to estimate a linear probability model that regresses individual support for redistribution on group-specific average annual income growth and changes in disposable income inequality (Gini coefficients) over five years preceding each ESS observation of support for redistribution, while controlling for average group support for redistribution in the previous wave.[3] In brief, our results indicate that income growth is associated with falling demand for redistribution regardless of what has happened to income inequality and that income growth conditions responses to changes in inequality in a manner consistent with our core hypotheses.

We also analyze data from the Inequality and Politics Survey (IAP), an original cross-national survey carried out in 2019, to explore some of the causal mechanisms posited in our theoretical framework, again sorting respondents into income quartiles. With limited variation on the independent variables of theoretical interest, this analysis yields suggestive evidence that income growth dampens support for redistribution by reducing expectations of downward mobility while rising inequality boosts support for redistribution by increasing expectations of downward mobility in the top three income quartiles. Furthermore, we find that income growth tends to boost belief in hard work as an important

[3] Including lags for support for redistribution in the previous ESS survey, the first observations of the dependent variable in the regression models presented below are from 2004, but the measures of inequality and income growth go back to 1999.

determinant of income differences among respondents in the lower half of the income distribution and that rising inequality depresses such beliefs among all respondents.

The rest of the paper is organized as follows. We begin by reviewing literature on preferences for redistribution and presenting our core hypotheses. We then provide a descriptive overview of income growth and changes in income inequality from 1999 to 2018. Against this background, we present the results of our ESS- and IAP-based analyses of preferences for redistribution and conclude by emphasizing that inequality matters for preferences through its effects on the distribution of income growth as well as its direct effects.

Theoretical framework

The much-debated theoretical model of redistribution proposed by Meltzer and Richard (1981)—often referred to, misleadingly, as "the canonical Meltzer-Richard model"—provides a convenient reference point for the elaboration of our theoretical framework. Assuming that citizens are fully informed and that their demand for redistribution is strictly motivated by (short-term) income maximization, the Meltzer-Richard model posits a sharp distinction between net beneficiaries from redistribution and net contributors to redistribution. Setting the "deadweight costs of redistribution" aside, individuals below the mean income stand to gain, in absolute terms, from increases of redistribution up to 100% while individuals above the mean income stand to gain from any and all reductions of redistribution. The Meltzer-Richard model predicts that rising inequality increases societal demand for redistribution, but this is not because people care about their relative income or, in other words, their position in the income distribution. The effect of inequality is simply due to the fact that more people

stand to gain from redistribution, in absolute terms, when inequality increases or, more precisely, when the distance between the mean income and the median income increases.[4]

In contrast to the Meltzer-Richard model, our theoretical framework posits a continuous, linear association between relative income and demand for redistribution. In a static perspective, we expect support for redistribution to be highest among people near the bottom of the income distribution and lowest among people near the top. This formulation recognizes that there are motives other than income maximization that lead people to support redistribution. Even if we assume that self-interest is the only motive that matters, however, it is reasonable to suppose that individuals in the first income quartile stand to gain more from redistribution through taxes and transfers than individuals in the second quartile and that individuals in the third quartiles stand to lose less from redistribution than individuals in the top quartile. The idea of a linear association between relative income and demand for redistribution also seems more consistent with two important empirical observations: (a) individuals often do not know exactly where they fall in income distribution; and (b) the cut-off between net beneficiaries and net contributors varies across countries and over time, depending on the structure of taxation and the design of social policy provisions.

Setting other-regarding motives for supporting redistribution aside for the moment, an obvious shortcoming of the Meltzer-Richard model is the assumption that (supposedly rational) individuals only care about their current income. Related to this, an extensive literature, starting with Moene and Wallerstein (2001) and Iversen and Soskice (2001), emphasizes demand for insurance as an important motivation behind support for the welfare state. Effectively treating redistribution as a by-product of (tax-financed) social insurance, this literature typically posits that demand for insurance, considered to be

[4] Rising inequality typically involves an increase in the mean-median distance, but this is not necessarily the case. If the incomes of the poor fall behind but middle-range incomes keep up with top-end incomes, the Meltzer-Richard model would not lead us to expect an increase in demand for redistribution. Note also that deadweights costs only affect demand for redistribution among citizens near the median income in the Meltzer-Richard model.

a "normal good," rises with income. Based on this postulate, we would expect high-income earners to demand more insurance than low-income earners and, in a dynamic perspective, we would expect income growth to increase demand for insurance across income groups. As many contributors to the social insurance literature recognize, however, these expectations must be qualified to the extent that income and risk are correlated (see, most notably, Rehm 2016). From a dynamic perspective, it is not obvious that we should expect demand for social insurance to rise with income growth if the rate of unemployment declines with income growth. Moreover, it seems very plausible to suppose that income growth enables people, especially people towards the upper end of the income distribution, to buy various forms of private insurance against future income losses (including real-estate assets that can serve as a cushion against labor-market risks or against income loss at the time of retirement).[5]

It is important to keep in mind that our inquiry pertains to support for redistribution, not support for social spending with redistributive implications, let alone actual levels of (or changes in) redistribution through taxation and income transfers. High-income earners may be willing to pay for social programs with redistributive implications in order to insure themselves against future income losses, but it is far from obvious why this would lead them to agree with the proposition that "the government should take measures to reduce income differences" (the dependent variable in our analysis of ESS data) or that they would favor "redistribution of wealth from the rich to the poor" (the dependent variable in our analysis of IAP data). To the extent that insurance motives play a role in answers to these questions, such motives would logically pertain to relative rather than absolute income changes. This brings us to the prospects-of-upward-mobility (POUM) hypothesis advanced by Benabou and Ok (2001) (see also Rueda and Stegmueller 2019). Simply put, individuals who expect to move up in the income distribution (for example, recent university graduates) have good reasons to think that they will benefit less from

[5] See Ansell (2014) on home ownership as a substitute for social insurance.

redistribution—or contribute more to redistribution—in the future and should therefore be less favorable to policies that lock in a high level of redistribution. Conversely, we should expect individuals who expect to fall in the income distribution to be more supportive of redistribution than what their current (relative) income would predict.

What then, apart from education and age, determines perceived mobility prospects? A simple and intuitive hypothesis is that individuals who have experienced (absolute) income growth over an extended period of time are more likely to believe that they are upwardly mobile than individuals who have experienced income stagnation (or decline) over the same period. A second hypothesis is that mobility prospects, in one direction or the other, are higher when the income distribution is more compressed, for the simple reason that absolute changes in one's own income have a bigger impact on one's position in the income distribution when absolute distances between ranks (be they percentiles, deciles or quartiles) are smaller.[6] From a dynamic perspective, these two arguments, taken together, imply that expectations of upward (downward) mobility should be highest for income groups who are experiencing income growth (decline) in a context of declining inequality. While recognizing that the precise cut-off between net contributors and net beneficiaries may be opaque to many people, we hypothesize that the effects of mobility prospects on preferences for redistribution are most pronounced for individuals in the middle of the income distribution, for whom relative income mobility can be expected to involve movement from one side to the other side of the cut-off.

As noted by many scholars, the Meltzer-Richard model completely fails to explain support for redistribution among citizens near the top of the income distribution. It seems implausible that worries about falling in the income distribution alone can explain this phenomenon. "Other-regarding motives" must also be taken into account. This brings us to the very extensive literature on the perceived

[6] For empirical evidence on the negative association between inequality and relative income mobility, see Aaberge et al (2001) and Andrews and Leigh (2009).

"deservingness" of the poor as an important determinant of support for redistribution among citizens who do not stand themselves to gain from redistribution (see Marquis and Rosset 2021 for references). In a related, but slightly different vein, Rueda and Stegmueller (2019) argue compellingly that support for redistribution among the affluent can be seen as an expression of concerns about negative externalities of poverty and inequality: their effects on crime (primarily an "egocentric" concern), but also their effects on schooling and other public goods (arguably more "sociotropic" concerns).

To the extent that affluent citizens are worried about negative externalities, we should expect them to respond to rising inequality by demanding more redistribution. It is less obvious that rising inequality makes affluent citizens feel more empathy with the poor, but experimental evidence seems to indicate that many people have some general aversion to inequality (see, e.g., Fehr ad Schmidt 1999). More importantly, we hypothesize that income growth makes affluent citizens more inclined to believe that economic conditions are good (improving) for everyone and that this in turn makes them less concerned about negative externalities of inequality as well as more inclined to believe that low-income citizens should be able to manage without public support or, in other words, to believe that the poor are poor because they are not hard-working (as distinct from the belief that the poor are poor because they are adversely affected by circumstances beyond their control).[7]

Turning to support for redistribution among people in the lower half of the income distribution, the literature has put little emphasis on other-regarding concerns among this group simply because self-interest and other-regarding motives point in the same direction. We have no reason to suppose that low-income earners as less concerned about crime or the quality of public schools than the affluent, nor that they are less averse to inequality on normative grounds, but such considerations reinforce rather

[7] Analyzing Eurobarometer data for nine countries over the period 1976-2014, Marquis (2020) finds that the percentage of respondents who attribute poverty to "social injustice" jumped sharply (from about 35% to 50%) while the percentages who attribute poverty to individual bad luck as well as laziness declined during the economic crisis of 2008-10.

than moderate their self-interest. Seeking to maximize their current income, low-income earners should respond to rising inequality and income stagnation income by demanding more redistribution. While upward mobility expectations can be expected depress demand for redistribution in the bottom half of the distribution (and especially the low-middle quartile), rising inequality reduces prospects of upward mobility. In the short-termist perspective of the Meltzer-Richard model, income growth does not alter the response of L and LM to rising inequality, but we expect it to offset the negative impact of rising inequality on mobility prospects. In addition, and perhaps more importantly, a large literature in sociology and social psychology, starting with Runciman (1966), teaches us that people care about their relative income and position in the social hierarchy as well as their absolute income and well-being (see Smith *et al* 2012). It seems very plausible to suppose that rising inequality renders positional deprivation more salient to low-income earners and that this leads them to demand compensatory redistribution, but also, as argued by Burgoon *et al* (2019), that income growth mitigates positional deprivation among low-income earners. Hence, we expect the combination of rising inequality and economic stagnation to generate more demand for compensatory redistribution among low-income earners than rising inequality alone.

Following Weisstanner (2022), one might also suppose that income growth boosts support for redistribution by reducing people's aversion to paying taxes.[8] This hypothesis runs directly counter to the hypothesis that income growth reduces support for redistribution by increasing upward mobility expectations as well as the hypothesis that income growth makes the affluent less empathetic towards low-income earners. If the tax-aversion hypothesis and the mobility (or empathy) hypothesis are both true, they will offset each other, and we might not observe any effect of income growth. We consider the relative importance of these potential effects of income growth to be an empirical question. For the time

[8] Weistanner (2022) derives this hypothesis from the literature on policy moods in periods of economic buoyancy and "hard times" and, in particular, Durr's (1993) notion of welfare policy as a "luxury good."

being, suffice it to note that the tax aversion effect should first and foremost matter to citizens in the upper half of the income distribution.

Macro-level descriptives

Since its inception in 2002, the European Social Survey has consistently solicited reactions to the statement that "the government should take measures to reduce income differences," with respondents being provided with five response options: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree and (5) strongly agree. As noted by many scholars, this question (also used by the International Social Survey Program) leaves a great deal to be desired (see Dallinger 2022). The question is broad and rather vague, arguably capturing normative dispositions rather than support for any specific redistributive policies and some (but not all) respondents are likely to interpret the statement with reference to the status quo (i.e., to register their (dis)agreement with the statement that "government should do *more* to reduce income differences"). Mindful of its shortcomings, we stick with the standard redistribution question for the simple reason that, to our knowledge, it is the only question pertaining to redistribution that has been asked repeatedly in a large number of countries, thus allowing us to estimate effects of *changes* in income growth and economic inequality.[9]

We assign ESS respondents to income quartiles based on a question that asks respondents to place their household in predetermined bands for disposable household income. Following conventional practice, we assign to each respondent the mid-point of the bands they placed themselves in and rely on the formula proposed by Hout (2004) to assign an income amount to respondents in the top (open-ended)

[9] It also deserves to be noted that studies that rely on the standard question for their dependent variable yield many sensible results. Particularly relevant for our purposes, every single study of this kind of which we are aware finds that support for redistribution falls with survey respondents' relative income.

income band. Having assigned an income amount to each respondent, we divide that amount by the square root of the number of persons living in the respondent's household to obtain an "equivalized household income." The respondents are then sorted into income quartiles, which we will henceforth refer as L (for low), LM (low-middle), HM (high-middle) and H (high).

Figure 1 shows our estimates, by country, of the percentage of ESS respondents in each quartile that agree or strongly agree with the statement that the government should take measures to reduce income differences. Across the seventeen countries included in our analysis, we observe a consistent income hierarchy: while L and LM are often indistinguishable from each other, these groups are everywhere and almost always more supportive of redistribution than HM and, especially, H.[10] Setting aside Denmark, distinguished by exceptionally low support for redistribution across all for income groups, L and LM support for redistribution, measured in this manner, ranges between 60% and 90%.

[Figure 1]

Perhaps the most noteworthy feature of Figure 1 is that we do not observe the increase in polarization of preferences by relative income that we would expect if inequality had risen uniformly and preferences for redistribution were motivated entirely by short-term income maximization. Broadly speaking, income groups seem to have moved, for or against redistribution, in parallel (cf. Gonthier 2017). We observe significant, apparently enduring, increases of L and LM support for redistribution in Austria and Germany, but L and LM support for redistribution has been quite stable in the other fifteen countries. HM and especially H support for redistribution appears to be more volatile. We observe significant, apparently enduring, increases of H support for redistribution since the Great Recession in quite a few

[10] The seventeen countries included in Figure 1 (and in the regression analyses presented in section 4) were selected based on participation in at least five ESS waves, with adequate information to assign respondents to income deciles and with, at most, five years between any two waves. The ESS data presented here and employed in our regression analyses are available at https://www.europeansocialsurvey.org/.

countries: Austria, Belgium, Germany, Great Britain, the Netherlands, Norway and, more recently, France. In these countries, preference polarization by relative income appears to have declined in the 2010s.

Ceiling effects provide an obvious explanation of why we observe a tendency for support for redistribution to rise among H respondents but not L respondents. If rising inequality (or income stagnation) generates support for redistribution in any two income groups, this effect should be more pronounced if the baseline is 50% support rather than 80% support. In the dynamic analysis of ESS data that follows, we take account of ceiling effects by including group-level support for redistribution in the previous wave as a control variable.

We rely on micro data from the Luxembourg Income Study (LIS) and the European Union's Statistics on Income and Living Conditions (EU-SILC) for our measures of changes in country-level income inequality and group-level income growth. Both measures pertain to disposable income, defined as total household income after taxes. In generating these measures, we exclude observations with a negative value for disposable income and equivalize the remaining observations by dividing disposable household income by the square root of household members.[11] We then calculate country-year estimates of Gini coefficients (scaled from zero to 100) as well average income by income quartile and merge the resulting LIS and EU-SILC macro-datasets by averaging values for country-years with two observations and linearly interpolating missing country-years.[12]

It is important to keep in mind that our measures of income inequality and income growth take into account the redistributive effects of taxes and transfers. In the Meltzer-Richard model, citizens'

[11] In addition, we have top-coded observations whose un-equivalized income is more than 10 times the un-equivalized median and bottom-coded equivalized household income at 1% of the weighted mean. Prior to merging the series, the correlation between LIS and EU-SILC on our variables of interest ranges between .96 for the Gini and .99 for the income variables. The underlying data are available at https://www.lisdatacenter.org/ and https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions.

[12] Of all the country-years spanning the years 1999 to 2019 that were used to compute our group income growth data, less than 13% of group income observations were the result of linear interpolation. In addition, the 2019 group income observations for CZ and PT were extrapolated based on their respective 2017-2018 observations.

demand for redistribution responds to changes in "pre-fisc" income inequality or, in other words, the distribution of "market income." In the real world, however, people cannot be expected to know (or care) much about the pre-fisc distribution of income: the inequality that we experience in our daily lives or read (hear) about in various media pertains to disposable income.

For each of the seventeen countries included in our analysis of preferences for redistribution, Table 2 presents our estimates of changes in Gini coefficients for disposable income inequality from 1999 to 2008, from 2008 to 2010 and from 2010 to 2018, along with our estimates of average annual income growth for the population as a whole over the same three time periods.[13]

[Table 2]

With a one-unit criterion for a "significant" change in the Gini coefficient, we observe significant increases in inequality in eight countries and significant declines in two countries from 1999 to 2008, with an average increase of 0.9 for the seventeen countries taken together. From 2010 to 2018, by contrast, the Gini coefficient increased significantly in four countries and declined in another three countries, with ten countries displaying a less-than-one-unit change and the average change being zero. Strikingly, Denmark, the Netherlands and Sweden are the only countries in which disposable income inequality grew significantly in the post-crisis period as well as the pre-crisis period. The standard story of ever-rising income inequality clearly must be qualified, but this does not render the question of how citizens respond to changes in income inequality less interesting. The absence of uniform long-term trends is an advantage for the purpose of addressing this question empirically.

Turning to the data on income growth, the crisis years of 2008-10 period stands out as exceptional in terms of the divergent of country trajectories. Over these three years, average real income of the population grew by more than 1% per year in five countries, stagnated in seven countries and declined in

[13] Our estimates of average annual income growth by income quartile are presented in the Appendix (Table A1).

five countries. Averaging across the seventeen countries, average incomes of the population as whole grew half as fast from 2010 to 2018 as they did from 1999 to 2008, but we again observe a great deal of cross-national variation in this respect. As shown in Table A1, the income of all four quartiles grew much more slowly in the post-crisis period than they had in the pre-crisis period and the deceleration of the income growth of the top quartile (H) was particularly pronounced. On average, H income grew at annual rate of 1% in 2010-18, as compared to an annual rate of 2.5% in 1999-2008.

Needless to say perhaps, the fact that the deceleration of income growth in the 2010s, relative to the pre-crisis period, has affected the upper-income quartile the most is directly related to the fact that income inequality has declined or increased less than it did in the pre-crisis period. By definition, rising (declining) inequality implies that H income grows faster (slower) than L income. Figure 2 brings this point home by plotting changes in Gini coefficients over five years against quartile income growth over the same five years. Predictably, we observe a clear negative association between rising inequality and income growth for L and LM and a positive (but weak) association between rising inequality and income growth for H. To some extent, rising inequality and quartile income growth are interdependent (a point to which we shall return below).

[Figure 2]

Responsiveness to changes in relative and absolute incomes by income group

Following conventional practice in the literature on preferences for redistribution, the dependent variable in our analysis of ESS data is a dummy variable that takes the value of 1 for respondents who agree or strongly agree that the government should take measures to reduce income differences, otherwise zero. Dichotomization serves to facilitate the interpretation of probabilistic regression results

and to address the fact that the distribution of responses the ESS redistribution question is right-skewed. With survey respondents assigned quartile dummies, the independent variables of theoretical interest are (1) the average annual income growth for the respondent's income quartile over the five years prior to observing the value of the dependent variable; and (2) the change in the level of inequality over the same five years (i.e., change from t-5 to t). Seeking to capture the effects of these variables on support for redistribution conditional on income quartile, we estimate a linear probability model with country, country-quartile and year random effects and account for ceiling effects by including the share of the respondent's income group that supported redistribution in the previous ESS survey. The model also includes several individual-level variables that previous studies have found to be associated with support for redistribution: gender, age, educational attainment (measured as a categorical variable based on ISCED levels of education), union membership, as well as a dichotomous variable indicating whether the respondent is currently unemployed.

As noted above, our measure of income inequality is the Gini coefficient for disposable income. Estimating average quartile income growth rates on a five-year basis generates a number of extreme episodes of positive or negative growth that mirror one another. A single observation of an income group's disposable income falling significantly and then returning its previous level registers as an episode of strongly negative growth followed by an episode of strongly positive growth. To prevent this from skewing our regression estimates in the context of a dichotomous dependent variable, we have bottom- and top-coded the income-growth variables such that values that are smaller (larger) than the variable's 2.5^{th} (97.5^{th}) percentile value instead take on that value.[14]

Formally, our preferred model looks as follows:

[14] Figure A1 in the appendix displays the distribution of the variable before and after this transformation, with the bumps on the edges of the tails easily noticeable in the left-side panel.

$$
\begin{aligned}
Y_{icgt} \sim\ & \beta_0 + \beta_1 \Delta Gini_c + \beta_2 IncGR_{cg} + \beta_3 \Delta Gini_c * IncGR_{cg} + \beta_4 Group_i \\
& + \beta_5 \Delta Gini_c * Group_i + \beta_6 IncGR_{cg} * Group_i + \beta_7 \Delta Gini_c * IncGR_{cg} \\
& * Group_i + \beta_8 Lag(GrPrefs) + \beta \mathbf{X}_i + \alpha_c + \alpha_{cg} + \alpha_t + \epsilon_{icgt}
\end{aligned} \tag{1}
$$

where α_c, α_{cg} and α_t are respectively the country, country-group and year random intercepts, $\beta\mathbf{X}_i$ is a matrix of individual-level control variables and its vector of coefficients, and Lag(GrPrefs) represents the share of the respondent's group who were in favor of redistribution in the previous ESS wave. The remaining terms form a cross-level three-way interaction between income group (L, LM, HM or H), change in the Gini coefficient (ΔGini) and group income growth. ε_{icgt} is the observation-level error term.

Table 2 presents results of estimating simpler models with the same set of variables as well as the three-way interaction model specified by the formula above. Across all models, the effect of the previously observed level of support for redistribution in the income group to which a respondent belongs is positive and support for redistribution rises with age. Women are more supportive of redistribution than men and union members are more supportive of redistribution than non-union respondents. As regards educational attainment, individuals with at least lower secondary education are more supportive of redistribution than those with less than lower secondary education, but support for redistribution generally falls with increases in educational attainment. The direct effects of respondents' position in the income distribution also conform to our theoretical expectations (and the findings of previous studies). The difference in support for redistribution between L and LM is never significant in our models, but HM respondents are consistently less supportive of redistribution than L and LM respondents and H respondents are in turn less supportive of redistribution than HM respondents.

[Table 2]

Turning to the macro variables of theoretical interest, we find that, on average, income growth is associated with less support for redistribution while increases in inequality are associated with more support for redistribution. To allow us to interpret the results of interacting these variables with each other and with income groups, Table 3 presents parametric bootstrap estimations of the difference in

probability of favoring redistribution under different scenarios, compared to a counterfactual "reference scenario" where change in inequality and quartile income growth are both equal to zero. [15]

[Table3]

The main take-aways from Table 3 are as follows. With country-level change in the Gini coefficient set at the median observation of zero in the middle row of each panel in Table 2, support for redistribution declines with income growth across all income groups. Relative to the zero-zero scenario, all income groups are at least very slightly more supportive of redistribution when they have experienced negative income growth over the preceding five years, but they are less supportive of redistribution if they have experienced the group-specific median rate of income growth (ranging from .95% for L to 1.68% for H). Setting income growth at its quartile-specific median (the middle column of each panel), we also observe some responsiveness to changes in inequality. Across all income groups, support for redistribution among respondents of all income groups holds constant when inequality rises strongly (2.07), but it decreases significantly when inequality declines. The latter effect is much stronger for H than for the other income groups. These findings are consistent with the hypotheses that income growth mitigates relative deprivation and encourages expectations of upward mobility among people in the lower half of the income distribution. They are also consistent with the hypotheses that the affluent–H in particular–

[15] The core idea of this procedure is to create a series of joint estimates for the parameters of our model (similar to what a Bayesian posterior distribution looks like) that we can then combine and for which we can obtain uncertainty estimates. This serves to generate directly comparable effects for different groups. We rely on the "mvrnorm" function from the MASS R package in order to compute 2000 draws from a multivariate normal distribution of our parameters, using as inputs the point estimates of our coefficients and the variance-covariance matrix of our model. We then use this simulated posterior distribution along with selected values of our variables of interest to construct the group scenarios featured in Table 3. These are obtained by isolating the coefficients relative to the Delta Gini and Group income growth variables and calculating the "total effects" associated with these scenarios for each income group. For reasons of presentation, we opt to highlight the *differences in probabilities* with respect to this reference zero-zero scenario rather than computing the complete probabilities under the different scenarios. (The latter figures are affected by the value chosen for the other covariates, arbitrarily fixed at the sample mean value).

become less concerned with negative externalities of inequality when their income grows and, conversely, feel more empathy with low-income earners when their own economic circumstances are less favorable.

For L, LM and H alike, we observe significant increases in support for redistribution when negative income growth coincides with increases in inequality (see left-hand columns of each panel). The response of L and LM preferences to changes in inequality under strong income growth is very muted, with the negative effect of income growth dominating the results. In the presence of strong income growth, it would appear, people in the bottom half of the income distribution do not particularly care how much better or worse people in the upper half are doing. For H, the estimated effect of changing inequality is also relatively stable across levels of income growth, with rising inequality always associated with more support for redistribution. By contrast, HM does not respond to inequality changes when experiencing negative income growth, nor does HM respond to income growth when inequality increases. Income growth is only associated with less HM support for redistribution when inequality is stable or decreases and declining inequality is only associated with less HM support for redistribution when income growth is relatively strong.

The apparently odd findings for HM might plausibly be explained in terms of mobility prospects. In our theoretical framework, income stagnation reduces expectations of upward mobility among people in the lower half and increases expectations of downward mobility among people in the upper half of the distribution and this should hold especially for individuals closer the median of the distribution (i.e., it should hold more for LM than for L and more for HM than for H). In addition, a more compressed income distribution increases the consequences of changes in absolute income for one's relative position in the income distribution. More so than members of other income groups, HM members have reasons to expect that they might become net beneficiaries of redistribution when inequality declines while their income growth declines. The lower-left cell in Table 3 corresponds to this scenario: the estimated value for HM indeed has a positive sign in this case, but it falls short of the 95% threshold of statistical

significance. On the other hand, the lower-right cell (declining inequality and rapid income growth) represents a scenario in which HM members can plausibly expect to move upwards in the income distribution and here we observe a sharp (statistically significant) turn against redistribution. Finally, the scenario of the upper-right cell is one in which people in the HM groups perceive a growing distance to H, leading them to favor the status-quo response rather than supporting less redistribution, despite experiencing strong income growth.[16]

It deserves to be noted that the analysis presented in Tables 2 and 3 provides no evidence in support of the proposition that income growth boosts support for redistribution by reducing tax aversion or increasing demand for social insurance. In this respect, our results diverge sharply from those presented by Weisstanner (2022), who finds a positive effect of income growth (by decile, treated as a continuous variable) on support for redistribution. With data from ESS and ISSP surveys, Weisstanner measures support for redistribution in the same manner as we do and also relies on LIS and EU-SILC data to measure relative and absolute incomes. Table A6 in the Appendix presents the results we obtain when we attempt to replicate Weisstanner's analysis using our own data. Consistent with the results of our main analysis, we find that absolute income growth is associated with less support for redistribution. Needless to say perhaps, we prefer our results to Weisstanner's because they conform to theoretical expectations that we think are well-founded. Their face validity is also supported by the attitudinal evidence that we present in the next section.

It is important to keep in mind that the p10, p50 and p90 values for income growth in Table 3 are specific to each income quartile and that changes in inequality entails divergence of quartile income

[16] Tables A2-A5 in the Appendix presents results based on models that substitute for changes in P50/P10 and P90/P50 income ratios for changes in Gini coefficients. While under strong income growth, HM preferences do not appear to respond to changes in bottom-end inequality (A2-A3), they do respond to changes in top-end inequality (A4-A5) in the manner suggested here.

growth rates. As already noted, rising (declining) inequality implies that L income grows slower (faster) than H income. To see the implications of this point for the comparative politics of redistribution, we can use the results of our three-way interaction model (Model 4 in Table 2) to estimate support for redistribution by income group based on internally consistent combinations of quartile income growth and change in income inequality, still with respect to a counterfactual zero-zero scenario.[17] Table 4 shows such estimates for six different country-level scenarios: four hypothetical (abstract) scenarios and two "real-world scenarios." The hypothetical scenarios include1) declining inequality and high growth, (2) declining inequality and slow growth, (3) rising inequality and high growth, and (4) rising inequality and slow growth. Not surprisingly, we observe a strong and nearly unanimous decline in support for redistribution in the happy first scenario. In the second scenario, it is first and foremost L and LM that turn against redistribution. The values for HM and H are also negative, but far from statistically significant. Highlighting the dominant role of income growth as a determinant of HM and H preferences, HM and H seem to be content with the status quo in this scenario. In the third scenario, characterized by the combination of rising inequality and high growth, H turns against redistribution while support remains stable for the other income groups. And in the fourth scenario, characterized by the combination of rising inequality and low growth, L becomes significantly more supportive of redistribution while support for redistribution is unchanged for the other three groups. In this scenario, LM already fares much better than L in terms of income growth, which explains why LM's support for redistribution remains within the bounds of the status quo.

[17] To generate these scenarios, we proceeded as follows. From our LIS/EU-SILC dataset, we selected the country-year whose Gini coefficient came closest to the mean Gini in our own sample and extracted the average income for twenty groups of the same size (from p0p5 to p95p100) before recomputing the Gini on the basis of these 20 observations. We then attributed these groups to their own quartiles and applied arbitrary quartile income growths to each of them for 5-year periods, before recomputing a new Gini coefficient. The difference between the two Gini coefficients is the change in the Gini coefficient corresponding to our virtual scenarios, which is meant to match as closely as possible the changes in Gini featured in table 3.

[Table 4]

Taken directly from our data, the final two scenarios presented in Table 4 are "economic crisis scenarios" involving negative growth for all four income groups. The scenario based on Dutch data for 2014 combines negative income growth with rising inequality while the scenario based on British data for 2010 combines negative growth with declining inequality. According our empirical model, both scenarios bring about increased support for redistribution at the level of the population as a whole, but the "coalitional dynamics" are different. In the Dutch crisis scenario, support for redistribution increases more equally among L, LM and H. In the British scenario, by contrast, HM and H turn out to be the groups that generate the shift of public opinion in favor of redistribution. The estimated values for L and LM are also positive, but well within the bounds of the status quo. For HM in particular, the British crisis scenario arguably corresponds to a situation in which the risk of downward mobility becomes very tangible.

Micro-foundations

The theoretical framework set out above identifies several cognitive (or emotional) mechanisms whereby income growth and changes in inequality might "cause" changes in support for redistribution. In this section, we mobilize data from an original cross-national survey, the Inequality and Politics (IAP) Survey, to test two of our hypotheses concerning causal mechanisms: first, the hypothesis that income growth makes affluent citizens less empathic towards low-income earners and, secondly, the hypothesis that income compression as well as income growth makes citizens more optimistic about their mobility prospects. We also test the hypothesis that income growth boosts support for redistribution by reducing tax aversion.

The IAP survey is an online survey that was carried out in thirteen West European countries and the United States in the summer of 2019. For comparability with our analysis of ESS data, the following

analysis is restricted to the thirteen West European countries included in the survey: Austria, Belgium, Denmark, France, Germany, Great Britain, Ireland, Italy, the Netherlands, Portugal, Spain, Sweden and Switzerland.[18] In each of these countries, representative samples of the population aged 16-75 answered a series of questions about their perceptions of inequality, their policy preferences and their voting behavior.[19]

Our measure of empathy with low-income earners or, in other words, perceived fairness of inequality is based on a question that probes respondents' opinions on why it is that "some people have better jobs and higher incomes than others." Among other things, respondents were asked about the importance they assign to the observation that "some people don't work hard while some others do," with five responses categories ranging from "not important at all" to "extremely important." For the analysis that follows, we dichotomize this variable, with respondents who consider hard work to be an "important" or "extremely important" determinant of income differences being assigned a value of 1, others a value of zero.

Our measure of perceived prospects of income mobility is based on two survey questions. The first question asked respondents to estimate the percentage of people in their country who are currently poorer than themselves while the second question asked them to estimate the percentage of people who will be poorer than themselves in five years. We operationalize mobility expectations as the difference between the latter estimate and the former estimate (with positive values representing belief in upward mobility). As this yields a continuous variable that is very strongly centered around zero, we create a trichotomized categorical variable by assigning respondents to one of three equally sized bins, those who

[18] Note that Italy is not included in the preceding analysis of ESS data.

[19] Respondents were recruited through IPSOS panels, with nationally representative quotas applied for age, gender, region, household income, and education. Data, codebook and technical report available at https://www.swissubase.ch/en/catalogue/studies/14110/latest/datasets/1323/2207/overview. See also Pontusson *et al*. (2020).

expect to move up, those who expect to move down and those who expect to remain in place (treated here as the reference category).

Finally, we measure tax aversion based on a survey item that asked respondents to rate the amount of income tax that they paid in the previous 12 months as "far too low", "too low", "the right amount," "too high" or "far too high". Again, we dichotomize this variable by assigning the value 1 to respondents who rated their tax burden as "too high" or "far too high" (creating two groups of roughly equal size).

In a first step, let us look at the effects of believing that hard work is an important determinant of income differences, mobility expectations and tax aversion on support for redistribution. In addition to the standard ESS/ISSP redistribution question, the IAP survey asked respondents to place themselves on a 10-point scale ranging from "fully opposed to redistribution of wealth the rich to the poor" (0) to "fully in favor of redistribution of wealth from the rich to the poor" (10). Answers to this question provides for a more fine-grained and less skewed measure of support for redistribution than the standard ESS/ISSP question and allows us to estimate OLS models with a continuous dependent variable.[20]

Table 5 shows the results of estimating a model that includes all of the above-mentioned variables along with the individual-level control variables as in our previous analysis of ESS data, as well as dummies for income quartiles and country-fixed effects. (We sort survey respondents into income quartiles following the same procedure as before). The effects of the quartile dummies and socio-demographic control variables are essentially the same as what we found in our analysis of ESS data: support for redistribution rises with age as well as relative income, respondents with university education are less supportive of redistribution than respondents without university education while women and

[20] Designed to match judgements of party positions in the Chapel Hill Expert Survey (https://www.chesdata.eu/), the 10-point question asks about redistribution of wealth rather than income, but it seems unlikely that this distinction features prominently in the minds of survey respondents. With answers to the ESS/ISSP question treated as a continuous variable, the correlation between the two measures of redistribution support is .49 ($p < 0.01$).

union members are more supportive that men and non-union respondents. For the (independent) variables of primary interest, we find strong negative effects of believing that hard work is an important determinant of income differences and rating one's tax burden as too high as well as a positive effect of expecting downward mobility. Expecting upward mobility does not appear to have any effect on support for redistribution in the presence of education and age as control variables.

[Table 4]

Figure 3 shows the average marginal effects of attitudinal variables by income groups, based on separate interaction models for belief in hard work, tax aversion and mobility expectations interacted with quartile dummies, still including country fixed effects.[21] Belief in hard work is associated with less support for redistribution across all income groups, but its effects increase consistently with relative income. Also increasing with relative income, the negative effect of tax aversion is only significant for HM and H. Among respondents in the bottom quartile, believing that one's tax burden is too high is actually associated with more support for redistribution. Perhaps most interesting, Figure 3 shows that expectations of upward mobility are associated with less support for redistribution among L and LM respondents, but not among HM and H respondents, and expectations of downward mobility primarily boosts support for redistribution among H respondents, although the coefficients are border-line significant for LM and HM as well. Contrary to our expectations, it does not appear to be the case that perceptions of mobility prospects are particularly strongly correlated with redistribution preferences among people in the middle of the income distribution.

[Figure 3]

[21] See Table A7 for full regression results. Note that the models underlying Figure 3 do not include socio-demographic control variables nor other "attitudinal" variables. Available upon request, results based on models that include these controls are similar, but weaker from a statistical point of view. The specification underlying Figure 3 strikes us as preferable (more meaningful) insofar as the socio-demographic control variables are correlated with income groups (older respondents, men and university-educated are over-represented in the upper half of the income distribution and union members are over-represented in the middle quartiles).

The next step is to explore the effects of income growth and changes in inequality on belief in hard work as an important determinant of income differences, tax aversion and mobility expectations. now using distinct dichotomized variables for upward and downward mobility. Replicating the setup of our analysis of support for redistribution based on ESS data, we do this by estimating linear probability models with quartile income growth and changes in the Gini coefficient for disposable income over 5 years (2014-2019) as macro variables and then interact theses variables with dummies for income quartiles, with country-quartile random effects included. In contrast to our analysis of ESS data, however, the results presented in Figure 4 are based on estimating two-way interactions in separate models for income growth and changes in inequality (see Tables A8 and A9 for full regression results). It is important to keep in mind that this analysis is based on only 13 country-level observation of changes in inequality and 52 country-quartile-level observations of income growth, and that inequality was relatively stable in the time period covered by our macro data (see Table 1). This renders the inclusion of multiple interaction terms in the same model dubious, not to mention the estimation of a three-way interaction.

The main purpose of the present analysis is to illustrate how one might go about exploring the "micro-foundations" behind the effects of macro variables and the results are, at best, suggestive.

[Figure 4]

In light of the limited number of observations and the limited range of variation on the macro variables of theoretical, we present 90% rather than 95% confidence intervals in Figure 4. To begin with, we find that income growth is indeed associated with belief in hard work as an important determinant of inequality. However, this effect appears to be driven mostly, if not entirely, by respondents in the lower half of the income distribution, for whom believing in the importance of hard work as an important determinant of inequality is a weaker predictor of preferences for redistribution than for more affluent groups. Beliefs about hard work and deservingness play an important role in the preference formation of affluent citizens, but these results do not seem to support the proposition that the effects of income

growth operate through such beliefs. On the other hand, but less central to the theoretical framework sketched above, we also find that rising inequality tends to depress beliefs in hard work as a determinant of income differences across all income groups or, conversely, that declining inequality—a common trend over the five years preceding the IAP survey—tends to boost belief in hard work as determinant of income differences.

While tax aversion is associated with less support for redistribution, we find no evidence whatsoever for the proposition that income growth boosts support for redistribution by reducing tax aversion. Our results even suggest that income growth actually boosts tax aversion, and that this effect is first and foremost driven by H, suggesting that tax aversion might explain the negative effect of income growth on H support for redistribution (very much contrary to the argumentation of Weisstanner (2022)). Affluent people appear to be less keen to pay taxes when their incomes rise. As for changes in inequality, they appear to have no effect on people's assessment of their tax burden.

In line with the predictions of our theoretical framework, the results presented in Figure 4 indicate that income growth reduces expectations of downward mobility and boosts expectations of upward mobility when we pool all respondents. Income growth operates primarily through expectations of downward mobility and, by extension, matters primarily for HM and H. Also in line with predictions of our theoretical framework, rising inequality is at least weakly associated with lower expectations of upward mobility across all respondents. Contrary to expectations, however, rising inequality also appears to be associated with higher expectations of downward mobility among people in the second, third and fourth quartiles. While rising inequality might reduce the probability of falling in the income distribution, it also increases the costs of falling and it seems plausible that the income mobility question in the IAP survey captures diffuse worries about downward mobility as much as "objective" assessments of the probability of downward mobility.

Conclusion

The main take-away of this paper is surely that income growth reduces support for redistribution among all citizens in most situations. When their incomes decline or stagnate, L, LM and H citizens respond to rising inequality by demanding more redistribution, but this is not the case when their incomes grow in robust fashion. The more complicated story about HM citizens appears to have a lot to do with mobility prospects. Our analyses of IAP data provide at least suggestive evidence in support of the propositions that income growth depresses support for redistribution by increasing belief in hard work as a determinant of income differences and by making people more optimistic about their prospects for upward mobility (and, conversely, less worried about downward mobility). Arguably income growth also renders low-income citizens less dissatisfied with their relative position, but we have not directly tested this proposition (for lack of an appropriate question in the IAP survey). According to our analysis of IAP data, income growth does not boost upward mobility expectations of L citizens and it seems implausible that belief in hard work alone accounts for the negative effect of income growth on support for redistribution (and responsiveness to rising inequality) among these citizens. Exploring how income growth affects perceptions of positional deprivation thus emerges as an important issue for future research.

It is tempting to conclude that income growth trumps inequality as a determinant redistribution preferences, but our analyses show that changes in inequality do have effects on preferences for redistribution through their effects on beliefs in hard work as well as perceived mobility prospects and worries about downward mobility. In general, robust economic growth renders inequality less salient to support for redistribution income groups. Another important implication of this paper is that changes in

distributive matter to politics through their effects on the income growth of different income groups. While higher GDP growth means that the average income grows faster, rising income inequality implies that high-income earners enjoy faster income growth than low-income earners (and declining inequality implies the opposite). This indirect effect of rising inequality is an effect that individuals experience even if they are oblivious to what has happened to inequality or consider income inequality to be "fair" or, indeed, even if they are entirely confused about where they stand in the income distribution.

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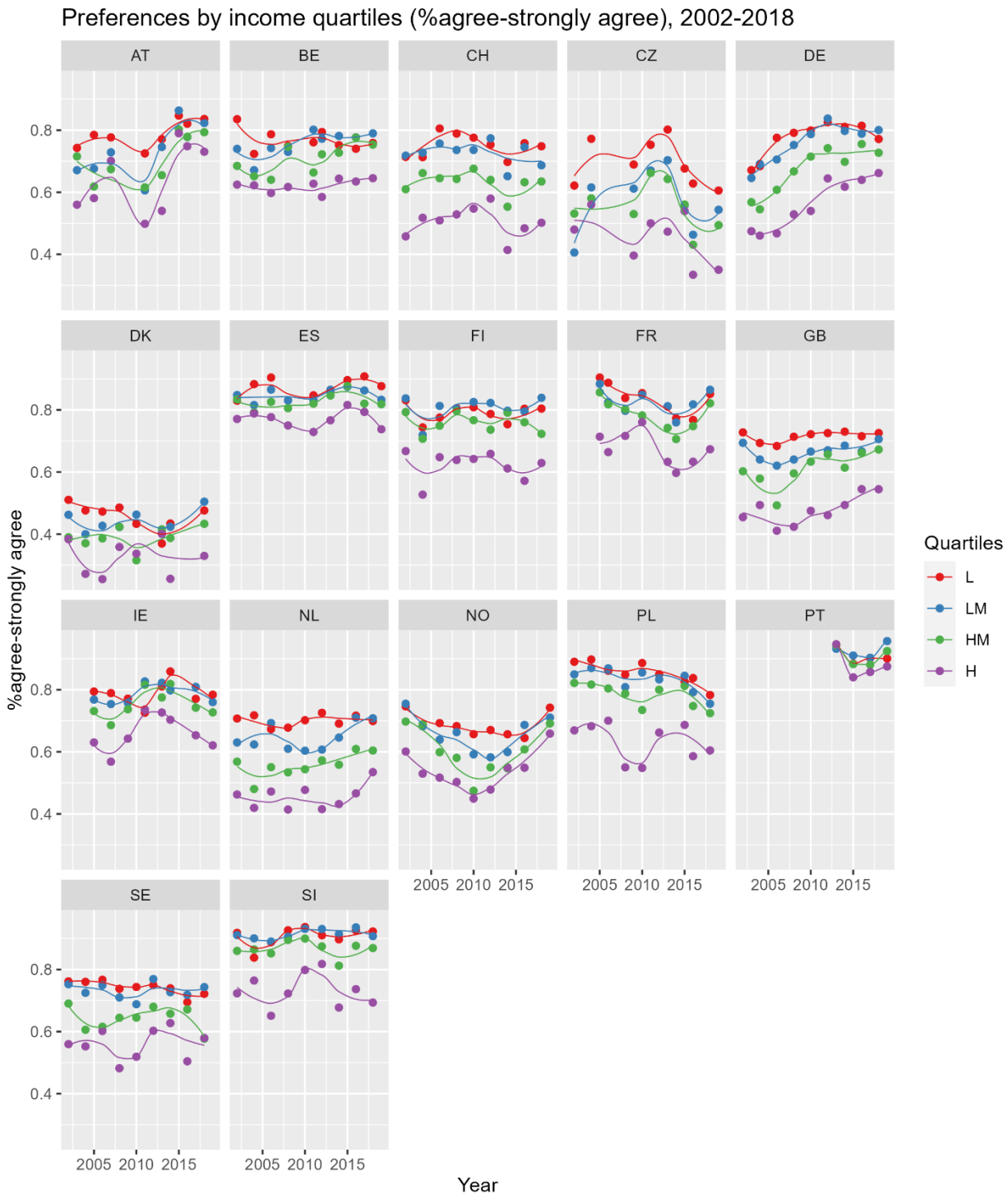
Figure 1: Support for redistribution by income groups (% agree and strongly agree), 2002-18.



Source: European Social Survey.

Table 1: Change in Gini coefficients for disposable household income (scaled 0-100) and average annual mean disposable income growth, 1999-2008, 2008-2010 and 2010-18.

country	1999-2008		2008-2010		2010-2018	
	Δ Gini	Inc. Gr.	Δ Gini	Inc. Gr.	Δ Gini	Inc. Gr.
AT	1.9	1.3	-0.2	1.7	-0.1	0.1
BE	-0.8	1	0.2	0.1	-0.7	0.7
CH	2.4	1.1	-0.9	0.1	0.4	0.2
CZ	0.4	3.3	0	0.4	-0.8	1.8
DE	2.9	0.5	-0.2	0.3	0.6	1.1
DK	1.6	0.3	1.6	5.1	1.9	0.6
ES	-0.9	2.6	1.1	-3.3	-0.6	-0.5
FI	1.8	2.5	-0.1	1.9	0.7	0.5
FR	0.7	1.8	0.7	0.2	-1.2	-0.1
GB	-1	3.7	-0.6	-4.5	0	0.6
IE	-2	2.4	0.2	-3.1	-0.8	2.7
NL	3.6	1.4	-1.3	-0.6	1.5	0.8
NO	-0.1	3.1	-0.7	0.2	1.8	1.3
PL	2.2	4	0.2	2.3	-2.3	3.5
PT	n.a.	n.a.	-0.5	-1.1	-2.5	0.3
SE	1.5	3.8	-0.3	1.4	1.3	1.3
SI	0.2	4.2	1.6	-4.2	0.1	1.3
Mean	0.9	2.3	0	-0.2	0	1

Source: Own measurements based on LIS and EU-SILC microdata.

Figure 2: Scatterplots of changes in Gini coefficients and group income growth over 5 years.

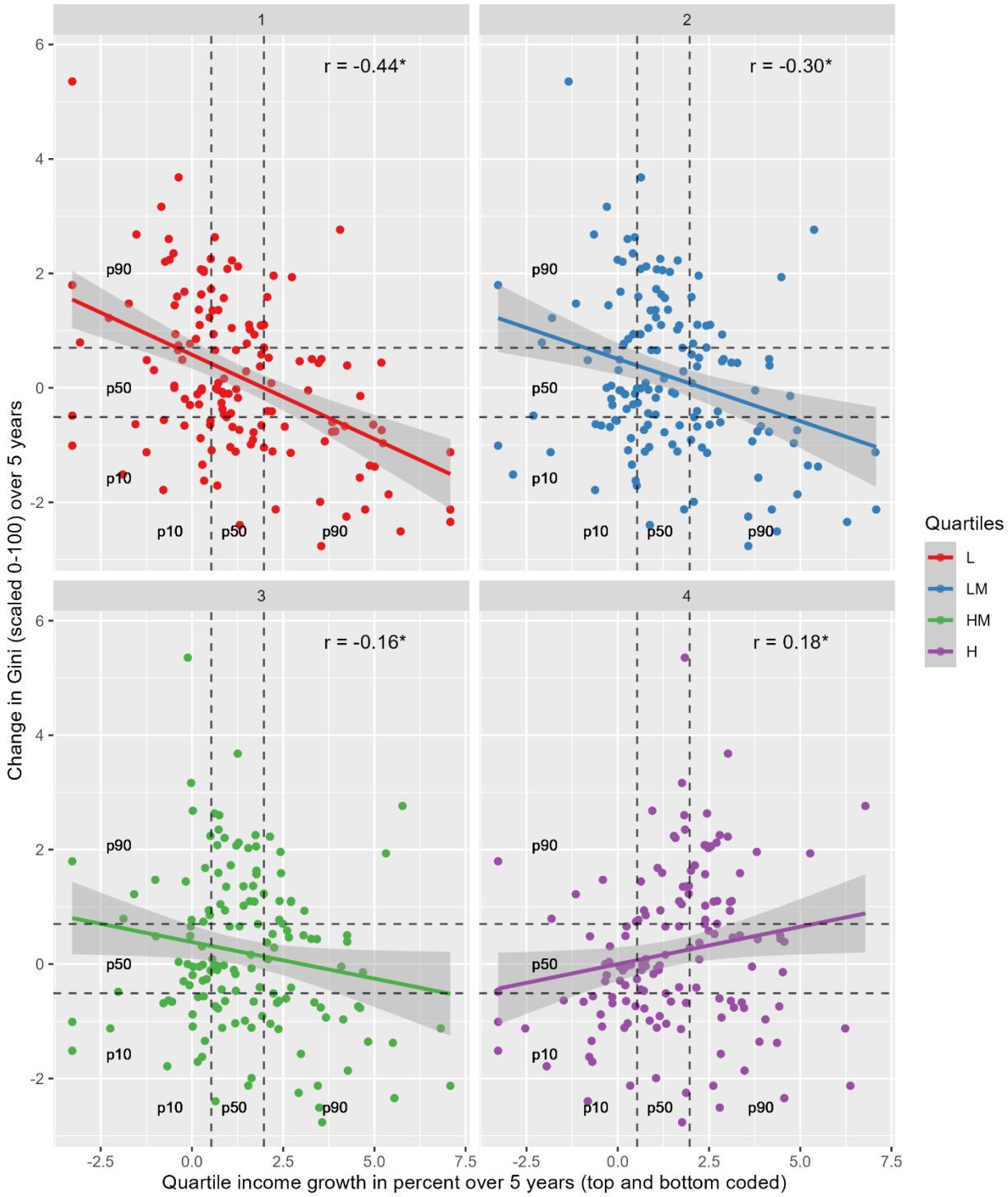


Table 2: Linear probability models of individual support for redistribution with Country, year and Country-Quartile Random Effects with lagged group DV

	Model 1	Model 2	Model 3	Model 4
Share of quart in favor previous wave	**0.33****	**0.32****	**0.33****	**0.32****
	(0.02)	(0.02)	(0.02)	(0.02)
Group Income growth 5 years	**−0.46****	**−0.69****	**−0.51****	**−0.52****
	(0.11)	(0.08)	(0.12)	(0.12)
Delta Gini 5 years	**0.45****	0.21	**0.33***	**0.34***
	(0.09)	(0.17)	(0.18)	(0.18)
Group Income growth 5 years x LM	−0.10		−0.09	−0.08
	(0.15)		(0.16)	(0.17)
Group Income growth 5 years x MH	−0.25		−0.24	−0.13
	(0.16)		(0.17)	(0.17)
Group Income growth 5 years x H	**−0.44****		**−0.45****	**−0.43****
	(0.16)		(0.17)	(0.17)
Delta Gini 5 years x LM		0.10	0.02	0.02
		(0.22)	(0.24)	(0.26)
Delta Gini 5 years x MH		0.16	0.03	**−0.49***
		(0.23)	(0.24)	(0.27)
Delta Gini 5 years x H		**0.47****	**0.42***	0.36
		(0.23)	(0.24)	(0.30)
Group Income growth 5 years x Delta Gini 5 years				−0.03
				(0.07)
Group Income growth 5 years x LM x Delta Gini 5 years				0.03
				(0.10)
Group Income growth 5 years x HM x Delta Gini 5 years				**0.38****
				(0.11)
Group Income growth 5 years x H x Delta Gini 5 years				0.06
				(0.11)
Age in years	**0.15****	**0.15****	**0.15****	**0.15****
	(0.01)	(0.01)	(0.01)	(0.01)
Female	**5.12****	**5.12****	**5.12****	**5.12****
	(0.20)	(0.20)	(0.20)	(0.20)
ISCED 2 (ref 0-1)	**0.90****	**0.89****	**0.90****	**0.90****
	(0.43)	(0.43)	(0.43)	(0.43)
ISCED 3	**−1.31****	**−1.33****	**−1.32****	**−1.32****
	(0.41)	(0.41)	(0.41)	(0.41)
ISCED 4	**−4.61****	**−4.61****	**−4.62****	**−4.61****
	(0.49)	(0.49)	(0.49)	(0.49)
ISCED 5-6	**−8.28****	**−8.30****	**−8.28****	**−8.27****
	(0.44)	(0.44)	(0.44)	(0.44)
Union member	**7.22****	**7.22****	**7.21****	**7.21****
	(0.27)	(0.27)	(0.27)	(0.27)
Unemployed	**3.95****	**3.91****	**3.95****	**3.95****
	(0.55)	(0.55)	(0.55)	(0.55)
LM	−0.52	−0.63	−0.53	−0.52
	(0.64)	(0.64)	(0.66)	(0.68)
HM	**−2.73****	**−3.07****	**−2.76****	**−2.74****
	(0.66)	(0.67)	(0.68)	(0.70)
H	**−7.40****	**−8.07****	**−7.48****	**−7.49****
	(0.76)	(0.76)	(0.77)	(0.79)
(Intercept)	**41.29****	**41.79****	**41.54****	**41.55****
	(2.72)	(2.73)	(2.73)	(2.74)
Controls	Yes	Yes	Yes	Yes
AIC	1982478.15	1982480.10	1982483.71	1982487.36
BIC	1982701.62	1982703.56	1982737.65	1982781.93
Log Likelihood	−991217.08	−991218.05	−991216.85	−991214.68
Num. obs.	190539	190539	190539	190539
Num. groups: country:quart	68	68	68	68
Num. groups: country	17	17	17	17
Num. groups: year	16	16	16	16
Var: country:quart (Intercept)	2.40	2.76	2.55	2.74
Var: country (Intercept)	70.02	70.38	70.33	70.65
Var: year (Intercept)	2.48	2.51	2.54	2.52
Var: Residual	1930.07	1930.06	1930.03	1929.87

***p < 0.01; **p < 0.05; *p < 0.1

Table 3: Respondent probability difference of supporting redistribution under different Δ Gini and Group income growth scenarios, by contrast with a zero-zero scenario

Income growth Δ Gini	p10	p50	p90
		L	
2.07	**1.15**	0.14	-1.78
	(0.39 ; 1.91)	(-0.7 ; 0.99)	(-3.76 ; 0.14)
0	**0.4**	**-0.5**	**-2.22**
	(0.21 ; 0.6)	(-0.74 ; -0.27)	(-3.31 ; -1.2)
-1.52	-0.14	**-0.96**	**-2.54**
	(-0.77 ; 0.52)	(-1.43 ; -0.48)	(-3.67 ; -1.5)
		LM	
2.07	**0.94**	0.09	**-1.82**
	(0.12 ; 1.77)	(-0.75 ; 0.87)	(-3.59 ; -0.02)
0	**0.18**	**-0.64**	**-2.49**
	(0.1 ; 0.26)	(-0.92 ; -0.36)	(-3.55 ; -1.4)
-1.52	-0.37	**-1.18**	**-2.98**
	(-0.99 ; 0.25)	(-1.66 ; -0.68)	(-4.12 ; -1.82)
		HM	
2.07	-0.33	-0.23	-0.06
	(-1.2 ; 0.54)	(-1.02 ; 0.55)	(-1.76 ; 1.63)
0	**0.14**	**-0.82**	**-2.62**
	(0.08 ; 0.2)	(-1.14 ; -0.48)	(-3.66 ; -1.55)
-1.52	0.49	**-1.24**	**-4.48**
	(-0.15 ; 1.12)	(-1.79 ; -0.71)	(-5.65 ; -3.28)
		H	
2.07	**2.05**	-0.06	**-1.93**
	(0.85 ; 3.24)	(-0.81 ; 0.72)	(-3.25 ; -0.59)
0	**0.65**	**-1.6**	**-3.61**
	(0.47 ; 0.84)	(-2.06 ; -1.15)	(-4.63 ; -2.58)
-1.52	-0.36	**-2.72**	**-4.82**
	(-1.18 ; 0.44)	(-3.49 ; -1.91)	(-6.06 ; -3.46)

Values whose 95% confidence interval exclude zero are in **bold**. The values presented in the table for Δ Gini correspond respectively to the 10^{th}, 50^{th} and 90^{th} percentile of this variable in our country-level dataset. The income growth values are based on group-specific percentiles and correspond to the following values:

L : p10 = -0.78, p50 = 0.95, p90 = 4.25

LM : p10 = -0.3, p50 = 1.07, p90 = 4.15

HM : p10 = -0.22, p50 = 1.25, p90 = 4.01

H : p10 = -0.69, p50 = 1.68, p90 = 3.78

Table 4: Country-level scenarios (based on model 4 of table 2)

Scenario	Delta Gini	L	LM	HM	H	Population
Declining Inequality High Growth	−1.65	**-1.97** (-2.82 ; -1.21) *3*	**-1.77** (-2.4 ; -1.12) *2*	**-1.58** (-2.18 ; -0.99) *1.5*	**-2.15** (-2.91 ; -1.38) *1*	**-1.87** (-2.25 ; -1.49)
Declining Inequality Low Growth	−1.68	**-1.27** (-1.83 ; -0.71) *1.5*	**-0.9** (-1.46 ; -0.34) *0.5*	-0.36 (-0.96 ; 0.22) *0.5*	-0.66 (-1.54 ; 0.18) *-0.5*	**-0.8** (-1.13 ; -0.46)
Rising Inequality High Growth	2.13	0.13 (-0.74 ; 1.01) *1*	-0.16 (-1.12 ; 0.78) *1.5*	-0.15 (-1.15 ; 0.82) *2*	**-1.41** (-2.54 ; -0.27) *3.25*	-0.4 (-0.97 ; 0.16)
Rising Inequality Low Growth	2.17	**1.31** (0.48 ; 2.14) *-1*	0.48 (-0.35 ; 1.25) *0.5*	-0.23 (-1.02 ; 0.57) *1*	-0.05 (-0.82 ; 0.77) *1.75*	0.38 (-0.06 ; 0.8)
NL 2014 Rising Inequality Negative Growth	1.47	**1.47** (0.77 ; 2.18) *-1.73*	**1.24** (0.51 ; 1.97) *-1.15*	-0.08 (-0.87 ; 0.73) *-1*	**1.39** (0.61 ; 2.18) *-0.61*	**1.01** (0.59 ; 1.4)
GB 2010 Declining Inequality Negative Growth	−1.12	0.23 (-0.36 ; 0.85) *-1.25*	0.18 (-0.44 ; 0.77) *-1.84*	**2.5** (1.57 ; 3.43) *-2.24*	**1.71** (0.73 ; 2.75) *-2.53*	**1.16** (0.7 ; 1.63)

Values whose 95% confidence interval exclude zero are in **bold**. The numbers in *italics* represent the average annual income growth of the groups in question over the previous 5 years.

Table 5: OLS models of preferences for redistribution: Expected mobility, Belief in hard work as a source of income differences and attitudes vis-à-vis own Tax Burden

	Model 1
Hard work important	**−0.65*****
	(0.03)
Downward Exp. Mobility	**0.12****
	(0.04)
Upward Exp. Mobility	−0.03
	(0.04)
Tax Burden too high	**−0.23*****
	(0.04)
Age in years	**0.00*****
	(0.00)
Female	**−0.09****
	(0.03)
University Educated	**−0.10***
	(0.04)
Union member	**0.49*****
	(0.04)
Unemployed	**0.31*****
	(0.07)
LM	**−0.23*****
	(0.05)
HM	**−0.57*****
	(0.05)
H	**−1.18*****
	(0.05)
(Intercept)	**6.69*****
	(0.09)
Country FE	Yes
R^2	0.07
Adj. R^2	0.07
Num. obs.	21930

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Figure 3: Marginal effects of selected variables on preferences for redistribution by income group.

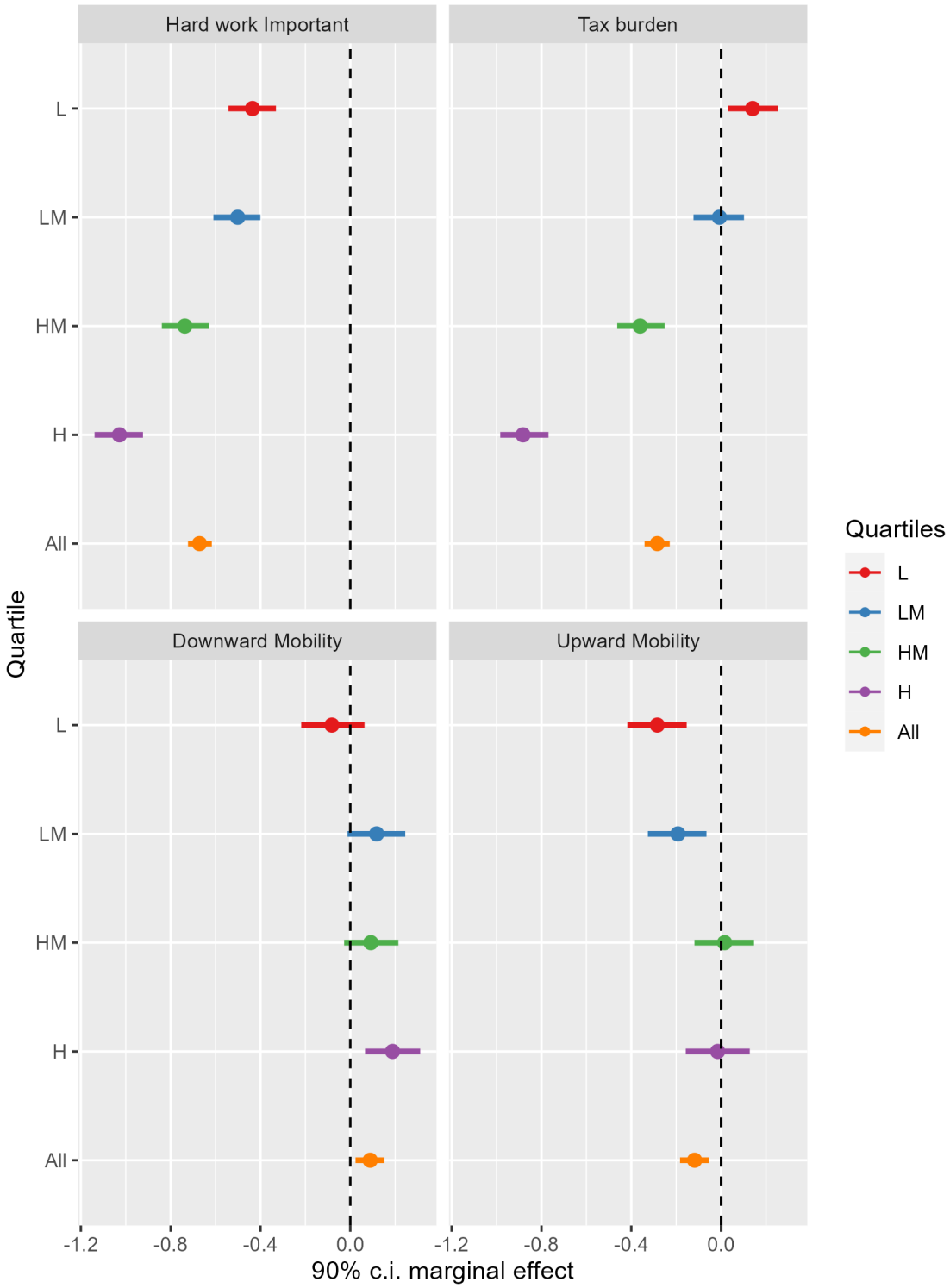
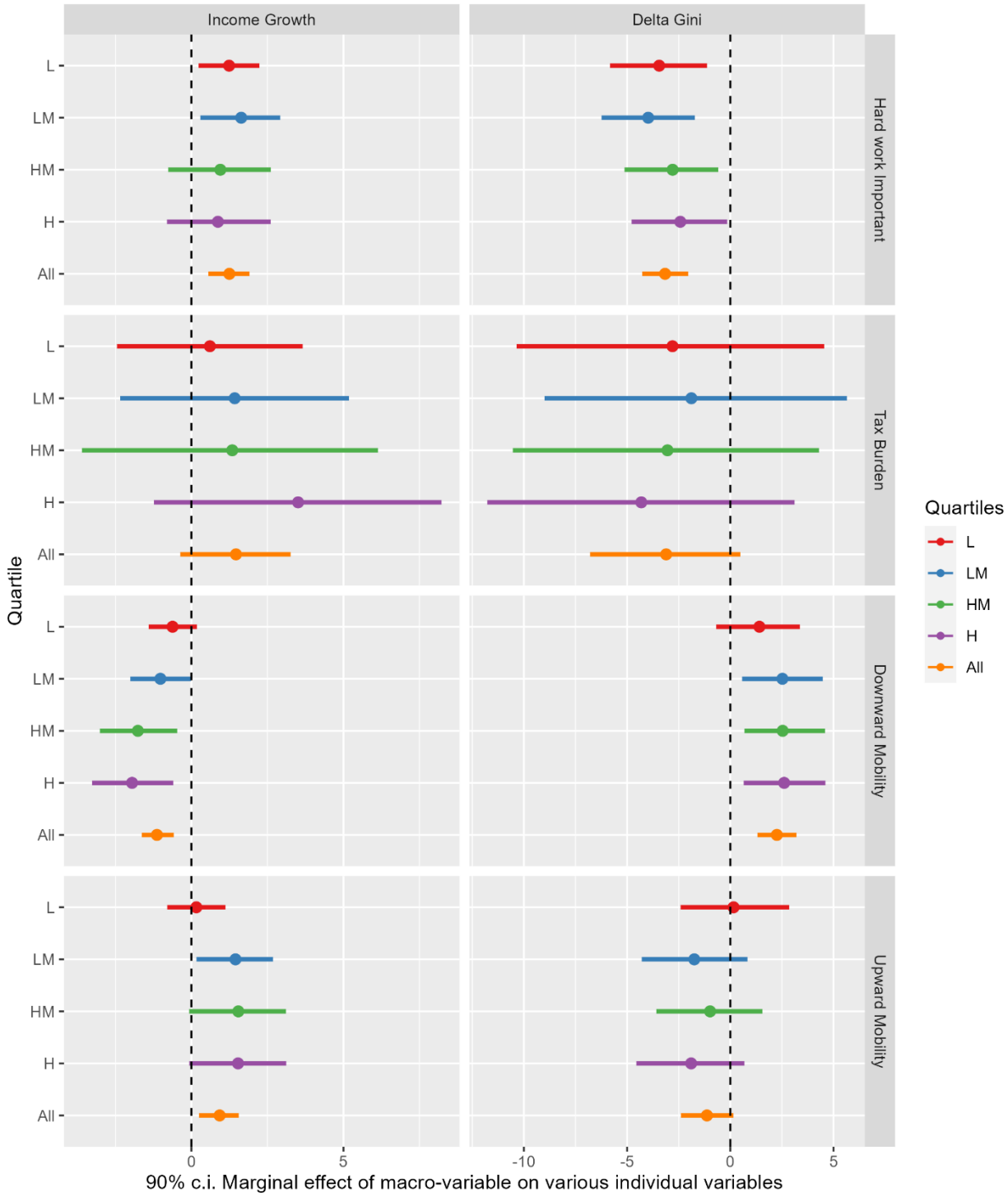


Figure 4: Marginal effects of macro-variables on selected individual variables, by income group and overall.



APPENDIX

Table A1: Average annual income growth by quartile, 1999-2008, 2008-10 and 2010-18.

Table A1: Average annual group income growth, 1999-2008, 2008-10 and 2010-18

	L			LM			HM			H		
country	1999-2008	2008-2010	2010-2018	1999-2008	2008-2010	2010-2018	1999-2008	2008-2010	2010-2018	1999-2008	2008-2010	2010-2018
AT	0.6	1.9	0.2	1.1	1.7	0.2	1.3	1.7	0	1.7	1.8	0.1
BE	1	-0.8	1.1	1.2	0.1	0.8	1.2	0.6	0.6	0.8	0	0.6
CH	0.2	1.3	0	0.7	0.9	0.2	1.1	0.5	0.2	1.6	-0.8	0.3
CZ	3.1	-0.3	1.9	3.3	0.5	2	3.3	0.9	2.1	3.3	0.3	1.6
DE	-0.6	0.1	1	0.1	0.3	1.2	0.5	1.1	1	1.1	-0.1	1.3
DK	-0.3	4.2	0.1	0.2	3.3	0.2	0.3	4.3	0.3	0.6	7	1.1
ES	2.6	-4.8	-0.4	2.8	-4.3	-0.3	2.8	-3.6	-0.4	2.4	-2.3	-0.7
FI	1.6	2.4	0.5	2.4	1.5	0.3	2.5	2	0.2	2.7	1.9	0.7
FR	1.8	-1.1	0.3	1.7	-0.4	0.2	1.5	0.4	0.1	2	0.8	-0.3
GB	3.9	-2.8	0.4	4.1	-4.3	0.7	3.8	-4.8	0.7	3.6	-4.8	0.6
IE	3.7	-4.1	3.5	2.4	-3	2.8	2.1	-2.7	2.4	2.2	-3.1	2.6
NL	0.7	0.6	0.1	0.8	0.1	0.7	0.9	0.2	0.9	2.2	-1.8	1.1
NO	2.8	1.3	0.7	3.2	0.6	1.1	3.2	0.2	1.2	3.1	-0.3	1.8
PL	3.4	1.7	4.4	3.6	2.2	4.1	3.9	2.4	3.6	4.4	2.4	3
PT	n.a.	-0.8	1	n.a.	-0.8	1	n.a.	-0.2	0.6	n.a.	-1.7	-0.3
SE	2.9	0.5	0.7	3.7	1.7	1.1	4	2.6	1.3	3.9	0.9	1.6
SI	4.1	-7.3	1.8	4.1	-4.8	1.1	4.2	-3.7	1	4.2	-3	1.5
Mean	2	-0.5	1	2.2	-0.3	1	2.3	0.1	0.9	2.5	-0.2	1

Figure A1: Density distributions for the income growth variable.

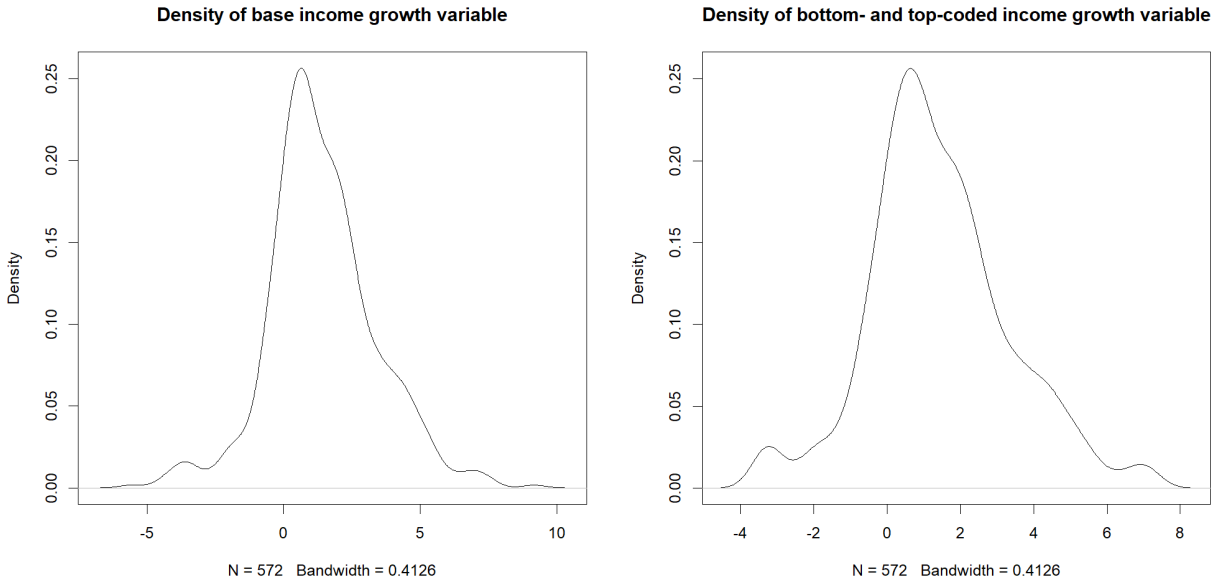


Table A2: Linear probability models of individual support for redistribution with Country, year and Country-Quartile Random Effects with lagged group DV

	Model A5	Model A6	Model A7	Model A8
Share of quart in favor previous wave	**0.33*****	**0.33*****	**0.33*****	**0.32*****
	(0.02)	(0.02)	(0.02)	(0.02)
Group Income growth 5 years	**−0.52*****	**−0.71*****	**−0.56*****	**−0.56*****
	(0.11)	(0.08)	(0.12)	(0.12)
Delta bottom-end 5 years	**3.90*****	0.82	2.35	3.14
	(1.30)	(2.42)	(2.59)	(2.68)
Group Income growth 5 years x LM	−0.12		−0.11	−0.11
	(0.15)		(0.16)	(0.16)
Group Income growth 5 years x MH	−0.25		−0.22	−0.23
	(0.16)		(0.17)	(0.17)
Group Income growth 5 years x H	**−0.36****		**−0.32***	**−0.31***
	(0.16)		(0.17)	(0.17)
Delta bottom-end 5 years x LM		0.75	−0.59	−0.80
		(3.28)	(3.47)	(3.73)
Delta bottom-end 5 years x MH		3.33	1.66	−0.40
		(3.34)	(3.49)	(3.81)
Delta bottom-end 5 years x H		**6.51***	4.88	4.95
		(3.36)	(3.49)	(3.87)
Group Income growth 5 years x Delta bottom-end 5 years				−0.98
				(0.83)
Group Income growth 5 years x LM x Delta bottom-end 5 years				0.46
				(1.22)
Group Income growth 5 years x HM x Delta bottom-end 5 years				1.91
				(1.25)
Group Income growth 5 years x H x Delta bottom-end 5 years				0.44
				(1.23)
LM	−0.49	−0.63	−0.49	−0.42
	(0.64)	(0.64)	(0.67)	(0.69)
HM	**−2.72*****	**−3.11*****	**−2.80*****	**−2.68*****
	(0.67)	(0.66)	(0.69)	(0.71)
H	**−7.50*****	**−8.10*****	**−7.66*****	**−7.61*****
	(0.76)	(0.75)	(0.77)	(0.80)
(Intercept)	**41.36*****	**41.73*****	**41.53*****	**41.56*****
	(2.69)	(2.70)	(2.69)	(2.70)
Controls	Yes	Yes	Yes	Yes
AIC	1982487.72	1982470.78	1982478.41	1982476.72
BIC	1982711.19	1982694.25	1982732.35	1982771.29
Log Likelihood	−991221.86	−991213.39	−991214.21	−991209.36
Num. obs.	190539	190539	190539	190539
Num. groups: country:quart	68	68	68	68
Num. groups: country	17	17	17	17
Num. groups: year	16	16	16	16
Var: country:quart (Intercept)	2.43	2.66	2.52	2.73
Var: country (Intercept)	66.99	67.45	67.25	66.97
Var: year (Intercept)	2.01	2.08	2.06	2.09
Var: Residual	1930.25	1930.23	1930.24	1930.22

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Table A3: Respondent probability difference of supporting redistribution under different Δ bottom-end inequality and Group income growth scenarios, by contrast with a zero-zero scenario

Income growth Δ bottom-end	p10	p50	p90
		L	
0.13	**0.94** (0.26 ; 1.61)	-0.25 (-1.02 ; 0.51)	**-2.52** (-4.15 ; -0.97)
0.02	**0.51** (0.33 ; 0.68)	**-0.49** (-0.77 ; -0.2)	**-2.4** (-3.49 ; -1.31)
-0.08	0.13 (-0.42 ; 0.69)	**-0.7** (-1.06 ; -0.33)	**-2.29** (-3.33 ; -1.24)
		LM	
0.13	0.51 (-0.2 ; 1.19)	-0.5 (-1.2 ; 0.18)	**-2.78** (-4.2 ; -1.35)
0.02	**0.25** (0.13 ; 0.37)	**-0.68** (-0.97 ; -0.39)	**-2.78** (-3.82 ; -1.73)
-0.08	0.02 (-0.44 ; 0.47)	**-0.85** (-1.25 ; -0.44)	**-2.78** (-3.91 ; -1.59)
		HM	
0.13	0.5 (-0.16 ; 1.19)	-0.49 (-1.17 ; 0.18)	**-2.35** (-3.73 ; -0.98)
0.02	**0.22** (0.11 ; 0.34)	**-0.91** (-1.26 ; -0.55)	**-3.04** (-4.09 ; -1.95)
-0.08	-0.03 (-0.46 ; 0.4)	**-1.3** (-1.76 ; -0.85)	**-3.66** (-4.76 ; -2.53)
		H	
0.13	**1.67** (0.86 ; 2.47)	-0.56 (-1.33 ; 0.19)	**-2.54** (-3.7 ; -1.33)
0.02	**0.77** (0.56 ; 0.97)	**-1.33** (-1.75 ; -0.9)	**-3.18** (-4.13 ; -2.24)
-0.08	-0.05 (-0.59 ; 0.5)	**-2.02** (-2.58 ; -1.49)	**-3.77** (-4.86 ; -2.65)

Values whose 95% confidence interval exclude zero are in **bold**. The values presented in the table for Δ bottom-end correspond respectively to the 10^{th}, 50^{th} and 90^{th} percentile of that variable in our country-level dataset. The income growth values are based on group-specific percentiles and correspond to the following values:

L : p10 = -0.78, p50 = 0.95, p90 = 4.25

LM : p10 = -0.3, p50 = 1.07, p90 = 4.15

HM : p10 = -0.22, p50 = 1.25, p90 = 4.01

H : p10 = -0.69, p50 = 1.68, p90 = 3.78

Table A4: Linear probability models of individual support for redistribution with Country, year and Country-Quartile Random Effects with lagged group DV

	Model A9	Model A10	Model A11	Model A12
Share of quart in favor previous wave	**0.33*** **	**0.33*** **	**0.33*** **	**0.33*** **
	(0.02)	(0.02)	(0.02)	(0.02)
Group Income growth 5 years	**−0.49*** **	**−0.69*** **	**−0.49*** **	**−0.47*** **
	(0.11)	(0.08)	(0.12)	(0.13)
Delta top-end 5 years	**8.40*** **	5.95	**9.06** **	**7.90***
	(2.16)	(3.78)	(4.04)	(4.20)
Group Income growth 5 years x LM	−0.08		−0.16	−0.22
	(0.15)		(0.17)	(0.18)
Group Income growth 5 years x MH	−0.22		−0.26	−0.21
	(0.16)		(0.17)	(0.18)
Group Income growth 5 years x H	**−0.39** **		**−0.41** **	**−0.36** **
	(0.16)		(0.17)	(0.17)
Delta top-end 5 years x LM		−2.98	−5.51	−2.00
		(4.96)	(5.47)	(6.00)
Delta top-end 5 years x MH		−0.54	−4.22	**−10.42***
		(5.06)	(5.42)	(6.29)
Delta top-end 5 years x H		**8.81***	5.88	−2.62
		(5.18)	(5.36)	(6.73)
Group Income growth 5 years x Delta top-end 5 years				1.28
				(1.39)
Group Income growth 5 years x LM x Delta top-end 5 years				−3.14
				(2.18)
Group Income growth 5 years x HM x Delta top-end 5 years				3.78
				(2.42)
Group Income growth 5 years x H x Delta top-end 5 years				3.93
				(2.45)
LM	−0.53	−0.60	−0.42	−0.50
	(0.64)	(0.64)	(0.66)	(0.67)
HM	**−2.73*** **	**−3.01*** **	**−2.68*** **	**−2.74*** **
	(0.66)	(0.66)	(0.68)	(0.69)
H	**−7.38*** **	**−7.92*** **	**−7.38*** **	**−7.67*** **
	(0.75)	(0.75)	(0.76)	(0.78)
(Intercept)	**40.95*** **	**41.41*** **	**41.12*** **	**41.55*** **
	(2.71)	(2.72)	(2.72)	(2.73)
Controls	Yes	Yes	Yes	Yes
AIC	1982480.83	1982461.04	1982466.33	1982448.33
BIC	1982704.30	1982684.51	1982720.27	1982742.90
Log Likelihood	−991218.42	−991208.52	−991208.17	−991195.17
Num. obs.	190539	190539	190539	190539
Num. groups: country:quart	68	68	68	68
Num. groups: country	17	17	17	17
Num. groups: year	16	16	16	16
Var: country:quart (Intercept)	2.35	2.68	2.49	2.63
Var: country (Intercept)	68.30	68.75	68.60	69.45
Var: year (Intercept)	2.71	2.69	2.75	2.83
Var: Residual	1930.16	1930.12	1930.11	1929.99

***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Table A5: Respondent probability difference of supporting redistribution under different Δ top-end and Group income growth scenarios, by contrast with a zero-zero scenario

Income growth Δ top-end	p10	p50	p90
		L	
0.07	**0.85**	0.2	-1.05
	(0.24 ; 1.47)	(-0.49 ; 0.89)	(-2.66 ; 0.61)
0	**0.38**	**-0.42**	**-1.96**
	(0.2 ; 0.58)	(-0.67 ; -0.18)	(-3.06 ; -0.91)
-0.08	-0.16	**-1.14**	**-3.01**
	(-0.94 ; 0.6)	(-1.68 ; -0.6)	(-4.07 ; -1.94)
		LM	
0.07	**0.67**	-0.46	**-2.98**
	(0.01 ; 1.29)	(-1.21 ; 0.25)	(-4.76 ; -1.24)
0	**0.22**	**-0.72**	**-2.85**
	(0.14 ; 0.3)	(-1.02 ; -0.43)	(-3.98 ; -1.73)
-0.08	-0.29	**-1.03**	**-2.7**
	(-1.01 ; 0.46)	(-1.57 ; -0.45)	(-3.85 ; -1.59)
		HM	
0.07	-0.11	-0.6	-1.51
	(-0.8 ; 0.6)	(-1.31 ; 0.09)	(-3.15 ; 0.12)
0	**0.14**	**-0.85**	**-2.7**
	(0.08 ; 0.2)	(-1.19 ; -0.51)	(-3.8 ; -1.63)
-0.08	0.43	**-1.14**	**-4.09**
	(-0.33 ; 1.19)	(-1.72 ; -0.54)	(-5.3 ; -2.91)
		H	
0.07	0.7	-0.42	**-1.41**
	(-0.22 ; 1.62)	(-1.07 ; 0.19)	(-2.69 ; -0.19)
0	**0.58**	**-1.37**	**-3.1**
	(0.4 ; 0.76)	(-1.79 ; -0.95)	(-4.04 ; -2.16)
-0.08	0.44	**-2.47**	**-5.05**
	(-0.46 ; 1.39)	(-3.17 ; -1.73)	(-6.26 ; -3.84)

Values whose 95% confidence interval exclude zero are in **bold**. The values presented in the table for Δ top-end correspond respectively to the 10^{th}, 50^{th} and 90^{th} percentile of that variable in our country-level dataset. The income growth values are based on group-specific percentiles and correspond to the following values:

L : p10 = -0.78, p50 = 0.95, p90 = 4.25

LM : p10 = -0.3, p50 = 1.07, p90 = 4.15

HM : p10 = -0.22, p50 = 1.25, p90 = 4.01

H : p10 = -0.69, p50 = 1.68, p90 = 3.78

Table A6: Linear probability models of individual support for redistribution with Country-year Random Effects (Weisstanner replication)

	Model A32	Model A33	Model A34	Model A35
Absolute Income Growth	**−1.59*** **	**−1.47*** **	**−1.32*** **	**−1.17*** **
	(0.37)	(0.37)	(0.39)	(0.39)
Relative Income Growth	**1.33*** **	**1.94*** **	**1.20*** **	**1.81*** **
	(0.42)	(0.43)	(0.42)	(0.53)
Income Decile	**−1.84*** **	**−1.88*** **	**−1.78*** **	**−1.82*** **
	(0.03)	(0.03)	(0.04)	(0.04)
Absolute x Relative Income Growth		**−0.43*** **		**−0.61*** **
		(0.06)		(0.11)
Absolute Income growth x Income Decile			**−0.04*** **	**−0.06*** **
			(0.02)	(0.02)
Relative Income Growth x Income decile				−0.01
				(0.06)
Absolute x Relative Income Growth x Income Decile				**0.04***
				(0.02)
Age in years	**0.15*** **	**0.15*** **	**0.15*** **	**0.15*** **
	(0.01)	(0.01)	(0.01)	(0.01)
Female	**5.18*** **	**5.18*** **	**5.17*** **	**5.18*** **
	(0.18)	(0.18)	(0.18)	(0.18)
Tertiary ecucated	**−6.86*** **	**−6.83*** **	**−6.86*** **	**−6.82*** **
	(0.23)	(0.23)	(0.23)	(0.23)
Unemployed	**3.36*** **	**3.48*** **	**3.40*** **	**3.54*** **
	(0.50)	(0.50)	(0.50)	(0.50)
National Unemployment Rate	**0.86*** **	**0.88*** **	**0.87*** **	**0.88*** **
	(0.31)	(0.31)	(0.31)	(0.31)
Gini market income	0.04	0.05	0.04	0.05
	(0.24)	(0.24)	(0.24)	(0.24)
GDP per capita	**−11.53*** **	**−11.19*** **	**−11.41*** **	**−11.22*** **
	(4.04)	(4.02)	(4.03)	(4.03)
(Intercept)	**191.84*** **	**187.60*** **	**189.97*** **	**187.66*** **
	(41.46)	(41.28)	(41.34)	(41.34)
Year dummies	Yes	Yes	Yes	Yes
AIC	2371057.64	2371019.86	2371058.77	2371027.01
BIC	2371378.09	2371350.65	2371389.56	2371388.82
Log Likelihood	−1185497.82	−1185477.93	−1185497.38	−1185478.51
Num. obs.	228030	228030	228030	228030
Num. groups: country:year	157	157	157	157
Var: country:year (Intercept)	102.55	101.58	101.91	101.77
Var: Residual	1914.64	1914.29	1914.59	1914.19

***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Table A7: OLS models of preferences for redistribution: Expected mobility, Belief in hard work as a source of income differences and attitudes vis-à-vis own Tax Burden

	Model A13	Model A14	Model A15
Hard work important	**−0.44*** **		
	(0.06)		
Downward Exp. Mobility		−0.08	
		(0.08)	
Upward Exp. Mobility		**−0.28*** **	
		(0.08)	
Tax Burden too high			**0.14***
			(0.07)
Hard work important x LM	−0.07		
	(0.09)		
Hard work important x HM	**−0.30****		
	(0.09)		
Hard work important x H	**−0.59*** **		
	(0.09)		
Downward Exp. Mobility x LM		0.20	
		(0.11)	
Downward Exp. Mobility x HM		0.17	
		(0.11)	
Downward Exp. Mobility x H		**0.27***	
		(0.11)	
Upward Exp. Mobility x LM		0.09	
		(0.11)	
Upward Exp. Mobility x HM		**0.30****	
		(0.11)	
Upward Exp. Mobility x H		**0.27***	
		(0.12)	
Tax Burden too high x LM			−0.15
			(0.10)
Tax Burden too high x HM			**−0.50*** **
			(0.09)
Tax Burden too high x H			**−1.02*** **
			(0.10)
LM	**−0.21****	**−0.36*** **	**−0.15***
	(0.07)	(0.08)	(0.07)
HM	**−0.41*** **	**−0.78*** **	**−0.31*** **
	(0.07)	(0.08)	(0.07)
H	**−0.83*** **	**−1.42*** **	**−0.62*** **
	(0.07)	(0.08)	(0.07)
(Intercept)	**6.74*** **	**6.59*** **	**6.39*** **
	(0.07)	(0.08)	(0.07)
Country FE	Yes	Yes	Yes
R^2	0.06	0.04	0.05
Adj. R^2	0.06	0.04	0.05
Num. obs.	23731	24495	22608

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$

Table A8: Linear probability models of believing that hard work is an important determinant of income differences / of finding one's own Tax Burden too high

	Hard Work				Tax Burden			
	Model A16	Model A17	Model A18	Model A19	Model A20	Model A21	Model A22	Model A23
Group Income growth 5 years	**0.83****		**1.17***		**2.54****		1.07	
	(0.42)		(0.67)		(1.21)		(1.93)	
Delta Gini 5 years		**−3.52*****		**−3.64*****		−0.35		−0.01
		(0.66)		(1.38)		(2.43)		(5.03)
Group Income growth 5 years x LM			0.12				1.73	
			(1.08)				(3.13)	
Group Income growth 5 years x MH			−0.73				1.93	
			(1.23)				(3.56)	
Group Income growth 5 years x H			−1.41				4.05	
			(1.22)				(3.51)	
Delta Gini 5 years x LM				−0.44				0.72
				(1.93)				(7.11)
Delta Gini 5 years x MH				0.53				−0.37
				(1.93)				(7.11)
Delta Gini 5 years x H				0.40				−1.70
				(1.94)				(7.11)
LM	3.08	**3.12***	2.80	2.85	2.28	2.46	−1.04	2.88
	(1.97)	(1.62)	(2.89)	(2.01)	(5.69)	(5.95)	(8.42)	(7.43)
HM	**6.22*****	**6.06*****	**7.53****	**6.37*****	5.80	5.40	2.19	5.18
	(1.97)	(1.62)	(2.97)	(2.01)	(5.69)	(5.94)	(8.64)	(7.43)
H	**8.94*****	**8.57*****	**11.17*****	**8.80*****	8.95	7.81	2.36	6.81
	(2.00)	(1.64)	(2.82)	(2.03)	(5.72)	(5.95)	(8.09)	(7.43)
(Intercept)	**55.56*****	**55.12*****	**54.90*****	**55.03*****	**39.20*****	**43.87*****	**42.02*****	**44.07*****
	(1.90)	(1.57)	(2.15)	(1.74)	(4.75)	(4.56)	(5.61)	(5.35)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AIC	262117.00	262097.39	262115.04	262094.41	247695.22	247698.11	247687.29	247687.49
BIC	262206.25	262186.64	262228.63	262208.00	247783.91	247786.80	247800.17	247800.37
Log Likelihood	−131047.50	−131037.69	−131043.52	−131033.20	−123836.61	−123838.05	−123829.64	−123829.75
Num. obs.	24682	24682	24682	24682	23451	23451	23451	23451
Num. groups: country:quart	52	52	52	52	52	52	52	52
Var: country:quart (Intercept)	20.10	11.86	20.81	12.92	204.84	224.47	212.27	239.44
Var: Residual	2388.19	2388.22	2388.18	2388.21	2244.67	2244.67	2244.68	2244.67

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Table A9: Linear probability models of Upward and Downward mobility expectations

	Upward Mobility				Downward Mobility			
	Model A24	Model A25	Model A26	Model A27	Model A28	Model A29	Model A30	Model A31
Group Income growth 5 years	**0.73****		0.14		**−1.14*****		−0.63	
	(0.37)		(0.59)		(0.29)		(0.45)	
Delta Gini 5 years		**−1.32***		−0.18		**1.92*****		1.26
		(0.72)		(1.47)		(0.58)		(1.20)
Group Income growth 5 years x LM			1.02				−0.40	
			(0.95)				(0.73)	
Group Income growth 5 years x MH			1.03				−1.10	
			(1.08)				(0.84)	
Group Income growth 5 years x H			0.97				−1.33	
			(1.08)				(0.84)	
Delta Gini 5 years x LM				−1.86				0.90
				(2.07)				(1.68)
Delta Gini 5 years x MH				−0.97				0.97
				(2.07)				(1.68)
Delta Gini 5 years x H				−1.69				0.76
				(2.08)				(1.69)
LM	**−2.92***	−2.86	**−4.87***	**−3.94***	0.65	0.54	1.37	1.05
	(1.74)	(1.75)	(2.55)	(2.15)	(1.36)	(1.41)	(1.96)	(1.74)
HM	**−6.69*****	**−6.80*****	**−8.57*****	**−7.35*****	1.32	1.47	3.30	2.03
	(1.74)	(1.75)	(2.62)	(2.16)	(1.36)	(1.40)	(2.01)	(1.75)
H	**−8.55*****	**−8.85*****	**−10.22*****	**−9.83*****	1.86	2.28	**4.03****	2.72
	(1.76)	(1.77)	(2.49)	(2.18)	(1.39)	(1.43)	(1.93)	(1.77)
(Intercept)	**63.72*****	**64.35*****	**64.86*****	**65.01*****	**11.84*****	**10.79*****	**10.86*****	**10.41*****
	(1.67)	(1.58)	(1.90)	(1.77)	(1.45)	(1.41)	(1.60)	(1.55)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AIC	268506.32	268505.51	268505.15	268501.37	271678.70	271681.00	271677.46	271678.74
BIC	268596.05	268595.24	268619.35	268615.57	271768.43	271770.73	271791.66	271792.94
Log Likelihood	−134242.16	−134241.76	−134238.57	−134236.69	−135828.35	−135829.50	−135824.73	−135825.37
Num. obs.	25779	25779	25779	25779	25779	25779	25779	25779
Num. groups: country:quart	52	52	52	52	52	52	52	52
Var: country:quart (Intercept)	15.66	15.86	16.18	16.74	7.45	8.34	7.49	9.12
Var: Residual	1947.49	1947.49	1947.49	1947.49	2205.11	2205.13	2205.06	2205.12

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$