To Redistribute or not to Redistribute?

The Effects of Inequality, Development, Absolute and Relative Income, and Party Polarisation on Preferences for Redistribution

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Abstract

When do people want redistribution? Income inequality has been on the rise in recent decades, especially in advanced democracies. Since redistribution is the main tool that governments have at their disposal to ameliorate income disparities, and government policies are (at least partly) influenced by public opinion, abating income inequality will largely depend on whether people want redistribution. Therefore, this has brought renewed importance to understanding the determinants of support for redistribution.

Redistributive preferences are commonly viewed as being driven by self-interest, implying that support for redistribution is monotonically determined by how much a person can expect to gain or lose from it. However, empirical evidence has not always been consistent with this framework, and findings have varied due to data availability as well as differences in methodology and the operationalisation of key variables.

This dissertation consists of three papers that make use of the World Values Survey and the European Values Study to analyse the determinants of respondents' support for redistribution. The first paper focuses on the effects of inequality and development on public support for and division over redistribution. The results show that support is higher in countries that are rich and unequal, and division is lower in countries that are poor and equal. The second paper focuses on how people perceive the utility of redistribution in absolute or relative terms depending on whether they can expect to gain or lose from it. The results show that people below the mean income base their preferences on their absolute distance from the mean, whereas for people above the mean it is based on their relative distance from the mean. The third paper focuses on the role that political parties play in (de-)activating self-interest, using the Comparative Manifesto Project to measure party polarisation on economic issues. The results show that people, particularly the poor, are more self-interested when parties are more polarised in their economic positions.

Overall, the findings indicate that inequality drives support for redistribution more in rich countries because the poor have more to gain, and the rich are willing to pay more to ameliorate disparities. This suggests that public opinion in advanced democracies is unlikely to tolerate protracted rises in inequality.

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> *The natural distribution is neither just nor unjust; nor is it unjust that persons are born into society at some particular position. These are simply natural facts. What is just and unjust is the way that institutions deal with these facts.*
>
> —John Rawls

1 Introduction

1.1 Inequality and Redistribution

Politics is about who gets what, when, and how (Lasswell, 1950). Following this conception of politics, economic inequality is one of the major concerns of political science. Scholars have long analysed trends in inequality and have sought to understand its determinants. Theories of inequality have varied based on the factors that may affect the distribution of economic resources, or if doing so is even feasible.

In 1896, Italian sociologist Vilfredo Pareto observed that 80% of the land in Italy was owned by just 20% of the people. Seeing how this pattern of distribution often repeated itself in the economy, it inspired him to develop the well-known 'Pareto's Law' (also called the '80-20 rule'), which asserts that 80% of consequences come from 20% of cases. According to Pareto's Law, the allocation of economic resources follows a power-law distribution that is fundamentally determined by social structure of human nature (Pareto, 1896; 1964; Persky 1992).[1] Societies distribute resources according to a mixture of skill, luck and social norms, which are broadly similar in every society. This view has often been criticised for implying that levels of inequality would be stable across time and context. If inequality is caused by human nature, then it should be generally constant across societies. But, in fact, levels of income inequality vary substantially across countries and time – something that Pareto himself acknowledged – revealing trends and patterns to be explained. Still, it is remarkable that, in 1989, a century after Pareto's initial observation, the income distribution of the world closely followed the '80-20 rule', as shown in *Figure 1.1*.

[1] The Pareto distribution follows a probability density function $f(x)$ defined in Eq. 1.1, where X is a random variable, x_m is a positive scale parameter, and α is a positive shape parameter. The '80-20 rule' occurs when $\alpha = \log_4 5 \approx 1.16$.

$$f_X(x) = \frac{\alpha x_m^{\alpha}}{x^{\alpha+1}} \{x < x_m\} \tag{1.1}$$

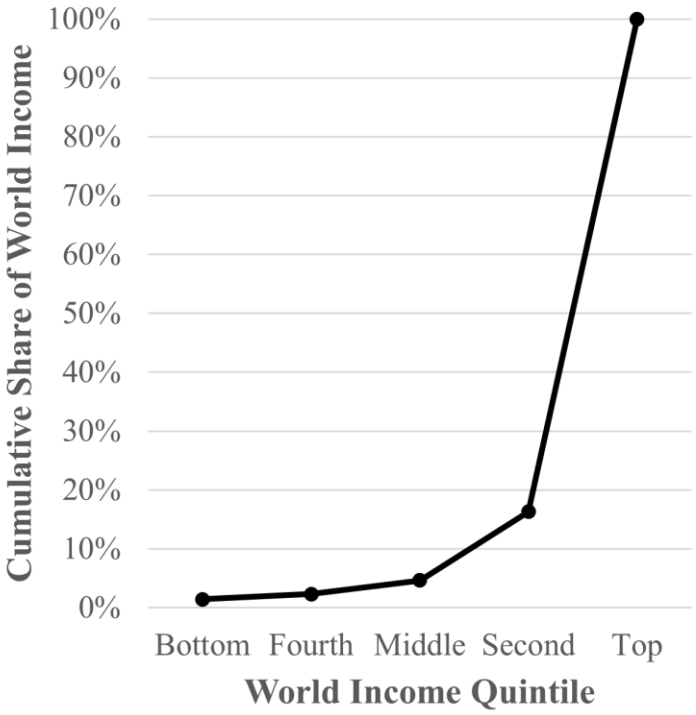


Figure 1.1 World income distribution in 1989.

Source: United Nations Development Program, 1992, Human Development Report 1992 (New York: Oxford University Press for the United Nations Development Program).

One of the most prominent theories explaining changes in inequality was proposed by Simon Kuznets (1955), who hypothesised that development and inequality follow an 'inverted U-shaped' relation, as shown in *Figure 1.2*. The explanation for the 'Kuznets curve' is that industrialization at first increases economic inequality due to the accumulation of capital and internal migration, but this is later ameliorated as rising affluence leads to democratization and the creation of a welfare state. The Kuznets curve offered a compelling explanation for trends in inequality, particularly in the Western world. Disparities had grown during industrialization, epitomized in the Gilded Age, before deflating in the post-War Era. This optimistic outlook has been extensively investigated, and although many studies have found mixed evidence for it (see, e.g., Lindert & Williamson 1985; Lindert 1986; Feinstein 1988; Anand & Kanbur 1993; Fields 1995; Fields and Jakubson 1993; Deininger and Squire 1998; Schultz 1998), developed countries are consistently shown to be more equal (Theyson & Heller 2015; Inglehart 2018).[2]

[2] The data from the WIID used in this thesis corroborates that richer countries are generally more equal (see *Figure* **3.1**).

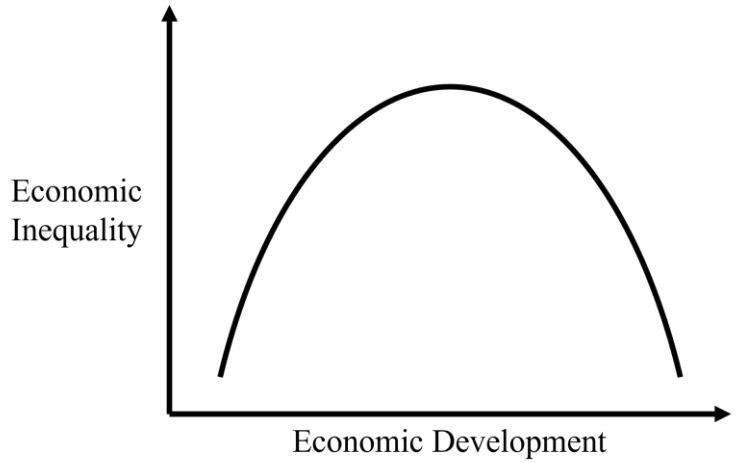


Figure 1.2 Kuznets curve. Source: Created by author.

Since the 1980s, though, income inequality within countries has been on the rise, as shown in *Figure 1.3*, especially in developed countries (Lakner & Milanovic 2013; Piketty 2014; Hung 2021). If development supposedly reduces inequality in rich countries, why, then, has it been on the rise? Modern theorists have developed more nuanced theories of economic distribution to explain this trend. In one of the sharpest critiques of the Kuznets curve, Piketty (2014) argues that the rise in inequality is an inevitable consequence capitalism because capital returns grow faster than wages (formulized as $r > g$). Furthermore, Piketty argues that the decrease in inequality observed in the 20th Century was due to the exceptional forces, namely war, socialist movements, and new technology.

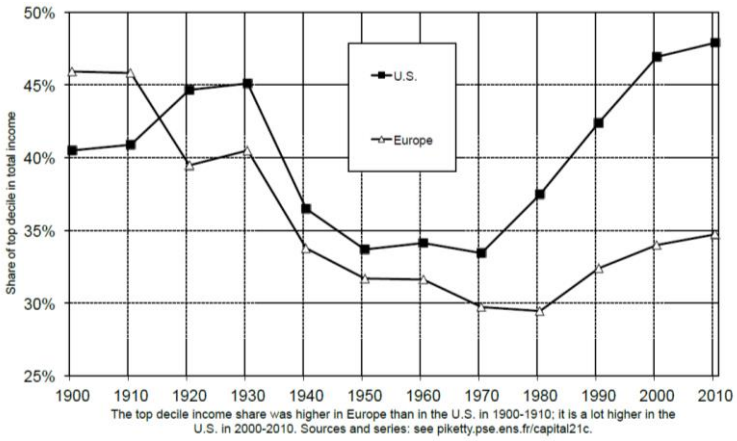


Figure 1.3 Income inequality: Europe vs. the United States, 1900-2010.

The top decile income share was higher in Europe than in the U.S. in 1900-1910; it is a lot higher in the U.S. in 2000-2010. Source: Piketty (2014). See piketty.pse.ens.fr/capital21c.

Although Piketty's explanation serves to explain recent trends in inequality, it offers little explanation for historical trends in inequality that stretch further back in time. An alternative interpretation is offered by Milanovic (2016), who proposes that inequality evolves in 'Kuznets waves', shown in *Figure 1.4*, based on the interplay of economic and social forces (e.g., the labor supply, demographics, globalization, technology, conflicts, etc.).

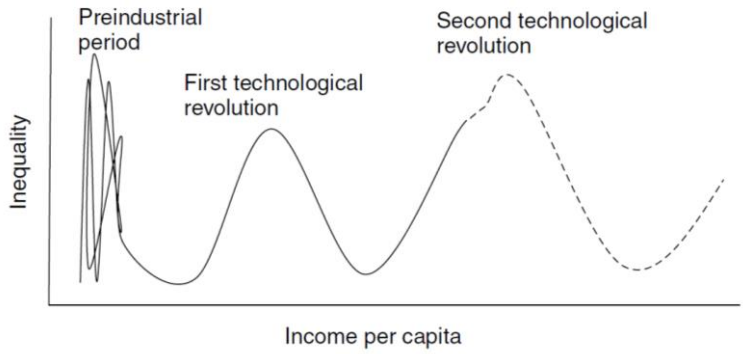


Figure 1.4 Kuznets waves.

Expected pattern of changes in inequality versus income per versus income per capita from the preindustrial through the postindustrial period and into the future (dotted line). Source: Milanovic (2016).

One thing that both Piketty and Milanovic do agree on is that the future of inequality will largely be determined by politics. Milanovic argues that reducing inequality will depend on "the ability of the 'losers' in this system to organize themselves politically" (2016, p. 217), and Piketty argues that "the institutions and rules that govern democratic debate and decision-making therefore play a central role, as do the relative power and persuasive capabilities of different social groups" (2014, pp. 480-1). Thus, the future of inequality will depend on the political capacity to enact redistribution.

Redistribution is the public transfer of economic resources across social groups, typically with the aim of reducing economic inequality. Redistributive policies usually take the form of tax and transfer programs that grant net benefits to lower-earners and incur net costs to higher-earners. This is the main instrument that governments have at their disposal to ameliorate inequality, so understanding when they are incentivised to enact such policies is a crucial first step to knowing how inequality will evolve. Governments, especially democracies but even autocracies, are accountable to (or at least constrained by) public opinion. People's attitudes influence how they vote, and, by extension, the policies governments are driven towards (Anderson & Beramendi 2008, p. 12; Rueda & Stegmueller 2019, p. 8). Thus, the dynamics theorized between inequality, redistribution and public opinion follow a causal cycle flow: inequality affects public opinion, which affects voting behaviour, which affects party positions, which affects redistribution, which then affects inequality again. Consequently, the determinants of public preferences for redistribution have received considerable attention (e.g., Dion & Birchfield 2010; Alesina & Giuliano 2011; Schmidt-Catran 2016; Dimick *et al.* 2018; Rueda 2018; Rueda & Stegmueller 2018).

Since the 1980s, as income inequality started rising in advanced democracies, scholars have been trying to understand why governments have not taken sufficient steps to mitigate this trend. There are mainly three possible explanations for this. One possible explanation is that governments lack the capability of enacting redistributive policies effectively and efficiently due to other constraints. As Piketty (2014) points out, in capitalism, (at least in its current form) incomes from rent tend to grow faster than incomes from wages. Moreover, money has become more fluid. Technological advancements have made it easier for individuals and businesses to transfer income internationally to jurisdictions with more favourable fiscal

policies. Globalization has made countries increasingly economically interdependent on each other, making it more difficult for any government to reallocate resources within their own country.

Another explanation is that people want more redistribution, but that governments – even democratic ones – are simply not responsive enough to public opinion. In an analysis of the United States, Bartels (2008) finds that politicians are responsive to the views of rich voters, but not the poor, due to the influence of campaign donations. Milanovic (2016, p. 190) has described a similar trend towards plutocracy in a global context: "In a positive feedback loop, pro-rich policies further increase the incomes of the rich, which in turn makes the rich practically the only people able to make significant donations to politicians, and thus the only ones who get a hearing from the politicians".

Both explanations share an underlying assumption that public opinion is pushing governments to redistribute more, but they are unwilling or unable to do so. Going further back in the casual chain, a final explanation is that public opinion has become more tolerant of inequality than before, either because people are not aware of it or because people do not believe that redistribution will be worth it. Do rising levels of income inequality made people want more redistribution? What other factors can condition this response? This question serves as the motivation for the thesis because it addresses a crucial question about the future of economic inequality. If people do not want redistribution, then it is improbable that governments will even try to do reduce inequality.

1.2 Research Design

1.2.1 Data: Why the Integrated Values Survey?

There are several cross-national survey datasets that include questions on income equality: the World Values Survey (WVS), the European Values Study (EVS), the European Social Survey (ESS), the Global Barometer Surveys (GBS),[3] and the International Social Survey Programme (ISSP). The WVS and EVS have similar methodologies, as they are both run by the World Values Survey Association, so they can be integrated in what is called the Integrated Values Survey (IVS). This thesis uses the IVS as the main dataset because it is the largest cross-national survey available, covering the broadest range of countries over the longest time span. The IVS consists of 425 surveys in 115 countries across every world region between 1988 and 2020. This helps maximise the reliability and generalizability of the findings. For comparison, the ESS – which is also commonly used in this literature – consists of 269 surveys of 40 countries in Europe between 2002 and 2020.

The dependent variable in the analysis is individual-level support for redistribution, measured by the 'Income Equality' question from the IVS surveys (Item E035). The item uses a ten-point scale whereby 1 indicates support for less redistribution and 10 indicates support for more redistribution. The item is worded as follows:[4]

[3] The GBS is the integration of five regional survey projects: Asia Barometer, Afro Barometer, Arab Barometer, Eurasia Barometer and Latinobarómetro.

[4] The direction of the question is reversed for clarity so that higher values represent more support for redistribution.

> *How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal.*

This question has been used as the outcome variable in numerous studies (Ansell & Samuels 2010; Pepinsky & Welborne 2011; Hayward & Kemmelmeier 2011; Iglesias, López & Sántos 2013), as have other questions on economic issues from the IVS, like business ownership (Bjornskov & Paldam 2012) and individual responsibility to provide (Sealey 2018; Andersen *et al.* 2021). Survey questions that use ten-point scales such as this have been found to be more useful than five-point scales because they have higher convergent and discriminant validity while maintaining similar means (Coelho & Esteves 2007).

Each paper includes an appendix table outlining sources of missing data, an appendix table outlining the means, standard deviations and correlation coefficients of the variables used in the analyses, and appendix tables with the non-standardised results from the regression models conducted. Response rates for the questions in IVS that are of interest are generally high. Economic data at the country-level also has high coverage once country-year observations are matched with the nearest observation with a 2-year margin of difference. The only variable that has a substantial rate of missing data is party polarisation. Since the CMP mainly covers advanced democracies, this offers data for 40.8% of the country-year observations of the IVS. Although this is indeed a high rate of missing data, alternative datasets with wider coverage are scarce, partly because the cases missing tend to be countries with less democratic political systems that often lack have multiple competitive parties to compare. Overall, the CMP dataset is considered the best option to address the question regarding parties' role in the formation of redistributive preferences.

1.2.2 Income Position

Income position refers to an individual's place in the income distribution. This concept is central to the thesis, as it is discussed at length and operationalised in various ways. Briefly, income position can be operationalised using *scale measures* based on raw income (e.g., $0-$9,999, $10,000-$19,000, etc.), *rank measures* based on the position on the distribution (e.g., percentile, decile, quintile, etc.), or *mean-centred measures* (e.g., raw income minus mean income). Mean-centred measures are the best proxy for the utility of redistribution because it reflects what people can expect to gain or lose if incomes were equalised. Rank measures, though, are better at reflecting aggregate effects of income position because its values represent position in a way that is proportional to the share of the sample covered.

In the first paper, income position is operationalised as income percentile because the aim of the study is to estimate public division over redistribution. Since income percentile follows a uniform distribution (i.e., the value reflects the share of respondents), its effect on redistributive preferences is the best way of analysing public division short of using an aggregate measure of polarisation.

The second paper delves more deeply into the concept of income position, since it is more focused on how people perceive the utility of redistribution, meaning the net outcome a

person can expect if incomes were equalised. If redistribution was conducted to the point that all incomes were equalised, then every person's income would become equal to the mean. Thus, the distance between a person's income from the mean is the best proxy for the utility of redistribution. For this reason, instead of using income percentile, which reflects a person's rank in the income distribution, the second paper uses a mean-centred approach. The difference between a person's income and the mean, *income distance*, is used as a proxy for absolute utility, and the ratio between the income and the mean, *income ratio*, is used as a proxy for relative utility. Furthermore, the theory in the second paper proposes that people perceive the utility of redistribution differently depending on whether they can expect to gain or lose from it. In order to reflect this, income distance and income ratio are modelled as having discontinuous effects, with the mean income serving as the discontinuity cut-off: people below the mean income can expect to gain from redistribution, while those above the mean can expect to lose from it. For the sake of simplicity, people below the mean income are referred to as *poor*, and those above it are referred to as *rich*. In sum, the second paper uses income distance and income ratio as well as the poor/rich discontinuity to operationalise the utility of redistribution as absolute and relative gains and losses.

The third paper, building on the previous one, uses income distance to analyse whether party polarisation moderates economic self-interest among the public. There are some constraints on the analysis due to data availability and the multilevel nature of the specification. The data for party polarisation is obtained from the Comparative Manifesto Project (CMP), which only covers a smaller set of countries that are more developed and democratic, and the models include random slopes for the effect of income position to account for differences across countries. As a result, the analysis uses sample splitting around the mean to differentiate the effects between the rich and the poor.

Next, I describe the methodology used to operationalise income percentile for respondents in the IVS dataset as well as their raw household income, which is used to calculate income distance and income ratio based on their relation to the mean income.

1.2.3 Income Scales in the IVS

The IVS includes an 'Scale of Incomes' question (Item X047) that uses country-specific household income scales labelled by national currency adapted to ten categories (10 per cent lowest to 10 per cent highest income category) and is worded as follows:[5]

> *Here is a scale of incomes and we would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come into, after taxes and other deductions. (1) First step, (10) Tenth step.*

This item has limitations in terms of comparability and interpretability because the values used as the cutoffs for the steps vary across countries and, sometimes, even across the surveys of the

[5] Waves 1 and 2 of the EVS asked for pre-tax income. Wave 1 is not used here because it did not include the question on income redistribution (the main variable of interest). Moreover, this item is used to estimate the rank position of respondents in the income redistribution, which are unlikely to be affected by transfers.

same country. Nevertheless, it can still be used to rank respondents based on the distribution of the responses for their country-year survey (see Donnelly & Pop-Eleches 2018). The distributions of responses to the item on income scales for each survey are illustrated in *Figures A1.1–A1.18*.

Once the income percentile of IVS respondents is estimated, their household income can be obtained using the World Income Inequality Dataset (WIID). The WIID uses the Shorrocks-Wan approach (Shorrocks & Wan 2008) to produce synthetic distributions of net household incomes at the country-year level, which describe the estimated income for each percentile group (see Gradín 2021, Appendix A).[6] Therefore, joining IVS survey data with the WIID dataset by income percentile provides a reliable and comparable estimate for how much money each respondent makes. The process for obtaining respondents' raw income is shown in

Figure **1.5** using the example of the survey of Spain in 2008. Based on their percentile position, each group is then matched with their corresponding raw income from the WIID.

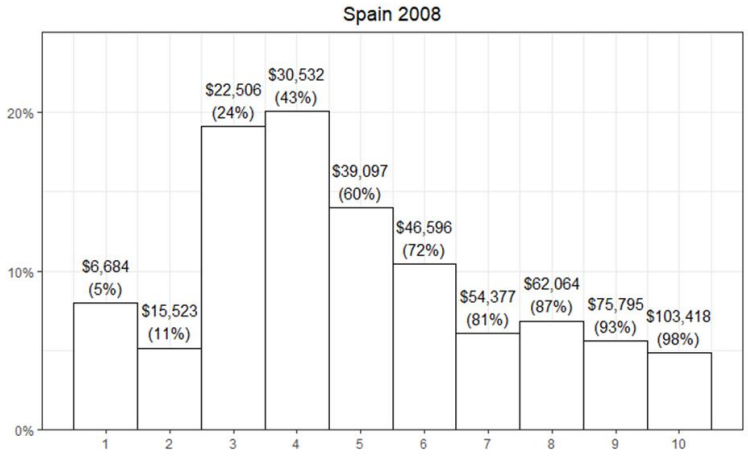


Figure 1.5 Histogram of responses for 'Income Scales' (Item X047) of IVS for Spain in 2008.

Estimated income percentiles in parentheses. Estimated household income from WIID.

This process could also be replicated using data from the World Inequality Database (WID), which similarly uses survey and tax data to create synthetic distributions of income and wealth for countries (Alvaredo *et al.* 2021). The WIID is used here instead of the WID because it has more coverage and offers an integrated dataset by country, year and income percentile. Although the WID has more limited coverage, partly due to the availability of data needed for its rigorous methodology, it would be useful for future studies to observe the different effects that pre-/post-tax income has on preferences, as well as wealth.

Table 1.1 shows how this is done with the example of the survey of Spain in 2008. As we can see, the share of respondents that fall into each scale is hardly constant: 5% place themselves on the 10th scale, but 20% on the 4th. But the cumulative share can indicate where each group of respondents falls in relation to the sample. For example, 96% of respondents placed themselves at or below the 9th scale, so we know that the respondents that picked the

[6] The WIID estimates net household income (after tax and transfers) for each percentile of the population.

10th scale represent the top 4% of respondents. Each group is then assigned an income percentile equivalent to the mean of the range of the cumulative share that correponds to the income scale they selected. For example, the respondents that picked the 4th scale fall between the 14th and the 33rd percentiles, so they are assigned the 24th percentile.

Table 1.1. Responses for 'Income Scale' (Item X047) in the IVS for Spain in 2008.

Income Scale	Freq.	Share	Cumulative Share	Income Percentile	Income	Mean Income	Income Distance	Income Ratio
1	78	8%	8%	5th	$6,684	$39,286	-$32,602	0.17
2	57	6%	14%	11th	$15,523	$39,286	-$23,763	0.40
3	181	19%	33%	24th	$22,506	$39,286	-$16,781	0.57
4	186	20%	53%	43rd	$30,532	$39,286	-$8,754	0.78
5	131	14%	67%	60th	$39,097	$39,286	-$190	1.00
6	100	11%	77%	72nd	$46,596	$39,286	+$7,309	1.19
7	57	6%	83%	81st	$54,377	$39,286	+$15,091	1.38
8	64	7%	90%	87th	$62,964	$39,286	+$22,778	1.60
9	53	6%	96%	93rd	$75,795	$39,286	+$36,508	1.93
10	43	5%	100%	98th	$103,418	$39,286	+$64,132	2.63

Notes: Income Scale indicates response to 'Income Scale' question. Freq. (Frequency) indicates the number of respondents that placed themselves on the income scale. Share indicates the weighted share of respondents that placed themselves on the income scale. Income Percentile is the average income percentile that can be imputed to each income group. Income is the estimated net household income in the WIID for the corresponding country, year and income percentile. Mean income is the average income for the country-year in the WIID. Income Distance is income minus the mean income. Income Ratio is income divided by mean income.

This method maximises the variance that can be extracted from the responses while keeping the measure of income percentile unbiased. The strength of this approach is that it will not yield biased measurements even if respondents give biased answers. For example, assuming that the scales used in the survey for Spain in 2008 were accurate and the sample was representative, it is clear that the poorest respondents overestimated their place on the income distribution and the richest ones underestimated it. Although this reduces the variance of the measure, the resulting ranks are still accurate because they comapre respondents to the distribution of responses, even if the bias of respondents is correlated with their income position. The underlying assumption in this approach is that respondents do not place themselves lower on the income scale the richer they are, and vice versa. In other words, biasing the measure of income percentile would require people's income position to be inversely proportional to their perception of their income position.

Next, the income distance and income ratio of respondents can be obtained based on their income and the mean income for their corresponding country-year, which is equivalent to GDP per capita.[7] Following the example of the survey of Spain in 2008, *Table 1.1* shows the income distance and income ratio corresponding to each group from the income scale item.

[7] In the WIID database, GDP per capita is identical to the average income of all percentiles. As explained in the WIID Companion user guide: "Note that the percentile income shares refer to the distribution of per capita net income, as estimated based on available survey information. Due to the lack of enough consistent information on survey mean incomes, though, the percentile mean incomes reported in the dataset refer to the distribution of country gross domestic product (GDP) instead (i.e. they are obtained by multiplying the percentile income share by the corresponding per capita country GDP, in constant 2017 PPP USD)" (Gradín, 2021, p. 3).

Income distance is calculated as individuals' income minus the mean income, as shown in Eq. 1.2. Since the GDP per capita of Spain in 2008 was $39,286, in *Table 1.1* respondents who selected 1 on the Income Scale are estimated to make -$32,602 less than the mean, and respondents who selected 10 are estimated to make +$64,132 above it. *Figure 1.6* shows the distribution of income distance for IVS respondents.

$$\text{Income Distance} = \text{Income} - \text{GDP per capita} \tag{1.2}$$

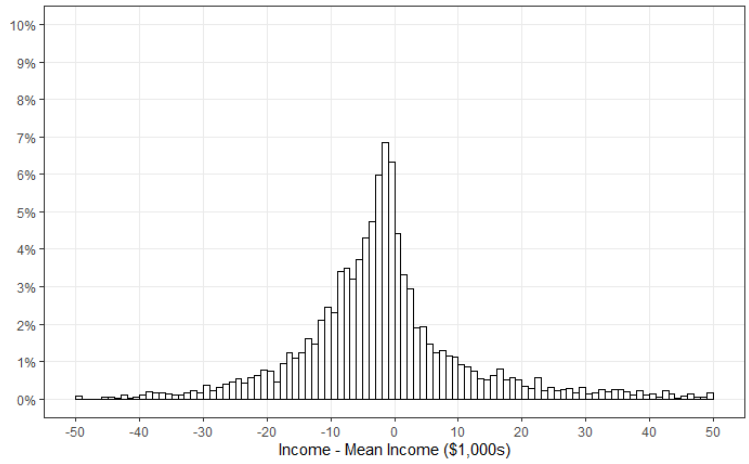


Figure 1.6 Histogram of income distance of IVS respondents.

Income ratio is operationalised as the ratio scale between incomes and mean income, as shown in Eq. 1.3. Thus, a value of 1 indicates that a respondent's income is equal to GDP per capita, a value of 2 indicates an income that is double the mean, and a value of 0.5 indicates an income half of the mean. In the example from *Table 1.1*, respondents who selected 1 on the Income Scale are assigned 0.17 because their income ($6,684) is 17% the GDP per capita ($39,286), and respondents who selected 10 are assigned 1.63 because their income ($103,418) is 163% the GDP per capita.

$$\text{Income Ratio} = \frac{\text{Income}}{\text{GDP per capita}} \tag{1.3}$$

One issue with the operationalisation of income ratio is that a simple division of income by the mean yields an imbalanced measure, as shown in *Figure 1.7*. All respondents below the mean are distributed between 0 and 1, while respondents above the mean have no upper limit. This could lead to a bias in the estimation of the effects of income ratio. Moreover, this operationalisation implies that the relative distance between an income of zero and the mean income is equivalent to the relative distance between the mean income and an income twice of the mean. If instead we take the inverse of the ratio, dividing the mean income by income, then the measure would reflect people's expected net outcome from redistribution (i.e., the mean income) in relation to their income. However, the same problem occurs but the other way around. There is no limit for people under the mean income, but all respondents above the mean are now constrained between zero and one.

Ideally, each step in the measure for income ratio should reflect distances that are changing at a constant rate. In order to make the measure for income ratio symmetrical vis-à-

vis the mean, values below 1 are transformed using a Box-Cox transformation with a power parameter of -1 and a shift parameter of 1 as formulated in Eq. 1.4.

$$f(\text{Income Ratio}) = \begin{cases} \text{Income Ratio} & \text{if Income Ratio} \geq 1 \\ \dfrac{\text{Income Ratio}^{-1} - 1}{-1} + 1 & \text{if Income Ratio} < 1 \end{cases} \quad (1.4)$$

Figure 1.7 shows the distribution that results from this transformation. Basically, it takes income divided by the mean for the rich, the negative of the mean divided by income for the poor, and then corrects for the gap between the lower bounds. This way, there is an equivalent distance between someone who makes twice the mean income and someone who makes half of it, or between someone who makes three-times the mean income and someone who makes one-third of it. An alternative to this approach would be to use a logarithmic transformation, which would also be symmetrical around the mean. Although this approach yields a more normal distribution, the rate of change in this case is not constant but rather exponential. This would imply that people perceive the relative utility of redistribution as having diminishing returns itself.

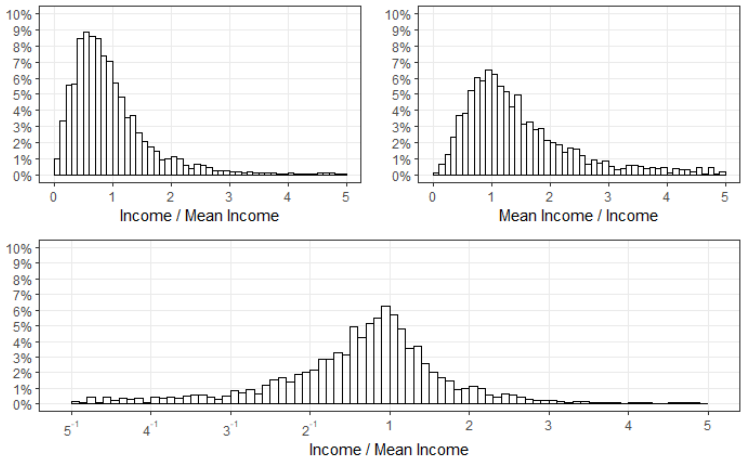


Figure 1.7. Histogram of income ratio of IVS respondents.

1.2.4 Analyses

Since the data has a multilevel structure (individual respondents are nested in country-year surveys nested in countries), the analyses use mixed-effects models with both fixed and random effects to address potential complications (clustering, nonconstant variance, underestimation of standard errors, etc.). This type of model has been proposed for studies of pooled cross-sectional time-series datasets (see Bell, Fairbrother, & Jones 2019) and has been employed in similar studies (Fairbrother 2013; 2016; Schmidt-Catran 2016; Sealey 2018; Rueda 2018). Mixed-effects models such as these yield results that are equivalent to group fixed effects models, but with the advantage of being more parsimonious and automatically clustering standard errors.

The analyses for the three papers use mixed-effects models predicting preferences for redistribution with some variations. The first paper includes random intercepts for country,

random slopes for year and income percentile by country, and de-meaned values for Gini and GNI per capita. The second paper includes random intercepts for country and country-year, and random slopes for income distance, income ratio, and the discontinuity around the mean income. The third paper includes random intercepts for country and random slopes for income distance.

The models include country-level random intercepts and random slopes for the effects of individual-level explanatory variables (i.e., income position). These random effects account for systematic differences between countries in redistributive preferences as well as its relationship with income position. A country's region and the majority religion can have important effects on how its population views social policies (Dion & Birchfield 2010; Andersen *et al.* 2021). Historical background can also be a potential source of endogeneity between public opinion and social policy. For example, countries with communist legacies have been associated with economic stagnation (Benjamin & Kautsky 1968; Crafts & Toniolo 2010; Harrison 2012) and weaker economic-based political cleavages (Gijsberts & Nieuwbeerta 2000; Rohrschneider & Whitefield 2009; Saarts 2016).

Apart from this, the models in Paper 1 and Paper 3 also include country-level random slopes for the effect of year to control for time trends that are specific to a country due to unobserved time-varying factors that can also affect economic attitudes. For example, some scholars have noted that immigration can hinder support for redistribution due to inter-group dynamics and how the public perceives the recipients of such policies (Finseraas 2008; Duch & Rueda; 2014; Alesina *et al.* 2018). Since Paper 2 is focused on individual-level variables, the random effects are grouped at the country-year survey level. This accounts for all variance observed in redistributive preferences due to differences across countries as well as differences due to time-varying factors such as growth, inequality, or immigration. Thus, the models estimate the discontinuous effects of income distance and income ratio without bias from country-level factors.

Furthermore, the country-level variables (i.e., Gini and GNI per capita) are de-meaned for the models in Paper 1 in order to differentiate between their cross-sectional and longitudinal effects. This involves calculating the average value for Gini and GNI per capita for each country observed in the sample. The models then include the value for the country-mean, which reflects the cross-sectional effect, and the difference between the country-mean and the country-year value, which reflects the longitudinal effect (Mundlak 1979; Fairbrother 2014; Bell *et al.* 2019). As I discuss in the literature review and Paper 1, redistributive preferences likely have an endogenous relation with inequality and development because people's attitudes are conditioned by their macro-economic context, but public opinion can also influence government policy and, hence, the macro-economic context.

The country-level data on party polarisation, though, is not de-meaned in Paper 3, for three main reasons. First, the data availability of the CMP puts more constraints on the analysis of the IVS dataset. As a result, disaggregating cross-sectional and longitudinal effects of party polarisation leads to large margins of errors, despite similar results. Second, party polarisation is not de-meaned so that its effect can account for potential cross-sectional dependence. In other

words, public opinion may be conditioned by party polarisation in a more elastic way, responding to how polarised parties are, rather than responding monotonically to changes in polarisation. Finally, the models in the third paper control for Gini and its interaction with income position. This accounts for potential reverse causality due to changes in public opinion driven by macro-economic shifts that could influence political parties.

1.3 Thesis Plan

This thesis is organised into six chapters. In this first chapter Introduction, I outlined the motivation of the thesis as well as the research design for the papers. Rising income inequality within advanced democracies is the prime motivation for this research project. The main questions I aim to address here are whether the public opinion is less tolerant of income disparities in developed countries, what underlying mechanisms drive individuals' redistributive preferences, and whether political actors have the capacity to moderate these drivers.

In the second chapter, Literature Review, I outline and discuss key concepts and theories featured in the literature on preferences for redistribution. The key concepts discussed are redistributive preferences, inequality, income position and economic development. The theoretical discussion parts from the common model based on self-interest developed by Romer (1975) and Meltzer and Richard (1981), and then outlines theories that have complemented it, such as altruism, prospective utility, and priming. In the end of the literature review, I outline some methodological takeaways and gaps in the literature that prompt the papers in the thesis.

The third chapter consists of Paper 1 – *Good Samaritan or Rich Samaritan?*, which examines the interacted effect of economic development and income inequality have on public support for redistribution and public division over it. The theory proposes that economic development makes people less tolerant of income inequality because the poor have more to gain, the rich have more to give, and increased state-capacity means that the government can enact redistribution more efficiently and effectively. The theory also proposes that inequality and development make people less divided over redistribution. Inequality means that more people stand to gain from redistribution and it also enhances altruism among the rich. Development enhances social affinity and reduces the costs of redistribution. Therefore, people are more divided over redistribution in countries that are less developed and more equal. The theoretical model is illustrated in *Figure 1.8*. The results from the analysis of the IVS data provide support for these hypotheses.

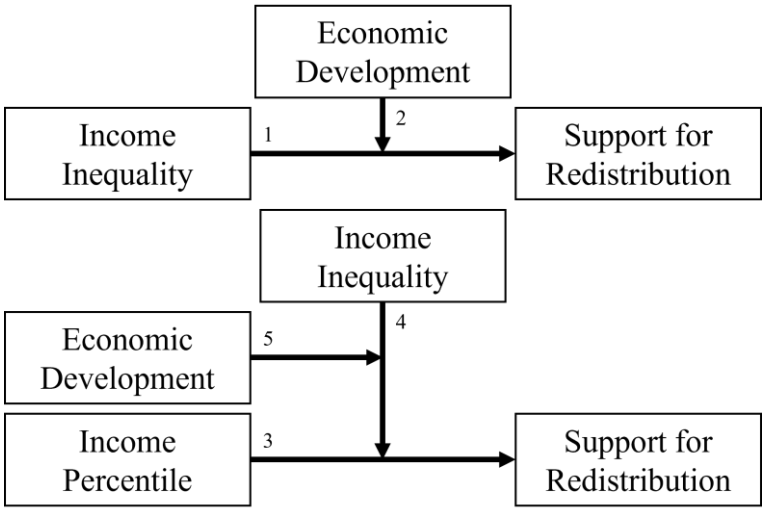


Figure 1.8 Theoretical model for Paper 1 – Good Samaritan or Rich Samaritan.

1. Income inequality increases support due to inequality aversion. 2. Economic development makes people more open to redistribution due to increased resources and state-capacity. 3. Income percentile drives support for redistribution due to economic self-interest. 4. Income inequality weakens the effect of income percentile because fewer people pay for redistribution. 5. Economic development weakens the moderating effect of income inequality by reducing the relative costs of redistribution.

The fourth chapter consists of Paper 2 – *Absolute Gains, Relative Losses*, which delves into the micro-level mechanisms that drive individual preferences for redistribution. Building on previous research, the theory proposes that people perceive the utility of redistribution differently based on whether they can expect to gain or lose from it. Based on self-interest, preferences should reflect absolute utility, but altruism suggests that people who lose from redistribution are less sensitive to absolute utility. Meanwhile, prospect theory suggests that people also perceive utility in relative terms, and that people weigh prospective losses more heavily. Thus, the paper hypothesises that people under the mean income are sensitive to their income distance, while people above the mean are sensitive to their income ratio. The theoretical model is illustrated in *Figure 1.9*. This study offers a micro-level explanation for why people in developed countries are less tolerant of inequality: the poor have more to gain, and the rich have less to lose in relative terms.

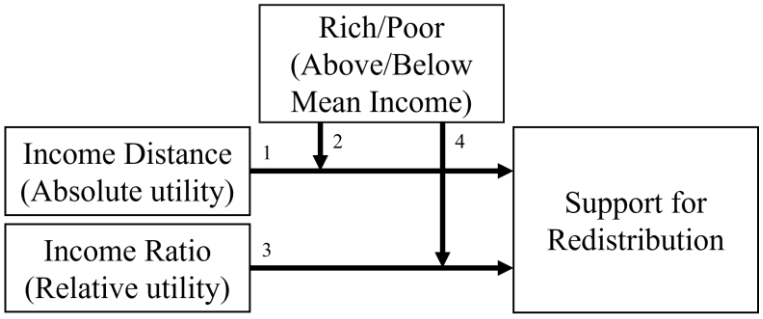


Figure 1.9 Theoretical model for Paper 2 – Absolute Gains, Relative Losses.

1. Self-Interest drives the effect of absolute utility. 2. Altruism makes the effect of absolute utility weaker for rich. 3. Status quo bias drives effect of relative utility. 4. Loss aversion makes the effect of relative utility stronger for the rich.

The fifth chapter consists of Paper 3 – *Activating Self-Interest*, which focuses on the role that political parties play in shaping public opinion over redistribution. Party polarisation is theorised to moderate self-interest among the public by priming voters about income

equality, bringing attention to the issue, and enhancing voter sorting based on income position. For this paper, the IVS dataset is merged with data on party polarisation over economic issues from the CMP. The results from the analysis indicate that party polarisation enhances the effect of income position on support for redistribution, especially among the poor. The theoretical model is illustrated in *Figure 1.10*. This finding suggests that public opinion on inequality will be contingent on the agency of political actors, who have the capacity to activate (or re-activate) people's economic self-interest.

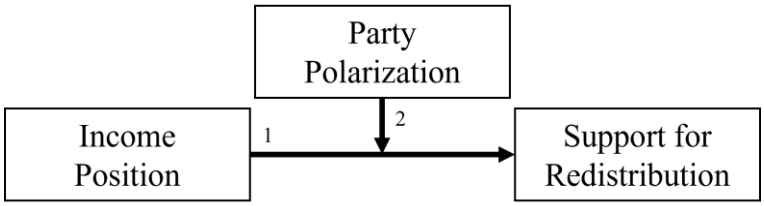


Figure 1.10 Theoretical model for Paper 3 – Activating Self-Interest.

1. Income position increases support due to economic self-interest. 2. Party polarisation strengthens self-interest by priming voters.

Finally, in the sixth chapter, Conclusion, I discuss the findings and implications from the three papers, outline avenues for future research and draw methodological takeaways on the study of inequality and public opinion. The findings imply that people in developed country are less tolerant of inequality and less divided over redistribution. This is because people are aware of and sensitive to their position on the income distribution, but the poor perceive the utility of redistribution in absolute terms, while the rich do so in relative terms. Moreover, political parties also influence public opinion, which explains part of the heterogeneity in attitudes that exists on inequality. These implications will be useful to political leaders who must gauge and navigate public opinion on economic matters. The sections on future research and methodological takeaways outline other factors and methods that can be used to grow a more comprehensive understanding of redistributive preferences. The effect of economic development could be understood better by disaggregating the effects of affluence and state-capacity. The effect of inequality may be offset by governments' social spending. Cultural attitudes may be a driving factor moderating economic self-interest. Since public opinion, public policy and social context are interrelated, exploring their effects could be done effectively by combining cross-national surveys to provide larger datasets, and by using panel series modelling with simultaneous equations to account for endogeneity. I conclude with some final remarks on the role that public opinion plays in redistribution, whether governments have the capacity to enact meaningful redistribution nowadays given technology and globalization, and what this could mean for the future of income inequality.

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1.5 Appendix Figures

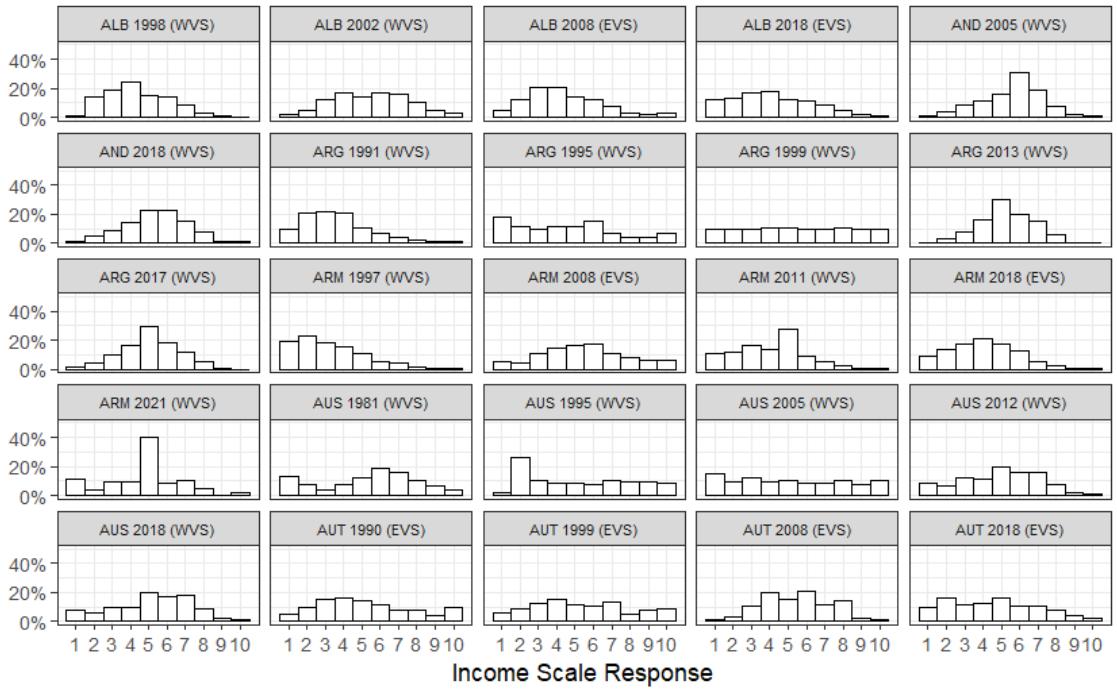


Figure A1.1. Distribution of responses to Income Scales item in the IVS (continued).

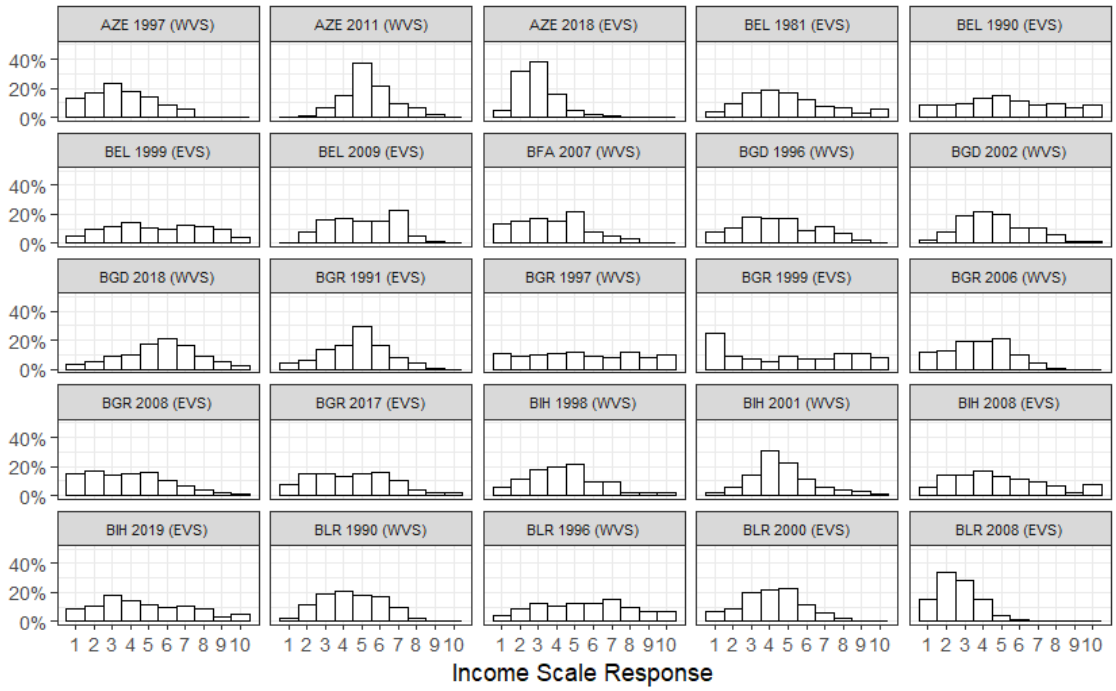


Figure A1.2. Distribution of responses to Income Scales item in the IVS (continued).

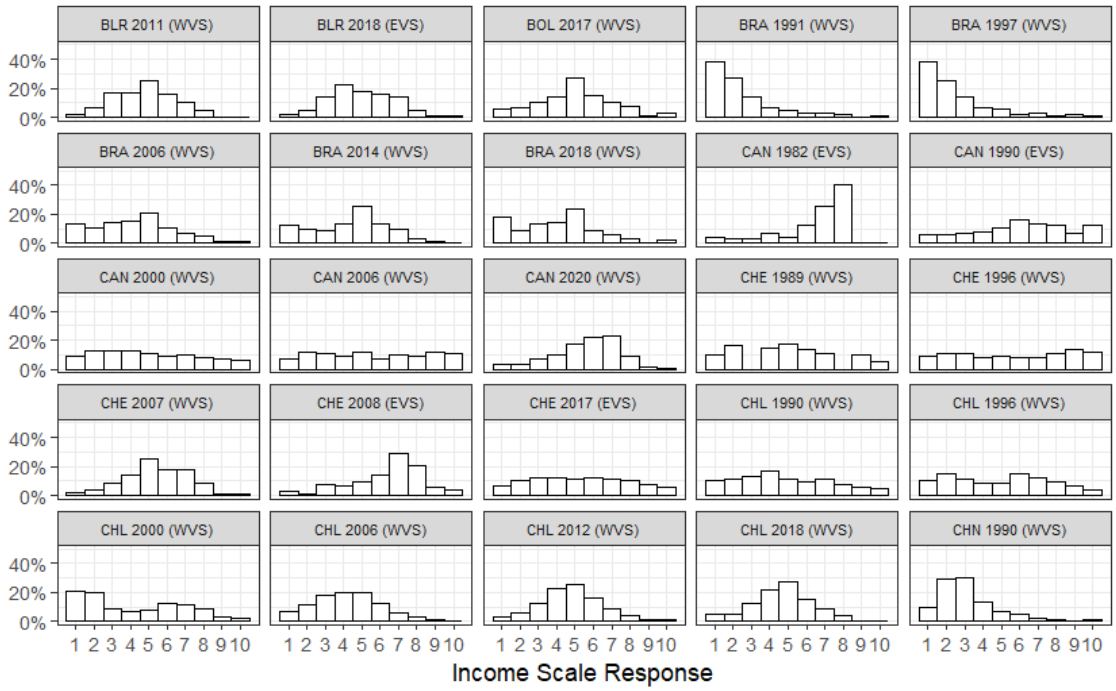


Figure A1.3. Distribution of responses to Income Scales item in the IVS (continued).

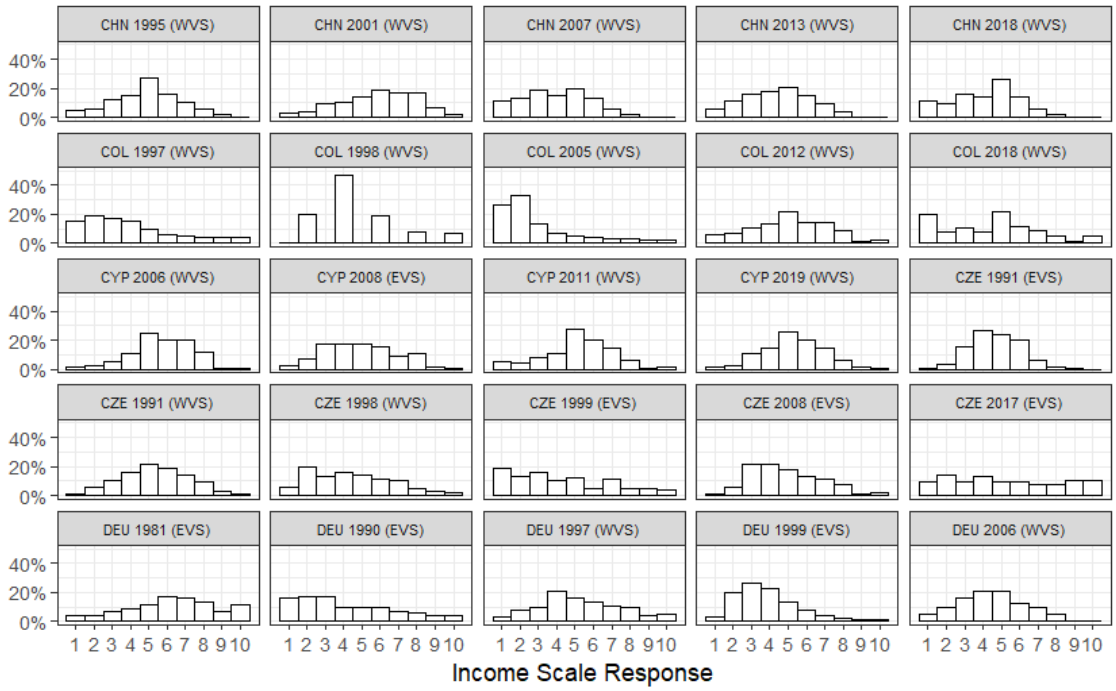


Figure A1.4. Distribution of responses to Income Scales item in the IVS (continued).

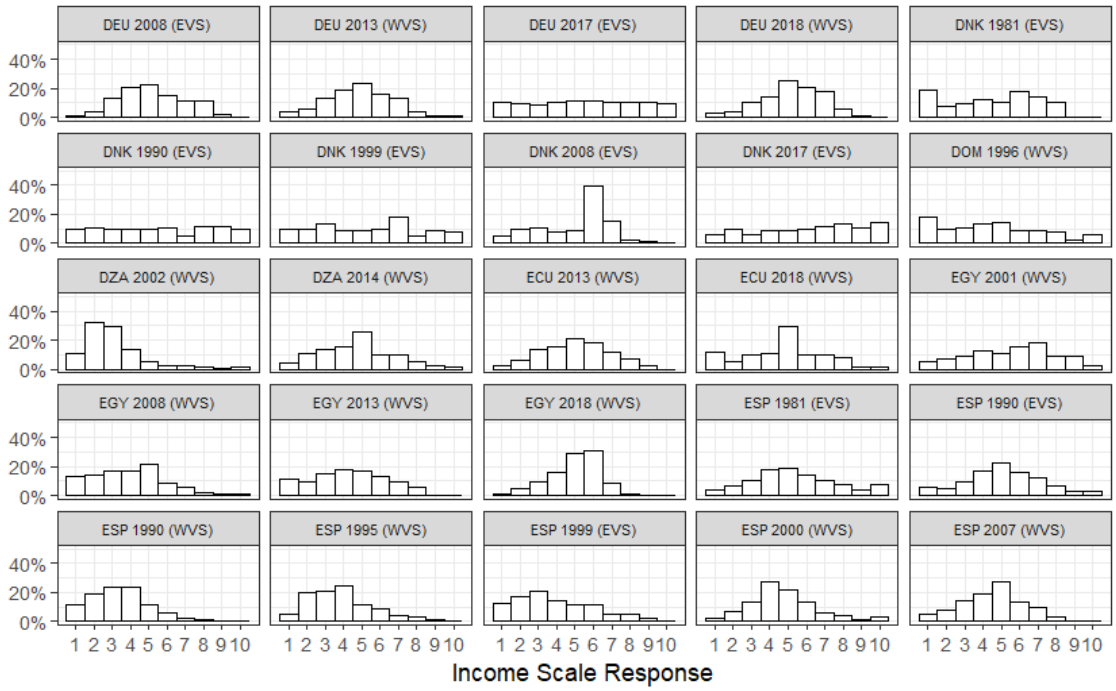


Figure A1.5. Distribution of responses to Income Scales item in the IVS (continued).

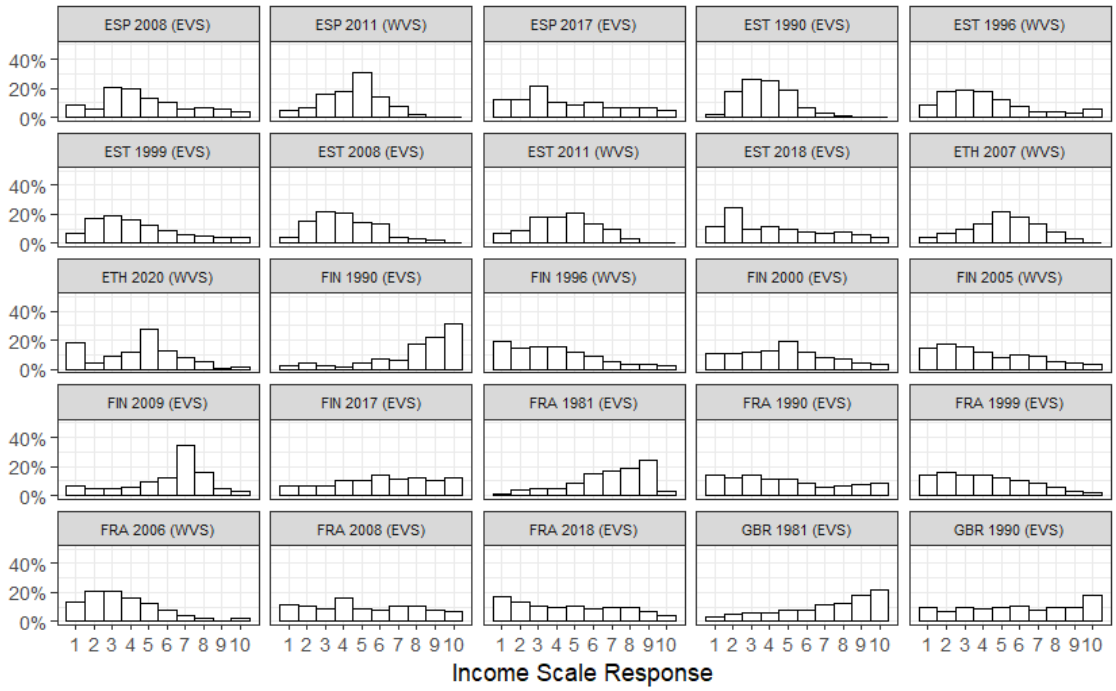


Figure A1.6. Distribution of responses to Income Scales item in the IVS (continued).

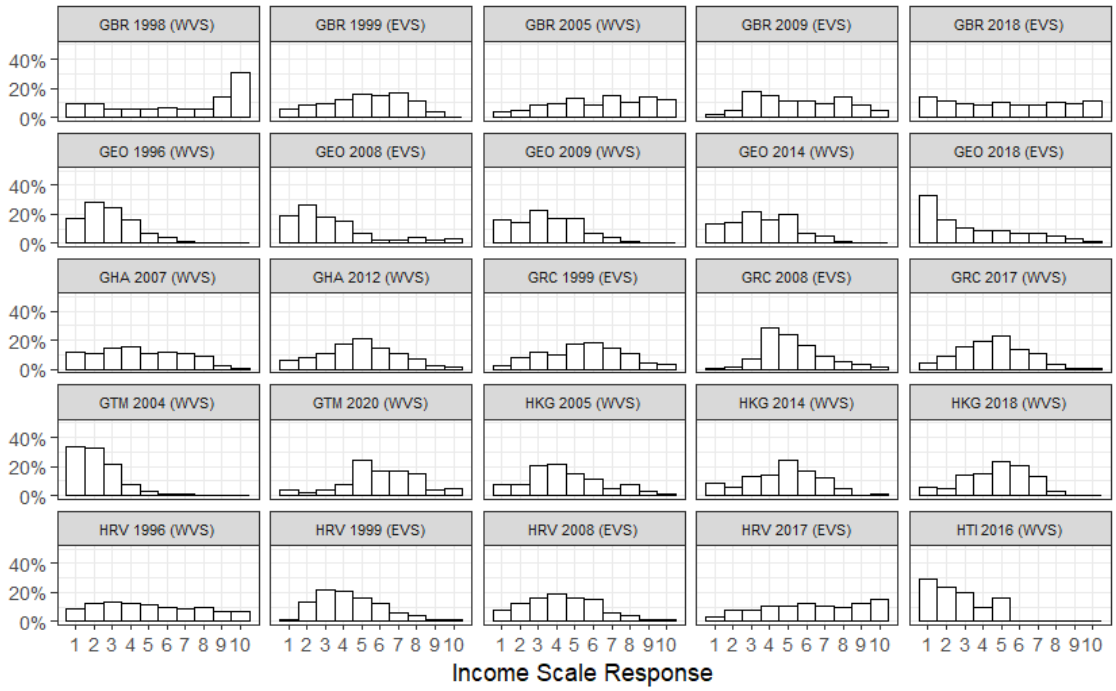


Figure A1.7. Distribution of responses to Income Scales item in the IVS (continued).

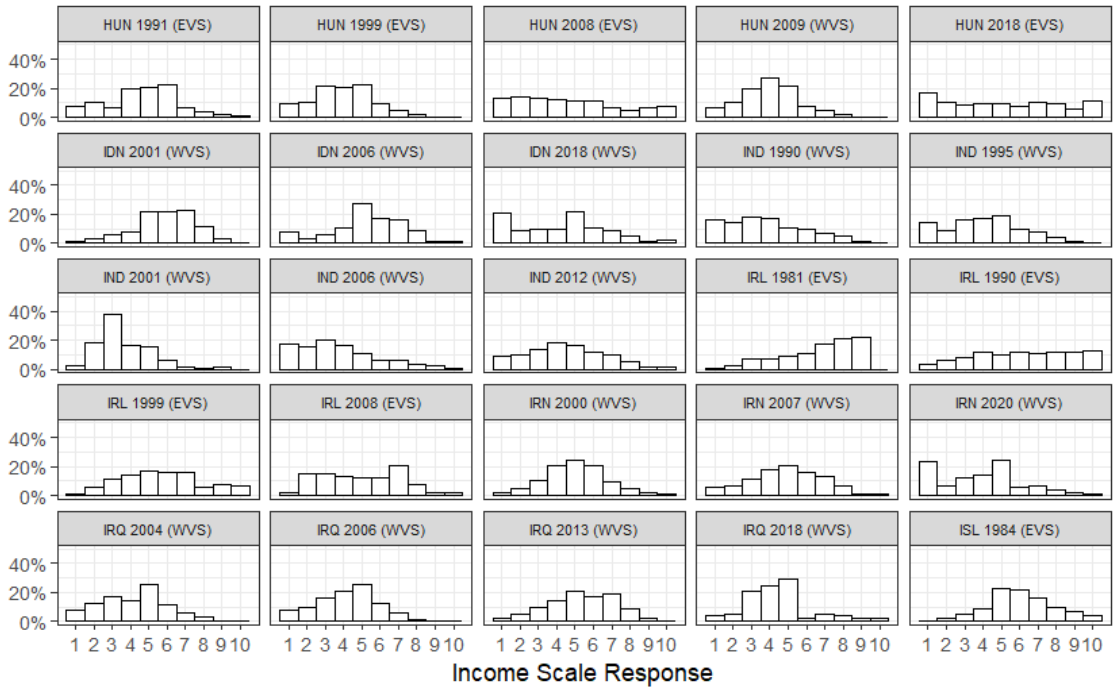


Figure A1.8. Distribution of responses to Income Scales item in the IVS (continued).

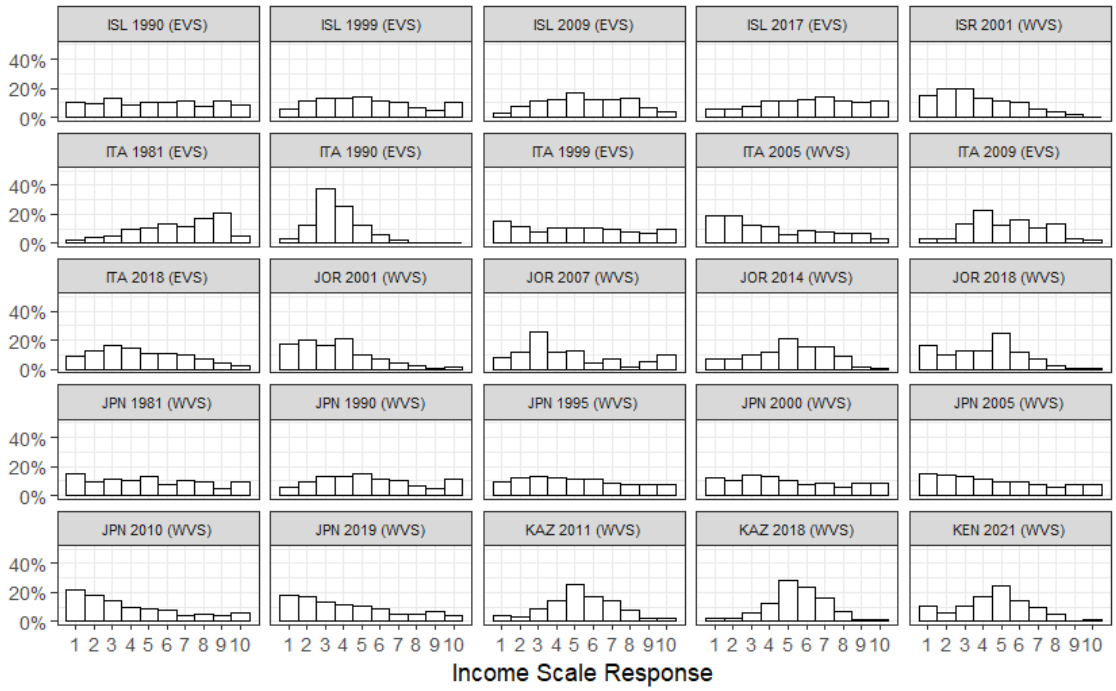


Figure A1.9. Distribution of responses to Income Scales item in the IVS (continued).

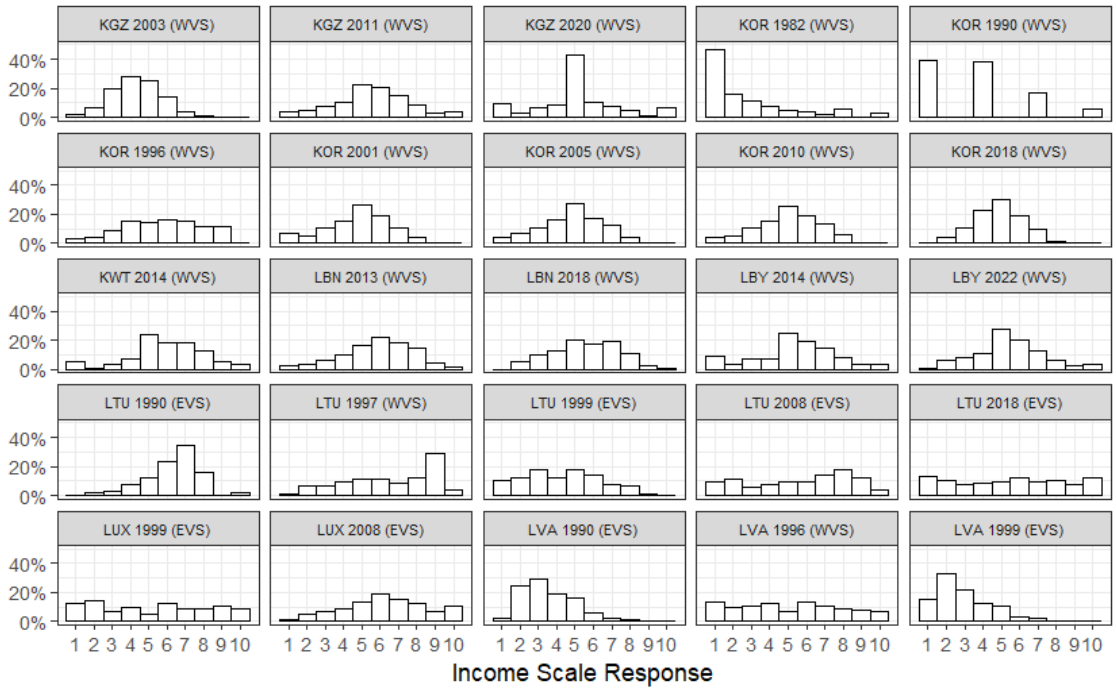


Figure A1.10. Distribution of responses to Income Scales item in the IVS (continued).

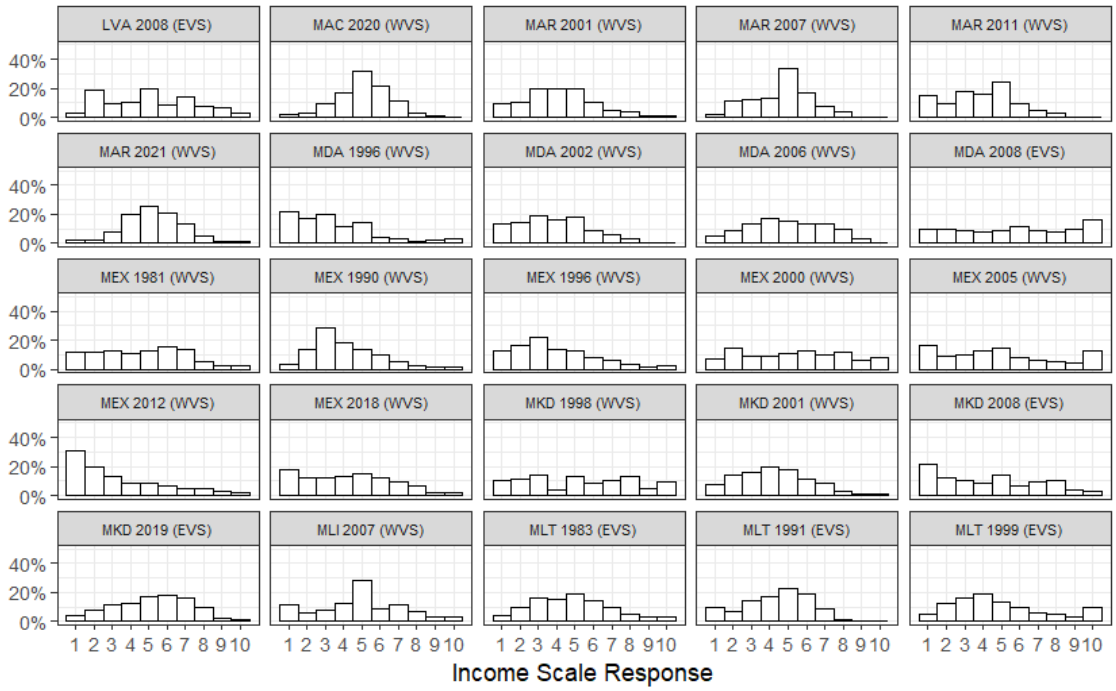


Figure A1.11. Distribution of responses to Income Scales item in the IVS (continued).

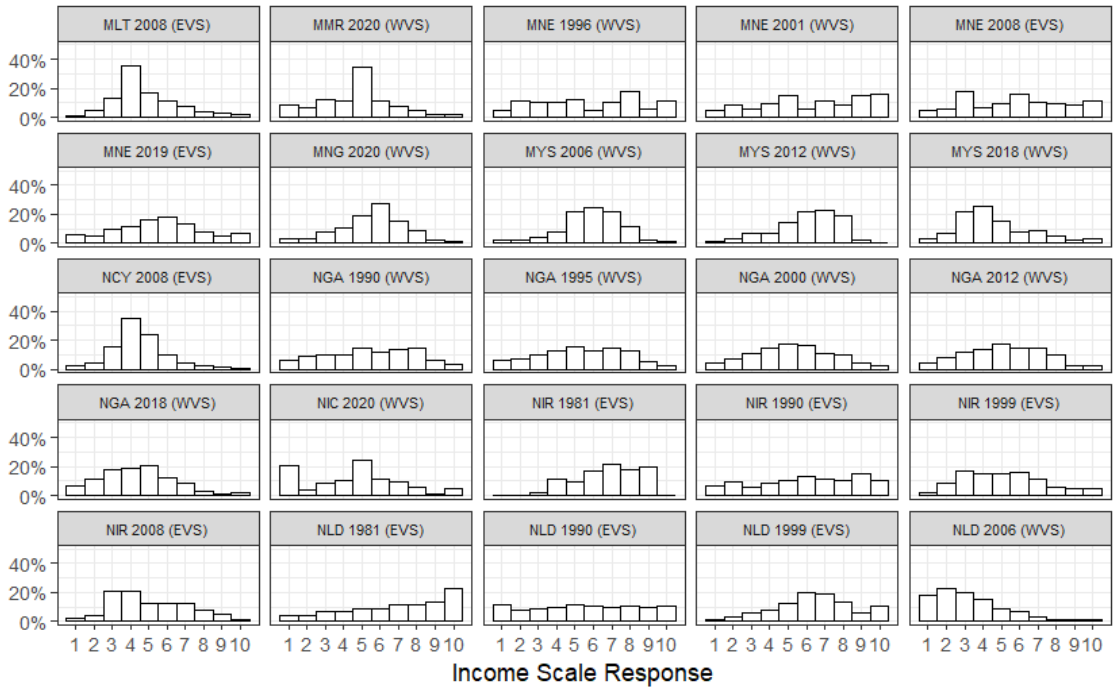


Figure A1.12. Distribution of responses to Income Scales item in the IVS (continued).

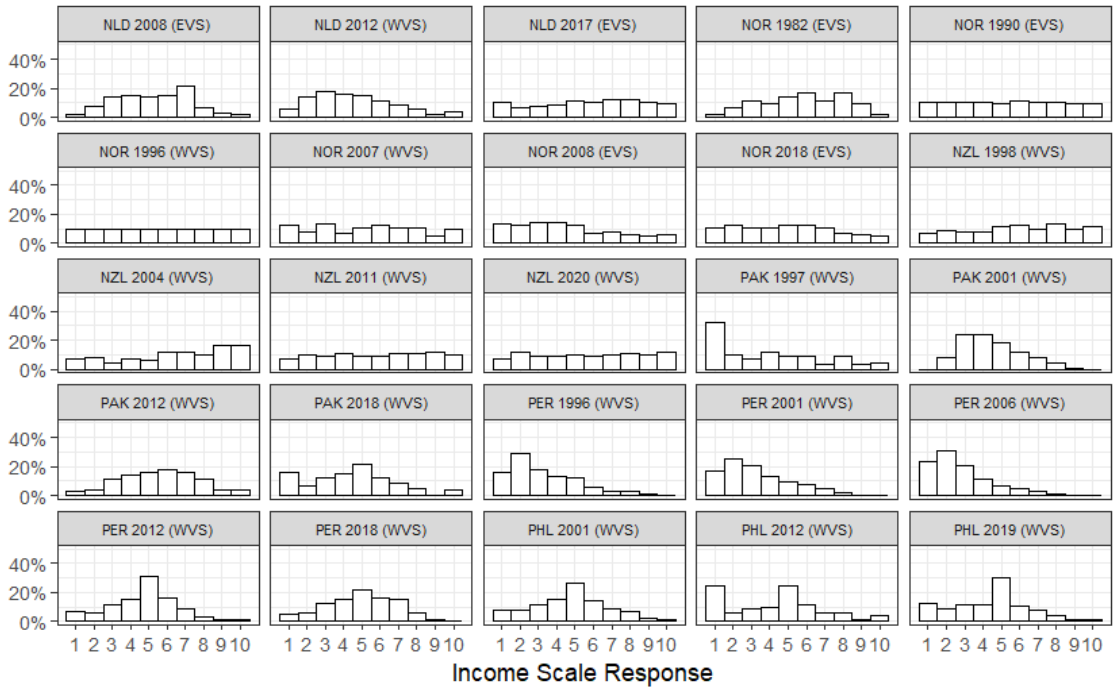


Figure A1.13. Distribution of responses to Income Scales item in the IVS (continued).



Figure A1.14. Distribution of responses to Income Scales item in the IVS (continued).

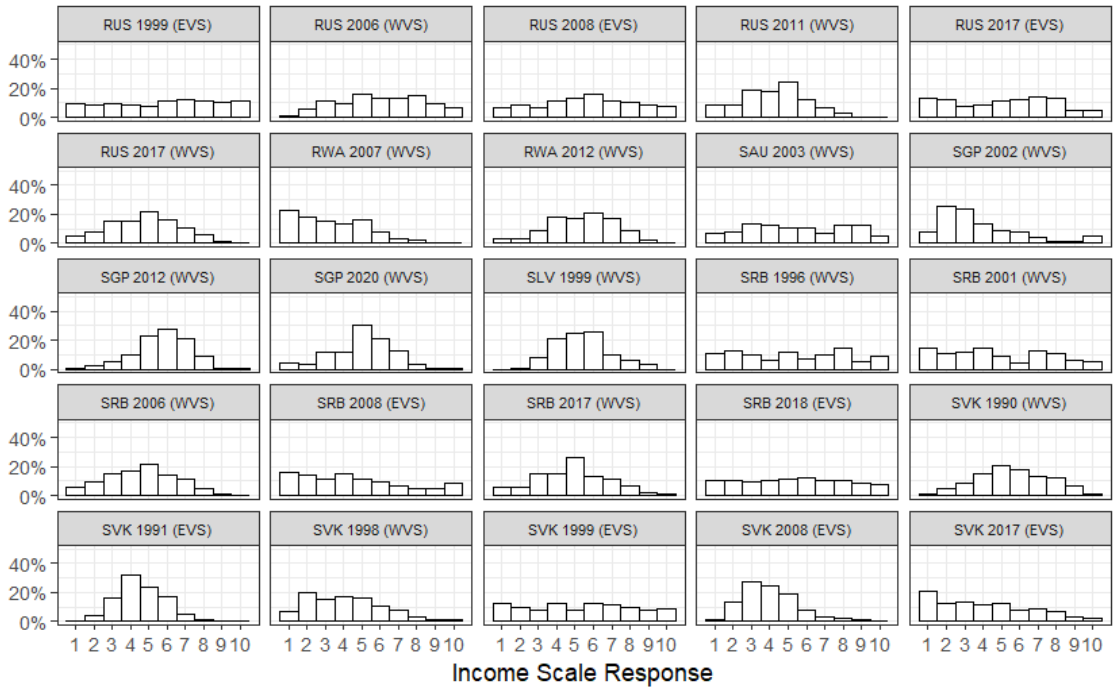


Figure A1.15. Distribution of responses to Income Scales item in the IVS (continued).

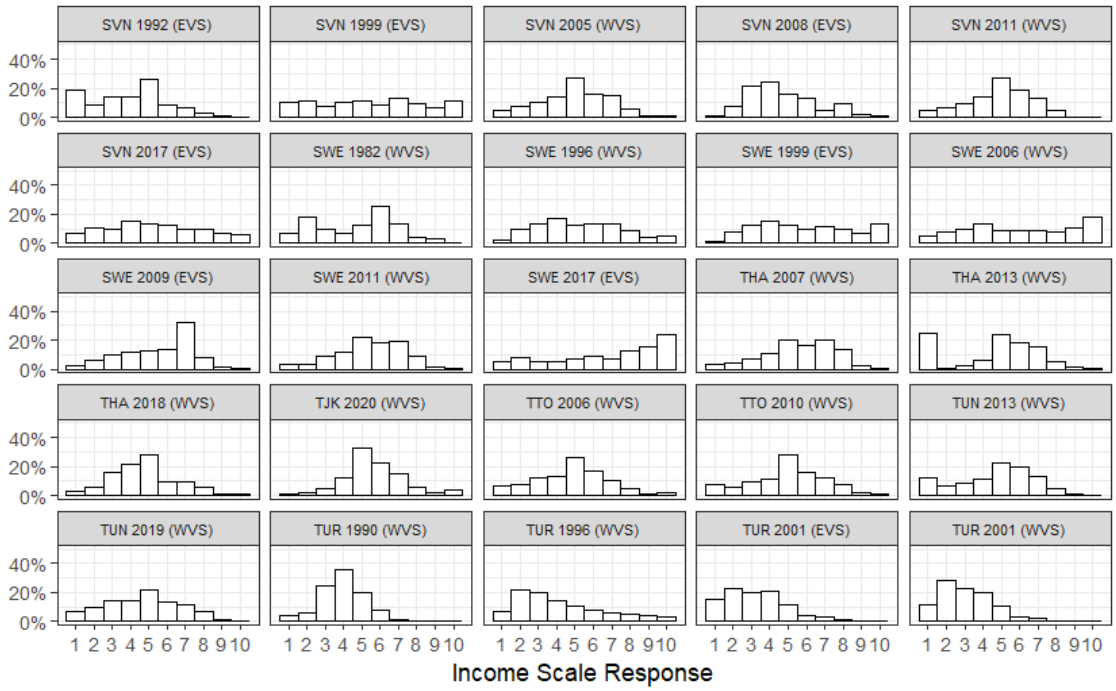


Figure A1.16. Distribution of responses to Income Scales item in the IVS (continued).

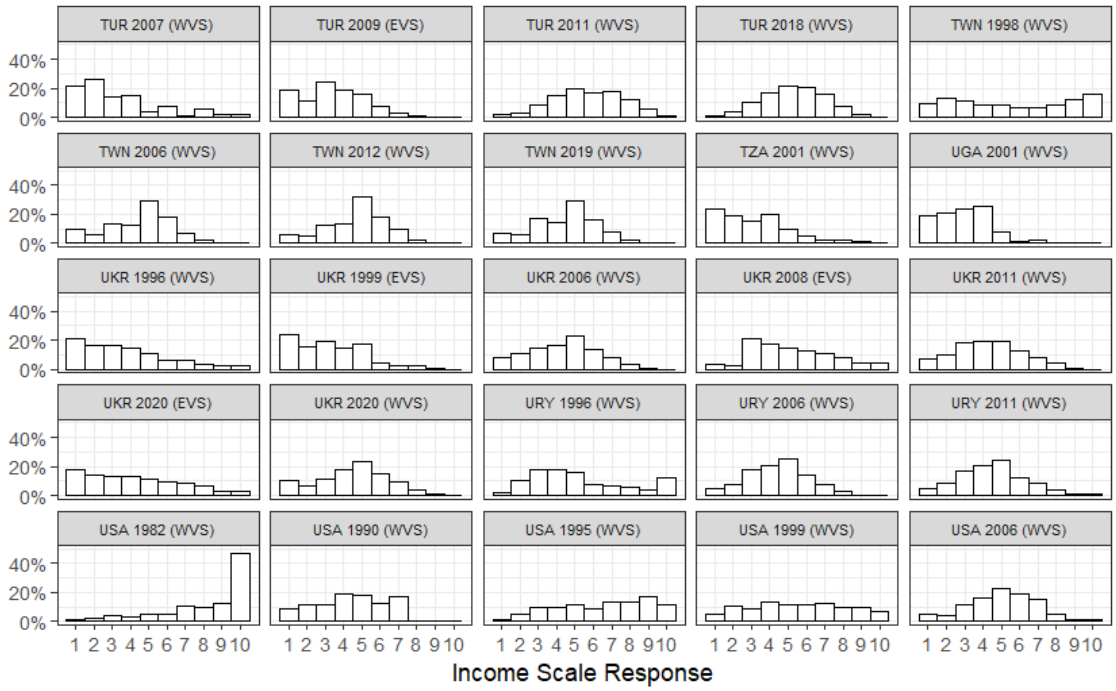


Figure A1.17. Distribution of responses to Income Scales item in the IVS (continued).

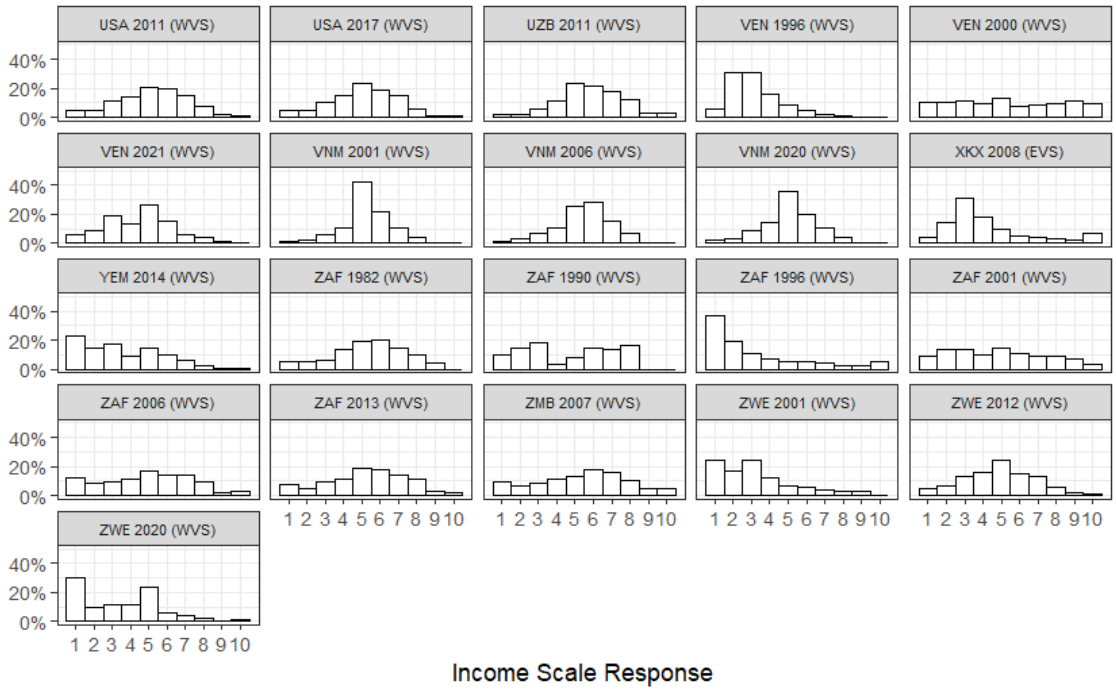


Figure A1.18. Distribution of responses to Income Scales item in the IVS (continued).

> *Social scientists, like all intellectuals and all citizens, ought to participate in public debate. They cannot be content to invoke grand but abstract principles such as justice, democracy, and world peace.*
>
> –Thomas Piketty

> *I was at the World Bank and a commission reviewed our work on inequality for the U.S. Congress or somebody, and the head of the commission said to us: "You are spending taxpayer money to study issues like inequality? Which goes directly against capitalism and growth." That was the perception, that it should not be studied.*
>
> –Branko Milanovic

2 Literature Review

2.1 Summary

Given rising levels of income inequality, especially in advanced democracies, understanding the determinants and conditions of the public's redistributive preferences has gained importance. When do people want more redistribution? And when are people more polarised over it? This article reviews the existing literature and offers methodological recommendations for future research. Although redistributive preferences are commonly understood through the lens of self-interest, other theories take into consideration altruism (inequality aversion) and prospective utility (diminishing marginal utility of income), which have important implications for the effects of inequality and development. While there appears to be a consensus that inequality increases demand for redistribution and reduces polarisation over it, the evidence on the effect development is mixed and requires more attention. Furthermore, scholars have identified other factors that moderate support for redistribution, such as ethnic homogeneity and welfare institutions, although the role of political parties remains a gap in the literature.

2.2 Introduction

Given rising levels of income inequality, knowing when public opinion demands a more equal distribution of incomes has gained increased importance. Preferences for redistribution are typically viewed through the lens of self-interest. In other words, the utility from redistribution is monotonically proportional to the expected net outcome: the more (less) people expect to gain from it, the more (less) they support it. However, a strict interpretation of this view can lead to some problematic implications. Common sense would suggest that public demand for redistribution is not static but increases with inequality. But, as explained below, this model of redistributive preferences based on self-interest in terms of absolute utility would imply that average support should be static across countries and time, independent of levels of inequality or development. In order to reconcile this, self-interest is frequently complemented with other theoretical mechanisms based on, for example, altruism and prospective utility. These theories have been tested across a large body of research dedicated to understanding the determinants of redistributive preferences more comprehensively. What can this body of research tell us about the prospect of taming income inequality in the future?

This review is organised into five sections. First, I conceptualize key ideas in this area and discuss their methods of operationalisation. Second, I review the theories developed to understand redistributive preferences and discuss their implications. While self-interest forms the primary theoretical basis of this literature, it is often complemented with theories based on altruism, prospective utility, and others. Third, I outline the main findings from the literature and assess their empirical validity. This is done conjointly with the theoretical review, as I assess the evidence for the models after outlining them. Fourth, I outline some key takeaways drawn from the methodology of previous studies: (a) the need to distinguish cross-sectional and longitudinal relations between variables; (b) the advantages of using mean-centred approaches to measuring income position; and (c) the importance of maximising the number (and variance) of country-level observations to obtain generalizable results. Lastly, I summarise the main implications of the findings and identify some gaps in the literature that offer avenues for future research: (a) the role that affluence (via economic development) plays in moderating self-interest and altruism; (b) the study of micro-level mechanisms for how people perceive the utility of redistribution; and (c) the role that party polarisation plays in activating self-interest among the public.

2.3 Key Concepts in Redistributive Preferences

2.3.1 Preferences for Redistribution

Preferences for redistribution are commonly understood as a desire for the government to limit income inequality through tax and transfer programs that have a net benefit for the poor and a net cost for the rich. *Table 2.1* shows the most widely used cross-national surveys with questions reflecting redistributive preferences. Patterns observed from such cross-national datasets are generalizable, given that each survey asks the same question across different countries.

One complication with surveying people's preferences towards redistribution is that redistributive policies can take different forms. Some policies focus on tax and transfer programs directly involving people's income, while others focus on welfare state programs involving public spending that have net redistributive effects. The items in *Table 2.1* focus on income equalization, which arguably relates more to direct tax and transfer programs, rather than welfare policies. Studies have also differentiated between policies that focus on taxing the rich more, and policies that focus on transferring more to the poor (Cavaillé & Trump, 2015; Sealey, 2018). Policies may increase taxes on a narrow segment of high earners and transfer income to a broad segment of low earners, or vice versa. In these cases, the questions do not specify who should pay/receive income transfers, or how large these transfers should be. These questions can be thought of as alluding to a generic notion of income equalization whereby incomes are redistributed in a way that is proportional to income and symmetric around the mean.

The items in *Table 2.1* also show some noteworthy differences in how support for redistribution is asked across surveys. Most notably, the ISSP and ESS use Likert scales,[8] whereas the WVS/EVS uses a ten-point scale. The optimal number of points used in scales for surveys such as these is a topic of long-lasting debate (Dawes, 2008). The *Figures A2.1–A2.3* show the distribution of responses for the items on support for redistribution. The most apparent takeaway from these histograms is that the ten-point responses from the WVS/EVS are more evenly distributed than the five-point responses from the ISSP and ESS, which skew substantially towards higher support. A possible downside of the ten-point scale is that respondents may gravitate towards the extremes of the scale or around the middle. This happens to a certain extent in the WVS/EVS, where 15% of respondents choose 1, 13% choose 10, and 13% choose 5. Still, 58% of respondents choose the other values on the scale, including 12% for 8, indicating that there is a substantial dispersion in the responses. Moreover, the questions in the ISSP and ESS refer to the role that the government plays in making incomes more equal, whereas the item in the WVS/EVS does not mention the government. Still, the need for government policy may be implied by the notion of *making* incomes more equal, as the item says, and the broader context of government policy questions from the survey. Furthermore, the WVS/EVS frame the scale as a dimension that involves a trade-off: more income equality versus more income differences as incentives. This may explain why the distribution for the WVS/EVS is less skewed than for the ISSP and the ESS: respondents generally like equality, and are only likely to go against efforts to lower income inequality when they are faced with potential costs.

[8] The ISSP waves for Role of Government IV & V changed the item to use a four-point scale (definitely/probably should/should not be). This is arguably a downside of the ISSP: it does not allow for a middle/neutral option, it hinders the consistency of the question wording, and it further limits the variance of responses.

Table 2.1 Questions on preferences for redistribution from cross-national surveys.

Survey	Question	Scale	Waves	Countries	Studies used
ISSP[9]	It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes.	5-points	10 (1985–2019)	35 (last survey)	Dion & Birchfield (2010)[10] Lupu & Pontusson (2011)
ESS	The government should take measures to reduce differences in income levels.	5-points	9 (2002–2020)	41 (at any point)	Schmidt-Catran (2016) Dimick *et al.* (2018) Rueda (2018)
WVS & EVS	How would you place your views on this scale? (1) Incomes should be made more equal. (10) We need larger income differences as incentives.	10-points	10 (1989 – 2020)	117 (at any point)	Shayo (2009) Dion & Birchfield (2010) Ansell & Samuels (2010) Hayward & Kemmelmeier (2011) Sealey (2017)

Another important observation about these questions on redistributive preferences is that they are normally framed in relation to the current state of affairs. Respondents are asked whether the government should do more or less to reduce income disparities, rather than asking what they believe the ideal distribution of incomes would be.[11] As a result, respondents are likely to answer the question in relation to how they perceive current levels of inequality. Moreover, respondents may also take into account existing levels of redistribution. As Schmidt-Catran notes (2016, p. 127), respondents could understand these questions in relation to what the government is already doing to ameliorate inequality. If social spending is already high, people may be less likely to support increases.

These observations on the wording of survey questions regarding redistributive preferences highlights the need to interpret cautiously any patterns found in responses. Most importantly, models predicting responses to these questions must account for existing levels of income inequality, as they are framed in relation to current levels of inequality. Although levels of social spending are also a relevant factor, data on this tends to be more limited in terms of availability and comparability (what counts as social spending can be disputed and vary across countries). Moreover, the effects of social spending should eventually spillover to levels of

[9] The surveys of the ISSP are organised by topic. The item on income equality is included in surveys on 'Role of Government' and 'Social Inequality'.
[10] Dion & Birchfield (2010) complement the ISSP dataset with some waves from the GBS and EVS.
[11] This has, in fact, been tried in a study by Norton and Ariely (2011) for wealth distribution in the United States. They find that Americans want a far more equitable distribution of wealth, despite grossly underestimating actual levels of inequality.

inequality. Even in cases where inequality is high despite large social spending, it is the distribution of income what ultimately indicates the pool of resources that can be redistributed.

2.3.2 Inequality

"'Inequality' obviously suggests a departure from some idea of equality", as put wryly by Cowell (2011, p. 1) in a comprehensive review on measuring inequality. He goes on to list three 'ingredients' necessary to measure inequality: (1) a unit that forms a population (e.g., person, household, family); (2) an attribute (e.g., income, wealth, height); and (3) a method of aggregating the allocation of attributes among the units in the population. In essence, inequality is defined in contrast to a situation where all units share the same attribute. While the conceptualization and measurement of inequality can be applied to any type of population with attributes, its most prominent application has been to describe the economic equality in society.

One of the main distinctions made in describing economic affluence is between consumption, income and wealth.[12] Consumption involves the resources that a person consumes, which includes expenditure from disposable income and loans as well as public goods and services. Income involves money received on a regular basis, such as salaries, social benefits and rents. Wealth involves valuable property that a person accumulates, such as assets, investments and savings. Inequality is usually lowest for consumption (Karoly 1993; Gottschalk & Danziger 2001; Johnson *et al.* 2001), since people tend to have less income when they are younger and older (see 'life-cycle hypothesis'; Modigliani & Brumberg 1954) and people tend to smooth their consumption over time (see 'permanent income hypothesis'; Friedman 1957). Moreover, people have to fulfil similar needs regardless of their socio-economic status (e.g., eating, housing, hygiene, etc.), so there is minimal consumption that the poor will generally have, and there are limits to the consumption that a rich person could indulge in. Inequality of wealth, on the other hand, tends to be the highest because wealth can also generate income as rents, dividends or royalties (Piketty 2014). Each measure of economic inequality has its advantages and disadvantages (see McGregor *et al.* 2019). Ultimately, though, income has been the principal focus in the literature on economic inequality because there is more data available as a by-product of income taxation (Saez 2004; Auten and Gee 2009), and it is easier to ask survey respondents about their income (people are more likely to know how much they make than the value of the public services they use or the value of their assets). Therefore, in this review, I generally refer to studies focused on income inequality.

While there is no shortage of methods for measuring income inequality (Coulter 1989; Cowell 2011; McGregor *et al.* 2019), the Gini coefficient is the preeminent one used. The Gini is the ratio of the Lorenz curve of a population's income with the line of perfect equality. Thus, it ranges from 0 (perfect equality) to 100 (perfect inequality). Gini can be calculated as shown

[12] These attributes can be further disaggregated (Johnson et al., 2001). Gross income includes all cash transfers before taxes. Net income (or disposable income) is after taxes. Discretionary income excludes minimal survival expenses. Household income (as opposed to individual income) includes all household members and controls for children and people under care. Consumption expenditure excludes public goods and services. Economic opportunity and happiness/utility have also been used as attributes to describe economic inequality (McGregor et al., 2019).

in Eq. 2.1, where x_i represents an individual's income and y_i represents an individual's cumulative position in the population.

$$\text{Gini} = 1 - \sum_{i=1}^{N} (x_i - x_{i-1})(y_i - y_{i-1}) \tag{2.1}$$

As McGregor *et al.* (2019) explain "the Gini coefficient is simple to calculate and can be explained using the familiar graphical representation". Moreover, they note that the Gini measure satisfies all but one of the axioms that are typically used to measure inequality: anonymity, scale invariance, population replication, and the Pigou-Dalton transfer principle. Meanwhile, Gini satisfies the diminishing transfer principle as long as transfers are large enough to elicit a change in the ranking of individuals. One disadvantage of using Gini to measure inequality is that it cannot tell us much about the shape of the income distribution, and thus the distance between income groups. Alternative measures proposed for this involve comparing extreme segments of the population, such as the Palma index (Palma 2006; 2011): the ratio of the income share of the top 10% and bottom 40%. Similarly, Lupu and Pontusson (2011) use the skew of the income distribution as a measure of inequality because it reflects the relative distance of middle-income earners from the poor and the rich. Nevertheless, any segment comparison requires emphasizing certain income groups over others, whereas the Gini aggregates these disparities uniformly.

There are numerous cross-national databases that offer Gini estimates for income inequality, the most extensive ones being the World Bank, the OECD, the Luxembourg Income Study, the United Nations, SEDLAC, and Eurostat. Deininger and Squire (1996) compiled a database on national income distributions from these and other sources, which has been extended by the World Income Inequality Database (WIID; UNU-WIDER 2021). The WIID includes quality scores based on "how much information is provided by each observation, under the understanding that the more information we have about the survey and methodology used to produce the estimates, the better" (UNU-WIDER 2021, p. 15). These quality scores are based on seven dimensions on which surveys vary: geographical unit (national, urban, rural, etc.); population covered (all, economically active, etc.); age covered (all, working age, etc.); income share unit (household, person, tax unit, etc.); the unit of analysis (household, person); the equivalency scale (for example, whether there is an adjustment for household size and its type); and income definition (gross income, net income, consumption, etc.).

The operationalisation of Gini from the WIID can present some difficulties due to the overlapping and heterogeneous nature of the data. The multiplicity of sources means that, in some cases, there are multiple observations for one country-year. More importantly, though, sources vary in the scales and methods used, which leads to a trade-off between country coverage and data quality. Different approaches have been put forward to maximise both of these attributes: moving averages, imputation and adjustment (see Jenkins 2015 for a review). Moving averages involve calculating the average Gini reported by sources for each country within a certain range of years, usually 5 years (i.e., ±2 years). The dataset is often filtered beforehand to keep the sources with the highest quality scores or sources that use a particular

scale. Moving averages are arguably the simplest and most commonly used approach (e.g., Li, Squire & Zou 1998; Chong 2004; Reuveny & Li 2003; Timmons 2010; Dion & Birchfield 2010; Ha 2012; De Haan and Sturm 2017). The imputation approach involves using multiple imputation to fill out gaps in the dataset, and then using these imputations to create a comparable estimate of Gini. This approach is employed by Solt in the Standardized World Income Inequality Database (SWIID), which has also been frequently used (e.g., Acemoglu *et al.* 2015; Olivera 2015; Sealey 2018; Houle 2017). The adjustment approach involves adjusting estimates based on systematic differences observed between methods, scales and series representing the same country. This approach is used in the WIID Companion developed by Gradín (2021), which also offers estimates of income values for each percentile group in a country-year observation using the Shorrocks-Wan algorithm (2009).

2.3.3 Income Position

Income position is the position that an individual holds in an income distribution. The measurements used in the literature have been quite varied, but can broadly be classified into three main groups: ordinal measures (e.g., Fong 2001; Gilens 2005; Rehm 2009; Alesina & Giuliano 2011; Loveless & Whitefield 2011), rank measures (e.g., Bean & Papadakis 1998; Cruces *et al.* 2013; Beramendi & Rehm 2016; Schmidt-Catran 2016; Andersen *et al.* 2021; Weisstanner 2022), and mean-centred measures (e.g., Corneo & Gruner 2000; Dion & Birchfield 2010; Dimick *et al.* 2015; 2018; Rueda 2018). Ordinal measures are based on grouping individuals by their raw income into ordinal scales (e.g., $0-9,999, $10,000-19,999, etc.). Rank measures are based on individuals' rank within the income distribution, which are typically grouped into tiles (e.g., deciles, quintiles, quartiles, etc.). Mean-centred measures are based on the distance between an individual's income and the mean income of their country (i.e., income distance). For example, in a country with a mean income of $40,000, a person making $20,000 would have an income distance of -$20,000, while for a person making $50,000 it would be +$10,000. Moreover, income distance can be transformed to conform to a certain scale, as Dion & Birchfield (2010) do based on the standard deviation of incomes by country-year.

When analysing redistributive preferences, mean-centred measures of income position are optimal because they are a reliable proxy for the net transfers an individual can expect if incomes were equalised. Returning to the previous example, a person with an income distance of -$20,000 can expect to gain $20,000 if incomes were equalised. In contrast, using ordinal measures, people with the same income could expect different outcomes from redistribution. For example, someone with an income of $20,000 would expect to gain from (and therefore support) redistribution in a country where the average income is $40,000, but would expect to lose from (and therefore be against) redistribution if the average income was $10,000. The same issue occurs with rank measures. Knowing an individual's rank in the income distribution of their country still does not tell us whether they can expect to gain or lose from income equalization. In a country with low inequality, an individual in the 70th percentile of the income distribution will likely be on the losing side of redistribution, whereas in a country with very

high inequality, someone at the 70th percentile may find themselves below the mean income, and therefore expect to gain from it.

2.3.4 Economic Development

According to modernization theory, economic development leads to social transformations associated with modernity in a way that is similar across societies (Eisenstadt 1966; Bernstein 1971; Inglehart & Welzel 2005; Marsh 2014). This is not limited to how society changes at the macro-level (e.g., industrialization, urbanization, technology, structural differentiation, bureaucratic rationality, etc.), but also how people react to this change at the micro level (e.g., values, attitudes, culture, behaviour, etc.). While economic development is generally operationalised in a more straightforward manner than income inequality, it can present some challenges regarding its interpretation because it entails a range of multifaceted social changes.

The most common measures of economic development are annual Gross Domestic Product (GDP) and Gross National Income (GNI) per capita. While GDP consists of the monetary value of all finished goods and services produced, GNI consists of all incomes claimed by residents, including foreign remittances, foreign direct investment, balance of trade as well as revenue from taxes and businesses. In essence, GDP reflects output and GNI reflects income, and the latter is larger insofar as a country receives net transfers from abroad. For the purpose of modelling redistributive preferences, using GNI per capita is preferable because it is a more accurate proxy of people's income. Despite this, GDP is more widely used in studies due to its availability, since calculating net foreign transfers presents extra difficulties. Nevertheless, both GDP and GNI are similar measures that are highly correlated. More importantly, though, is measuring economies using purchasing power parity (PPP) over nominal terms. While nominal measures are based on the local currency used to measure output or incomes, PPP corrects for currency exchange rates and price differences from transaction costs and trade barriers. The scale used to measure economic development is usually international dollars, which have the same purchasing power in a given country as the US dollar has in the United States. Lastly, it is worth mentioning that economic development is typically measured logarithmically to reflect its diminishing returns. This can have an important influence on modelling redistributive preferences, especially when using mean-centred measures of income, because using this approach with log values would implicitly assume that people perceive the utility from redistributive in logarithmic terms, which is itself a question that I discuss in this review. In sum, the optimal proxy of economic development is GNI per capita (PPP), as noted by Marsh (2014, p. 264), but GDP per capita (PPP) is a good substitute that often offers more coverage.

The social transformations driven by economic development are highly relevant to how people view redistribution. First of all, economic development implies rising affluence across society: as average incomes rise, people have more disposable income, and fewer people struggle to meet their basic needs. This rise in affluence has been theorised to have dual effects on redistributive preferences. On the one hand, as the poor can meet their basic needs more easily, they may be less willing to demand redistribution, and the rich may be less willing to pay for it once minimal living standards are ensured (Blekesaune 2007; Dion & Birchfield

2010; Jæger 2013; Andersen *et al.* 2021). On the other hand, as countries develop, the poor may demand more redistribution because there is more income to distribute, and the rich may be more willing to pay for because of the diminishing marginal utility of income (Alt 1979; Durr 1993; Stevenson 2001; Sealey 2018; Weisstanner 2022).

Economic development also entails greater state-capacity, which can in turn enhance public trust in the state, thus making people more supportive of redistribution. State-capacity is the ability of a state to collect taxes, enforce the rule of law and provide public goods in an effective and efficient way. Economic development is often referred to either as a prerequisite for or a consequence of state-capacity. As Besley and Persson (2010, p. 1) note, "a striking feature of economic development is an apparent symbiotic evolution of strong states and strong market economies". This is why economic development is theorised to increase political trust (Fukuyama 1995; Inglehart 2018), which in turn makes the public more confident in the government and thus more supportive of state-intervention (Glaeser & Schleifer 2003; Daniele & Geys 2015; Pitlik & Kouba 2015). Further research has found that well-being enhances political trust (Catterberg & Moreno 2005), and rising political trust in Asian countries, particularly China, has been attributed to high levels of economic growth (Wang 2005; Wong, Wan & Hsiao 2011; Lyu & Li 2018).

Due to the multifaceted social changes that economic development produces, it can present challenges in disaggregating the mechanisms behind its effect on redistributive preferences. It would be very difficult to operationalise a country's overall affluence, its state-capacity, and the well-being of the poor without running into problems related to collinearity. Moreover, a model that specifies economic development alongside inequality or income position can easily become rank deficient. For example, a model including country-level GNI per capita as well as individual-level income and income distance would be rank deficient because any one variable could be calculated based on the other two (Income Distance = Income – GNI per capita). Similarly, the well-being of the poor is essentially a function of a country's affluence and equality. Since it is almost impossible to fully disaggregate all the effects of economic development, it is recommendable to avoid specifying models that are rank deficient, and carefully consider the possible underlying mechanisms. Models that include GNI per capita, for example, ought to acknowledge that economic development involves a variety of social changes besides rising affluence, such as greater state-capacity, which can contribute to its effect.

2.4 Theories on Redistributive Preferences

2.4.1 Self-Interest and Redistributive Preferences

Material self-interest serves as the most common basis for understanding individuals' preferences for redistribution. The principles behind this idea can be traced back to rational choice theory (Downs 1957) and social choice theory (Arrow & Debreu 1954, Arrow 1974). The most popular version of this approach is the one proposed by Romer (1975) and developed by Meltzer and Richard (1981). The central proposition of the Romer-Meltzer-Richard (RMR) model is that people's preferences for redistribution are determined by their expected utility from tax and transfer programs: the more people expect to gain (lose) from redistribution, the

more (less) they support it. Indeed, studies have consistently found that the poor do indeed support redistribution more than the rich (Bean & Papadakis 1998; Corneo & Gruner 2000; Fong 2001; Gilens 2005; Finseraas 2009; Dion & Birchfield 2010; Alesina & Giuliano 2011; Dimick *et al.* 2016; Rueda 2018; Andersen *et al.* 2021).

The RMR model assumes that people seek to maximise their material well-being and that redistributive programs transfer income from those above the mean income to those below it. In theory, utility-maximising self-interest would dictate that all people below the mean would want a 100 percent tax rate so that all incomes were equal. Conversely, those above the mean would want a tax rate of zero in order to keep all their income. Nonetheless, there are reasons we would expect rational self-interested people to respond gradually to income disparities, rather than maximally (i.e., their preferences do not shift from one extreme to another around the mean). Changes in the distribution of incomes can entail unintended consequences that offset its utility, such as deadweight costs (e.g., more redistribution stymieing economic growth, or less redistribution leading to more crime and social unrest) and distortionary costs (e.g., people being unaware of how policies would affect them or even being unaware of their position on the income distribution).

As long as these costs are spread uniformly across the public or as a proportion of their income position, we can expect their support for redistribution to increase monotonically in proportion to their distance from the mean income. This is why income distance is the optimal measure to estimate economic self-interest. Of course, redistributive policies will rarely involve transfers that are proportional to income and evenly spread. Some policies may involve transfers between the extreme ends of the income distribution (the richest giving to the poorest), while others may be more generalized (most people above the mean giving to most people below the mean). Furthermore, these transfers may or may not be symmetric (i.e., the richest giving to all the poor, or all the rich giving to the poorest). However, if we conceptualize redistribution as policies that aim to bring us closer to income equalization, we can understand redistributive preferences as the extent to which people support or oppose this. Given that total income equalization would involve people's incomes becoming equal to the mean, their distance from the mean is the optimal proxy for how self-interest drives preferences on redistribution.

Redistributive preferences are not only determined by income, even if we stick to the framework of self-interest. The extent to which redistributive policies will benefit a person also depends on their prospects for future income as well as notions of risk and insurance. According to the 'life-cycle hypothesis' (Modigliani & Brumberg 1954), people tend to have less income when they are younger and older. As young people go through adulthood, they can expect to make more money, as they accumulate skills and knowledge, foster professional networks, earn promotions and wage raises, and also profit from investments and capital (e.g., rent from a second home). As adults become older and enter their retirement age, though, they tend to make less money. Moreover, a person's education and occupational status play an important role in determining how their income evolves over their life, which is reflected by notions of risk and insurance (Iversen & Soskice 2001; Rehm 2009; 2016). People with higher educational attainment tend to have lower incomes while they are students, but can expect higher and more

stable earnings over their lifetime. In an analysis of the European Social Survey, Rueda and Stegmueller (2019, pp. 62-65) build a model to predict respondents' expected income and find that expected income affect redistributive preferences about twice as much as current income. A country's existing welfare policies also play a role in this. In a country with strong trade union and generous safety net, people's incomes are likely to be more stable, as workers are less likely to lose their jobs, and if they do, they can rely on generous unemployment benefits and other public services. Lastly, social mobility also condition the prospects of future income. People on the lower end of the income distribution are often apprehensive about redistributive policies when they believe in their prospects for upwards mobility Feldman & Zaller 1992; Lipset 1997; Manza & Brooks 2021.

2.4.2 Median-Voter Hypothesis

Although the focus of this review is on public opinion regarding redistribution, the best-known proposition derived from the RMR model is the 'median-voter hypothesis', which concerns actual levels of redistribution (i.e., government social spending) and thus extends beyond public opinion in the causal chain. Before delving into the implications involving individual preferences, it is worth reviewing the research on this hypothesis because it has received the most attention and it helps illustrate two important conceptual distinctions: first, the difference between the median and the mean of public preferences; and second, the difference between cross-sectional and longitudinal relations.

The 'median-voter hypothesis' proposes that government redistribution is determined by the distance of the median voter's income from the mean: if it is below, there will be more redistribution, and if it is above, then there will be less. Since the distribution of incomes in virtually all modern societies has a right-skew, the median voter's income is below the mean income. Furthermore, higher levels of inequality imply that the median income falls further below the mean. As a result, the RMR model predicts that inequality drives government redistribution because it leads to greater demand for redistribution from median voter. *Figure* **2.1** shows two examples based on simulated distributions following a log-normal distribution function: Country A and Country B both have mean incomes of $30,000, but the former has a standard deviation of $15,000 while for the latter it is $30,000. As per the median-voter hypothesis, redistribution should be higher in Country B because the median-voter is further below the mean income.

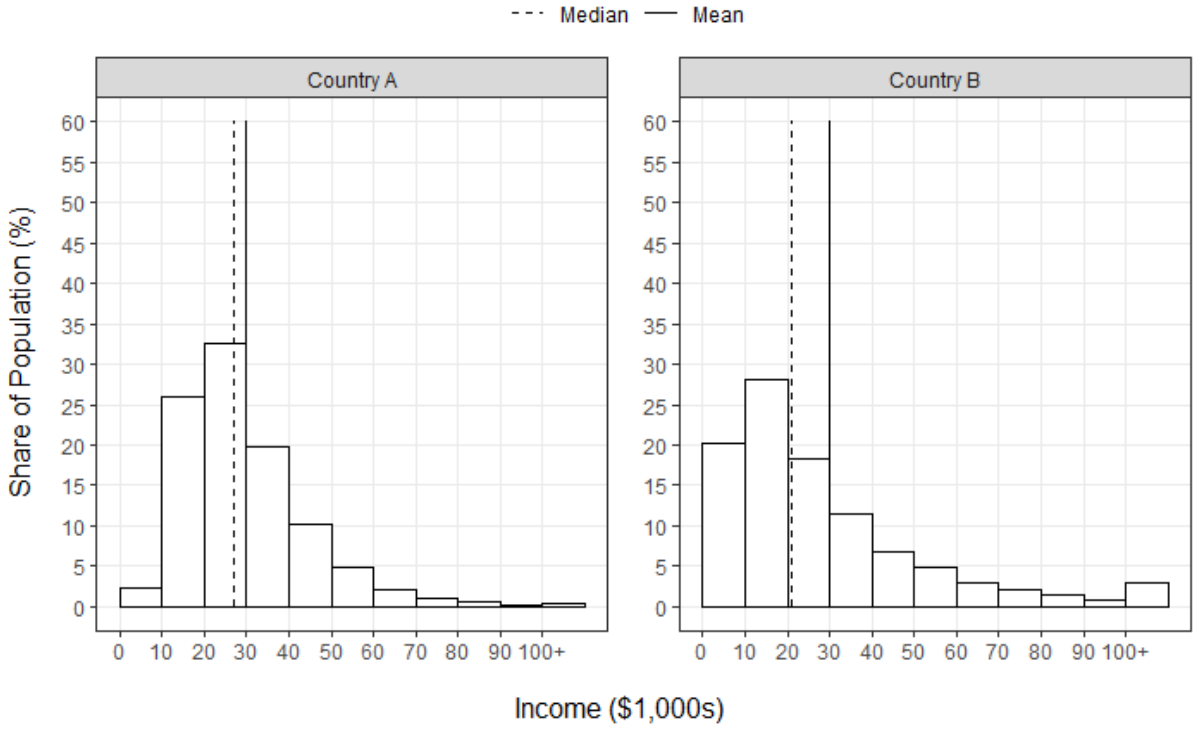


Figure 2.1 Graphical representation of the median-voter hypothesis with simulated data.

Incomes in Country A & B follow a log-normal distribution. The mean income is $30,000 in both cases. The standard deviation is $15,000 in Country A and $30,000 in Country B.

Contrary to the median-voter hypothesis, though, most comparative studies in this area have found that the relationship between income inequality and redistribution is, surprisingly, non-existent or in fact negative (Pedrotti *et al.* 1996; Lindert 1996; Gouveia & Masia 1998; Bassett *et al.* 1999; Rodrigiuez 1999, pp. 57–60; Moene & Wallerstein 2001; 2003; Bradley *et al.* 2003; Alesina & Glaeser 2004; Lübker 2007; Iversen & Soskice 2006; 2009). The most prominent explanation proposed is that inequality and redistribution have different cross-sectional and longitudinal relations due to reverse causality (Weakliem *et al.* 2005; Kenworthy & McCall 2008): rising inequality increases redistribution, but increased redistribution also lowers inequality. Indeed, longitudinal studies by Milanovic (1999; 2000), Aalberg (2003), and Kenworthy and Pontusson (2005) have shown that rising inequality in advanced democracies during the 1980s and 1990s led to more redistribution. Nevertheless, even longitudinal studies have not been able to confirm the public opinion mechanism behind the median-voter hypothesis (Milanovic 2000; Kenworthy & McCall 2008), perhaps because of limited samples.

This explanation follows the ‘thermostatic’ model of public opinion developed by Wlezien (1995). According to the model, “the public adjusts its preferences for "more" or "less" policy activity in response to what policymakers actually do” (Wlezien 1995, p. 981). Thus, the public acts as a thermostat: when governments increase social spending, support for redistribution goes down. This effect may even take place before changes in social spending, based on the political complexion of the party in the governance. For example, left-wing party can be expected to be more willing raise social spending than a right-wing party, and vice versa. This theoretical mechanism has been supported by a substantial breadth of empirical evidence (Wlezien 1995; 1996; 2004; Soroka & Wlezien 2004 2005). Consequently, we can expect the

public to view changes in the income distribution as a policy outcome of tax and transfer programs: the more inequality rises, the more they will support it.

The need to account for omitted variables and the limited data available at the aggregate level have prompted researchers more frequently to take a step back in the causal chain and delve into public support for redistribution, rather than redistribution itself, since the second step can be conditioned by electoral lags and political factors.

2.4.3 Implications of the RMR model

The main proposition of the RMR model is that redistributive preferences are determined by the net outcome one can expect from the equalization of incomes. This has implications beyond the 'median-voter hypothesis' regarding aggregate redistributive preferences, which I explain here. Briefly, these implications are that levels of income inequality and economic development should not affect average support for polarisation, and that they should increase the polarisation of preferences. This goes against well-established findings, but they are often overlooked in the literature. In some cases, these incongruencies are explained with other theoretical mechanisms, but other times they are not addressed at all. Overall, they showcase the need to consider other theoretical mechanisms that can provide an accurate understanding of the formation of preferences.

First, even though the RMR model is often interpreted as suggesting that inequality should increase mean support for redistribution (Alesina & Rodrik 1994; Schmidt-Catran 2016; Rueda & Stegmueller 2017), this is in fact only the case for *median* support but not *mean* support. Dimick *et al.* (2018, p. 443) note this oft-forgotten implication: "Since a change in the distribution of income—more specifically, a mean-preserving spread or contraction—does not change mean income, inequality makes no difference to a person with income *y*. Inequality therefore does not influence a self-interested person's preferences for redistribution (unless accompanied by a change in the ratio between an individual's income and the mean income)." In absolute terms, the utility from redistribution for people below the mean income are always equal to the prospective losses of those above it. Put differently, any amount received by a person because of redistribution, another person pays in taxes. So even if the distribution of incomes changes, the incentives for the poor to increase redistribution would be equivalent to the incentives for the rich to reduce it. Despite this implication of the RMR model, many studies have found that inequality has a positive effect on average support (Dion & Birchfield 2010; Mérola & Helgason 2016; Schmidt-Catran 2016; Sealey 2018; Rueda 2018; Rueda & Stegmueller 2019, pp. 109-114).

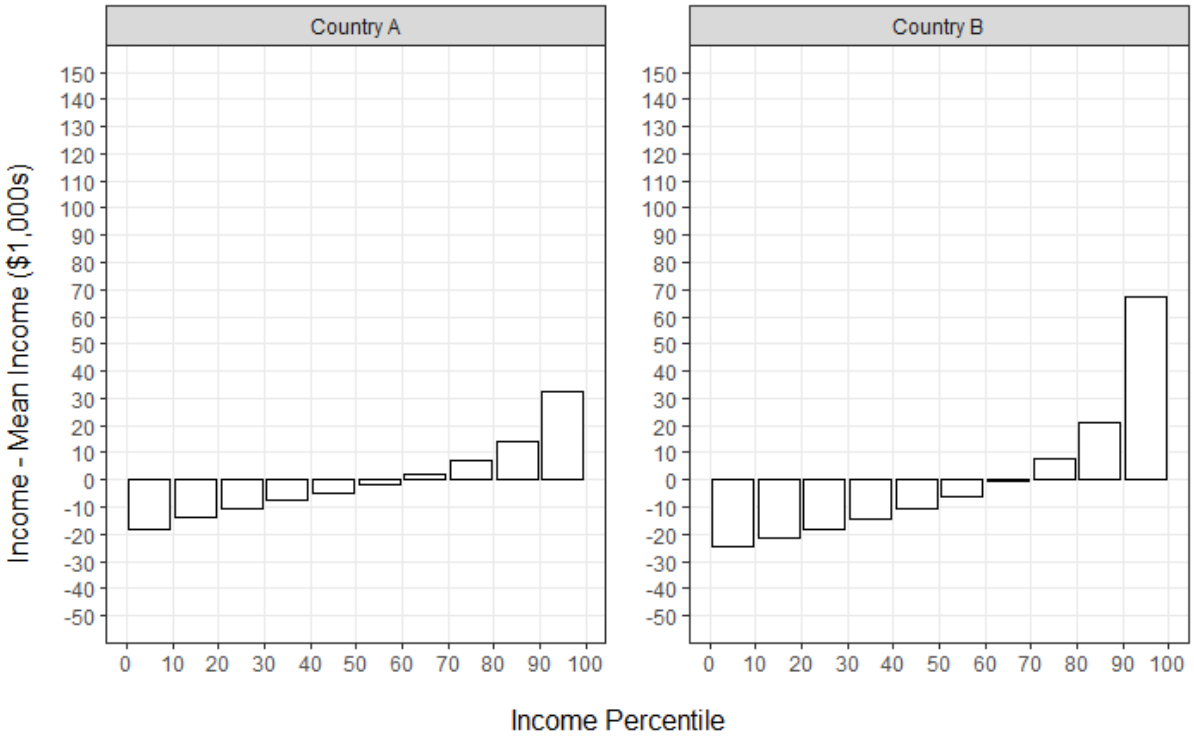


Figure 2.2 Graphical representation of the income distance for Countries A & B.

Based on self-interest, support for redistribution should be monotonically proportional to these values, with lower values driving support for more, and higher values driving support for less.

Second, for similar reasons mentioned previously, the RMR model would also predict that economic development also does not affect average support for redistribution. As countries become more affluent, the absolute distance between people's income and the mean becomes larger (i.e., there is more to redistribute). This should affect the rich as much as the poor – the latter have more to gain, and the former have more to lose – so, on average, preferences should stay the same. The empirical evidence for the effect of economic development on support for redistribution has been mixed, which may be partly due to differences between cross-sectional and longitudinal relations. The cross-sectional relation of development and support has been found to be negative in several studies (Dion & Birchfield 2010; Schmidt-Catran 2016; Andersen *et al.* 2021). Most longitudinal studies, on the other hand, have found a positive effect (Durr 1996; Blomberg & Kroll 1999; Stevenson 2001; Sealey 2018; Weisstanner 2022), although Schmidt-Catran (2016) finds a non-significant effect and Jæger (2013) finds a negative one. Whichever the true effect of economic development is, it seems highly unlikely that it has no effect at all, as the RMR model would suggest.

Third, the RMR model implies that the inequality increases the polarisation of redistributive preferences. As countries become more unequal, the total amount that people below the mean income can gain from redistribution (and that people above it can lose) increases. In other words, the poor have more to gain, and the rich have more to lose. As a result, if people are driven by absolute utility, then preferences should become more polarised. However, other interpretations of the RMR model suggest the opposite: that as inequality grows, preferences should become more uniform because the share of the population that stands to gain from redistribution becomes larger. As Dion & Birchfield (2010, p. 319) write,

"because income inequality corresponds to large segments of society with unfulfilled need relative to the societal average, there should be more consensus among income groups on the need for redistribution". Schmidt-Catran (2016, p. 124) echoes this point: "the group that is likely to oppose redistribution becomes smaller the higher the level of inequality. Hence, income polarisation should be weaker in countries with higher income inequality". Although it is true that inequality means that more people stand to gain from redistribution, this does not account for the intensity of their preferences. In the example from *Figure 2.2*, the share of the population below the mean income is 60% in Country A and 70% in Country B. But if incomes were equalised, the amount of money transferred in Country B would be larger than in Country A (72% larger in this case). Despite this, studies have consistently found that inequality reduces the polarisation of redistributive preferences (Dion & Birchfield 2010; Rosset & Pontusson 2014; Schmidt-Catran 2016; Rueda 2018; Dimick *et al.* 2018; Rueda & Stegmueller 2019; Andersen *et al.* 2021).

Finally, the RMR model would also suggest that economic development increases polarisation because, as with inequality, it implies that the poor have more to gain from redistribution and the rich have more to lose. As with average support, evidence for the effect of development on polarisation is mixed. On the one hand, cross-sectional studies have found that people are more divided in developed countries (Dion & Birchfield 2010; Andersen *et al.* 2021). On the other hand, research has found that the rich become less self-interested the more money they make (Rapoport & Vidal 2007; Mérola & Helgason 2016; Rueda 2018).

In sum, a strict interpretation of the RMR model's proposition about economic self-interest holds implications regarding the effects of inequality and development on redistributive preferences that are inconsistent with previous findings. Reconciling this with the intuitive notion of self-interest requires an explanation for why self-interest affects attitudes in an asymmetric way. If, contrary to what the RMR model would imply, inequality and development increase support for redistribution and reduce polarisation, this would mean that the rich display less self-interest than poor (at least as a response to over-time changes). Previous research offers two possible explanations for this: altruism and prospective utility.

2.4.4 Altruism and Redistributive Preferences

Before being applied more specifically to models on preferences for redistribution, theories on altruism were pioneered in the fields of behavioural economics and game theory (Rabin 1993; Andreoni & Miller 1995; Levine 1997; Bolton & Ockenfels 1997; Falk & Fischbacher 1998; Dufwenberg & Kirchsteiger 1998; Fehr & Schmidt 1999). Studies have found empirical evidence for altruistic motivations in experimental settings, showing that people dislike unequal distributions (Tricomi *et al.* 2010) and have concern for the welfare of others regardless of reciprocity (Fehr & Gächter 2000; Charness & Rabin 2002; Charness *et al.* 2007; Klor & Shayo 2010; Lei & Vesely 2010; Aguiar, Becker & Miller 2013).

Altruism has come to play a prominent role in the literature on redistributive preferences as a complement to self-interest (Shayo 2009; Lupu & Pontusson 2011; Cavaillé 2014; Cavaillé & Trump 2015; Dimick *et al.* 2018; Rueda 2018; Rueda & Stegmueller 2019).

The role that altruism plays in redistributive preferences can be modelled in various ways (see reviews by Fehr & Schmidt 2006; DellaVigna 2009). The most the most straightforward of these is inequity aversion, which assumes that "an equitable allocation is an equal monetary payoff for all players" (Fehr & Schmidt 2006, p. 639). In other words, altruism is the reason inequality drives overall support for redistribution among the public because people dislike income disparities.

Altruism has been widely used to explain why inequality and development increase support for redistribution (Alt 1979; Durr 1993; Stevenson 2001; Mérola & Helgason 2016; Sealey 2018; Dimick 2018; Rueda 2018; Rueda & Stegmueller 2019). If people prefer having smaller income differences in their country, then they will want to avoid situations where disparities grow. Of course, rising income inequality causes these disparities to grow because incomes become increasingly concentrated within a small segment of the population. Meanwhile, economic development also implies that income differences grow. If the average income rises, but the distribution of incomes stays the same, then income differences will become larger in absolute terms. An alternative, though similar, explanation for this is that people view redistribution as a 'luxury good' that can be afforded when countries are rich enough (Durr 1993; Stevenson 2001; Rapoport & Vidal 2007). This argument implies that development enhances altruism not because income differences become larger, but because the costs of redistribution become smaller. Another way to view this is that development reduces the deadweight and distortionary costs of redistribution. This view is summarised by Rapoport and Vidal (2007, p. 1231), who write that "once individuals have satisfied their own physiological constraint in the course of economic development, they devote resources to shaping their altruistic preferences, increasing their social degree of altruism above its natural level".

2.4.5 Prospective Utility and Redistributive Preferences

The diminishing marginal utility of income has long been a central theme in the literatures of optimal income taxation (Atkinson 1970; 1973, Atkinson & Stiglitz 1980; Blackorby *et al.* 1999; Mirrlees 1971; Slemrod *et al.* 1994; Stern 1976; Tuomala 1990; Kaplow 2008). More recently, this concept has been applied to models of redistributive preferences based on the distinction between absolute and relative utility from tax and transfer programs. While the absolute utility from redistribution is the net transfers a person can expect if incomes were equalised, the relative utility is the same amount but in relation to the person's current income. To the extent that people's preferences reflect their relative – as opposed to absolute – utility, we can say that there is a diminishing marginal utility of income. For example, the increase in relative utility of going from $100 to $200 dollars is larger than of going from $1,000 to $1,100. Thus, the utility function from redistribution is concave: "utility increases in consumption, but at a declining rate" (Dimick *et al.* 2018, p. 445) and the concavity of utility is "the rate at which individuals' marginal utility of income falls as income rises" (Kaplow 2008, p. 26).

Relative utility can explain why inequality and development make public attitudes towards redistribution less divided. Dimick *et al.* (2018, p. 445) explain why this is the case for inequality: "Because a rich person values an additional dollar less than a poor person does,

a rich person would rather spend more of that dollar on reducing inequality than a poor person would. Thus, the rich are more responsive to changes in inequality than the poor are, even though the poor prefer more overall redistribution than the rich". Indeed, in an analysis of the ESS, they find that the relationship between support for redistribution and income distance becomes flatter as inequality rises. This also helps explain why inequality weakens the effect of income position, as other studies have found (Dion & Birchfield 2010; Schmidt-Catran 2016), since it drives the rich to become more open to redistribution.

Economic development can also yield similar effects, only it would affect people from all across the income distribution because it implies rising affluence overall. As the mean income rises, people should become less sensitive to the absolute utility of redistribution because it will have a diminishingly smaller effect relative to their current income. Few studies, though, have delved into the interaction of development and income, which remains an important gap in the literature. While an experimental study by Mérola and Helgason (2016) suggests that positive shifts in absolute income make preferences more homogeneous, cross-sectional studies have found the opposite effect (Dion & Birchfield 2010; Andersen *et al.* 2021).

2.4.6 Political Actors and Redistributive Preferences

The ability of political leaders to shape the agenda and public opinion has been well-documented in a long and extensive literature (Key 1961; Sartori 1969; Zaller 1992; Geer 1996; Lachat 2008; Medina 2015; Moral & Best 2022). Party polarisation can drive polarisation among the public by providing voters with cues on what to think and what to think about. In the United States, increased polarisation in public opinion has been attributed to rising party polarisation, especially among informed citizens (Abramowitz 2010; Layman & Carsey 2002a; 20002b; 2006; Layman *et al.* 2006). Other studies of the United Kingdom and the Netherlands have found that when parties depolarised around certain issues, public opinion followed suit (Adams *et al.* 2011; 2012). In a recent study of 19 advanced democracies, Moral and Best (2022) find that citizens, especially ones that are engaged and informed, follow political parties as they become more or less polarised.

This literature suggests that political actors can intensify economic self-interest among the public by activating distributive politics as part of the agenda. This type of top-down effect has been explored more in depth with regards to class voting (the relationship between occupational class and vote choice). By converging in their economic positions, political parties constrict the range of options that voters have to choose from. Declining party polarisation on economic issues has been used to explain lower rates of class voting (Evans 1999; Evans & Tilley 2012; Evans & De Graaf 2013) and even lower turnout among the working class (Evans & Tilley 2017). Still, the effect of party polarisation on preferences for redistribution remains a gap in the field.

2.4.7 Ethnic homogeneity and Redistributive Preferences

Many scholars have argued persuasively that ethnic heterogeneity diminishes public support for redistribution. People are more willing to pay for welfare programs and share in the national wealth if they identify more with their fellow citizens. This shared feeling of identification can be hindered by differences in race, language, or ethnicity. As Habyarimana et al. (2007, p. 710) write, "individuals may attach positive utility to the welfare of fellow ethnic group members but no utility (or negative utility) to the welfare of non-group members".

Comparative studies have found that people are less supportive of redistribution in countries that are more ethnically diverse (Alesina *et al.* 2001 2004; Mau & Burkhardt 2009; Shayo 2009), albeit with some exceptions (Taylor-Gooby 2005; Sumino 2014). In fact, America's unusually low levels of redistribution compared to other developed countries have been attributed to its high racial and ethnic diversity (Alesina *et al.* 1997; 1999 2001; Alesina & Glaeser 2004; Luttmer 2001). Moreover, immigration also appears to reduce public appetite for redistribution (Alesina *et al.* 2018; 2021), especially among the rich (Rueda 2018; Rueda & Stegmueller 2019). Longitudinal studies in Sweden have further corroborated the negative effect of immigration (Eger 2010; Dahlberg *et al.* 2012).

2.4.8 Institutional Factors and Redistributive Preferences

Scholars have also highlighted the influence that institutions have on public opinion. As Steinmo notes (1994, p. 128), "what citizens believe about politics, and what they think is possible and desirable is fundamentally shaped by what government does for them". Regarding redistributive preferences, the relevant factors are the existing welfare regime and current levels of redistribution. According to power resource theory, variations in welfare states and levels of redistribution are determined by the distribution of power across economic classes. Countries with stronger labour unions and left parties produce more egalitarian outcomes (Kellermann 2007).

The institutional trajectory a country follows can subsequently shape its public opinion by framing expectations about the role of the state (Esping-Andersen 1999; Larsen 2006; Rothstein 1998; Svallfors 2003 2010). People who live in places with less inequality and more redistribution are accustomed to this and thus have a more egalitarian baseline preference. Conversely, we can expect less egalitarian baseline preferences in places with weak unionization rates and dominant right-wing parties (Kluegel & Smith 1986, p. 157; Krieger 1986; Bashevkin 2002). In line with this, studies have found a positive relationship between social expenditure and support for redistribution (Jæger 2006a; Brooks & Manza 2006a; 2006b; 2007), although the causal direction of the relationship is unclear (Myles 2006).

2.5 Methodological Recommendations

Based on this review, there are several recommendations that can be made for future research into redistributive preferences. First, studies should focus on estimating longitudinal effects rather than cross-sectional relations due to potential reverse causality. Many studies in this area focus on cross-sectional relations (Lübker 2007; Finseraas 2009; Dallinger 2010; Dion &

Birchfield 2010). However, the relationships between inequality, development and support for redistribution are likely subject to reverse causality and endogeneity (e.g., inequality increases support, but support decreases inequality). Therefore, it is important to specify models that capture longitudinal as opposed to cross-sectional effects, as researchers in this area have increasingly done (Lupu & Pontusson 2011; Schmidt-Catran 2016; Sealey 2018; Dimick *et al.* 2018; Rueda 2018; Rueda & Stegmueller 2019). For reviews on methodologies to analyse pooled cross-sectional time series datasets (as are most cross-national surveys), see Fairbrother (2014) and Bell et al. (2019).

Second, the approach used to operationalise income position at the individual level is of great importance, as different measures may capture different conceptions of utility (or do so inaccurately). Mean-centred approaches are clearly preferable over rank or scale ones as a proxy for the utility that people can expect from redistribution because it increases monotonically as a function of the distance of a person's income from the mean.[13] Moreover, mean-centred measures can vary based on whether they reflect income distance in absolute or relative terms. The absolute distance simply measures the distance between a person's income from the mean (as used in Dimick *et al.* 2018; Rueda 2018), whereas income distance could also be operationalised in relation to a person's current income to account for relative utility. Thus, mean-centred approaches should especially be used in studies focused on analysing individual-level mechanisms. Rank measures can still be preferable in cases where researchers are interested in aggregate measures of preferences based on the preferences of a population as a whole (e.g., whether public opinion is more divided across income groups). Although income distance can tell us how much about what a person can expect to gain from redistribution, unlike rank measures, it cannot tell us how many people would find themselves in that situation. Meanwhile, income scales that simply indicate a person's raw income are the least preferable measures because they neither reflect utility from redistribution nor are they stable in terms of the share of the population that belongs to each scale.

Finally, the generalizability of findings on redistributive preferences can be improved by using datasets that maximise variance. Due to data availability, studies in this area have usually focused on countries restricted to Western democracies, particularly the United States and Europe. This, however, can limit the extent to which findings can be applied to other countries. Variations observed in Western democracies may not be representative of the variations that take place overall. For example, since our observations from Western democracies tend to be restricted to when they were already quite developed, they are limited in terms of helping us understand the effect from earlier stages of economic development, especially if our samples do not go back in time long enough. This is why it is important to analyse samples of countries that vary as much as possible in their levels of development and inequality as well as, preferably, their observed changes over time. Furthermore, Western democracies may display dynamics in redistributive preferences that are particular to the region for cultural or historical reasons and, therefore, not generalizable. Such differences are corroborated by findings on regional variations of economic self-interest (Lübker 2007; Dion & Birchfield 2010; Andersen *et al.* 2021). Increasingly, researchers have analysed datasets with

[13] This assumes that redistribution transfers income from above the mean to below it.

broader samples such as the World Values Survey (Sealey 2018; Andersen *et al.* 2021) or combinations of various surveys (Dion & Birchfield 2010), which can greatly improve the generalizability of findings. It should also be noted that including as many countries as possible is just as important here as maximising the number of observations over time, given the need to estimate longitudinal effects. In this regard, more frequent surveys such as the ESS (conducted every 2 years) excel.

2.6 Discussion

This review started with the question of whether rising levels of income inequality can be expected to increase public demand for redistribution. For some time, the consensus might have appeared to be that the opposite was the case. Many macro-economic studies went against 'median-voter hypothesis', finding a negative relation between inequality and redistribution, with notable exceptions (Milanovic 2000; Kenworthy & Pontusson 2011). Nonetheless, empirical evidence from public opinion studies offers a more optimistic picture: inequality does drives support for redistribution. A 1-point rise in Gini has been estimated to increase support for redistribution by 0.013 (Jæger 2013) and by 0.022 points on a 5-point scale (Schmidt-Catran, p. 129-33; this effect is comparable to the effect of one quintile in the income distribution), and by 0.08 points on a 10-point scale (Sealey, p. 155). Moreover, inequality also appears to lead to more agreement among the public by reducing the polarisation of preferences (Dion & Birchfield 2010; Schmidt-Catran 2016; Dimick *et al.* 2018). This suggests that rising inequality will lead to an emerging consensus among the public around the need for redistribution to reduce income disparities.

Some caveats should be added to this conclusion. Inequality has been on the rise, particularly in developed countries, but the evidence for whether rich countries are less tolerant of income disparities is mixed. While some studies find that economic growth enhances support for redistribution (Alt 1979; Durr 1993, Stevenson 2000; Sealey 2018), others find a negative effect (Dion & Birchfield 2010; Dallinger 2010; Jæger 2013; Andersen *et al.* 2021) or a non-significant effect (Olivera 2015; Schmidt-Catran 2016). These contradictory results point to the need for more investigation into the effect of economic development on economic attitudes. Furthermore, the effect of rising inequality could be offset by other factors, such as immigration or political actors. Higher rates of foreign-born population reduce support for redistribution, especially among the rich, which consequently increases divisions over it (Rueda 2018). Meanwhile, political parties may also influence public opinion over redistribution. Studies have shown that convergence in economic positions has diminished class voting (Evans 1999; Evans & Tilley 2012; Evans & De Graaf 2013). This could spillover to voters' attitudes, making them more or less self-interested based on the polarisation between parties over economic issues.

The present review identifies some gaps in the literature on preferences for redistribution that point toward new avenues for future research. First, the role that economic development plays in shaping preferences deserves more attention, certainly when compared to inequality. Even though inequality is closer to redistribution conceptually, economic development is just as relevant based on theories of self-interest and altruism because it implies

rising affluence and more state-capacity. In fact, its effect may be more consequential because trends in growth are more predictable than trends in equality. Most countries consistently follow a positive path towards development, albeit at different rates and with occasional recessions, but countries do not generally become more or less equal with time. Therefore, if affluent societies are less tolerant of inequality, this offers an optimistic sign for advanced democracies experiencing growing income disparities. The evidence for the effect of development has been mixed: it can make people more open to redistribution by reducing its costs (Sealey 2018; Weisstanner 2020), but it can also have the opposite effect by reducing the need for redistribution (Blekesaune 2007; Dion & Birchfield 2010). Understanding which mechanism holds more water is entirely an empirical question. Furthermore, the interaction of economic development and income inequality is a related aspect that has been overlooked in the literature, with the exception of Andersen et al. (2020).[14]

Another gap in the literature is the need for a more detailed exploration of how people perceive the utility of redistribution and how different measures of income position can capture this. Do people perceive utility in absolute or relative terms? And do they perceive gains in the same way as losses? The RMR model, based on self-interest, assumes that people perceive gains and losses equally and in absolute terms. However, research in behavioural economics has produced findings that are relevant to this area. The diminishing marginal utility of income suggests that people perceive utility in relative terms, at least to some extent (Kaplow 2010). Moreover, loss aversion suggests that people give more weight to perceived losses than perceived gains (Kahneman & Tversky 1979). These questions can be empirically tested by systematically comparing the effects of different measures of income position on preferences. Even though most studies are mindful about the measure of income position used, they rarely use more than one measure simultaneously, let alone compare them. The closest examples of this have been studies on the effect of aggregate absolute and relative income shifts (Mérola & Helgason 2016; Weisstanner 2020). Meanwhile, the distinction between gains and losses from redistribution has been explored theoretically (Alesina & Passarelli 2015) and experimentally (Charité *et al.* 2015), but not with observational data. Studies using mean-centred measures of income position (e.g., Dion & Birchfield 2010; Rueda 2018; Dimick *et al.* 2018) can easily model this as a discontinuous effect using the mean income as a cut-off.

Understanding better the underlying individual-level dynamics of redistributive preferences has perhaps been neglected in the literature in favour of country-level factors. After all, the aggregate effects of inequality or development are composed of the sum of micro-level effects. Even though individual-level findings cannot be a replacement for aggregate results, they can provide robust evidence for underlying theories. If the principles behind theories on redistribution can be empirically tested at the individual-level, and the data available is more abundant and precise, then it can offer robust findings. Take, for example, the question of whether inequality increases aggregate support for redistribution. One could simply look at the relation between these two variables, but we must be careful to specify longitudinal effects and ensure there are enough country-year observations to do so. Alternatively, one could analyse

[14] Using WVS data, Andersen et al. (2020) find that economic development makes people more sensitive to inequality, although the item used refers to 'responsibility to provide' as opposed to the item on 'income equality'.

the concavity of the relationship between income position and support for redistribution. If this relationship is stronger for the poor than for the rich, then it follows that inequality increases average support for redistribution, since inequality implies an increase in the average distance from the mean income.

Lastly, the role that political parties play in shaping redistributive politics deserves more attention. Most research in this area has focused on macro-economic factors, as well as variations due to ethnic diversity or historical differences. But there is, in addition, an extensive and well-established literature showing that political actors play an important role in shaping public opinion (Key 1961; Sartori 1969; Zaller 1992; Geer 1996; Lachat 2008; Medina 2015; Moral & Best 2022). One way for parties to do this is through polarisation, by adopting policy positions that are further away from each other. Party polarisation can drive polarisation in public attitudes (Moral & Best 2022) and intensify class voting (Evans 1999; Evans & De Graaf 2013; Evans & Tilley 2012; 2017). Whether parties can enhance economic self-interest is an important question for the literature on redistribution, as it would determine the extent to which political actors have agency over their country's income distribution by influencing public opinion. Politicians have little control over macro-economic and historical factors, but if their decisions can mould public opinion, this can inject some contingency over the distribution of incomes in the future.

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2.8 Appendix Figures

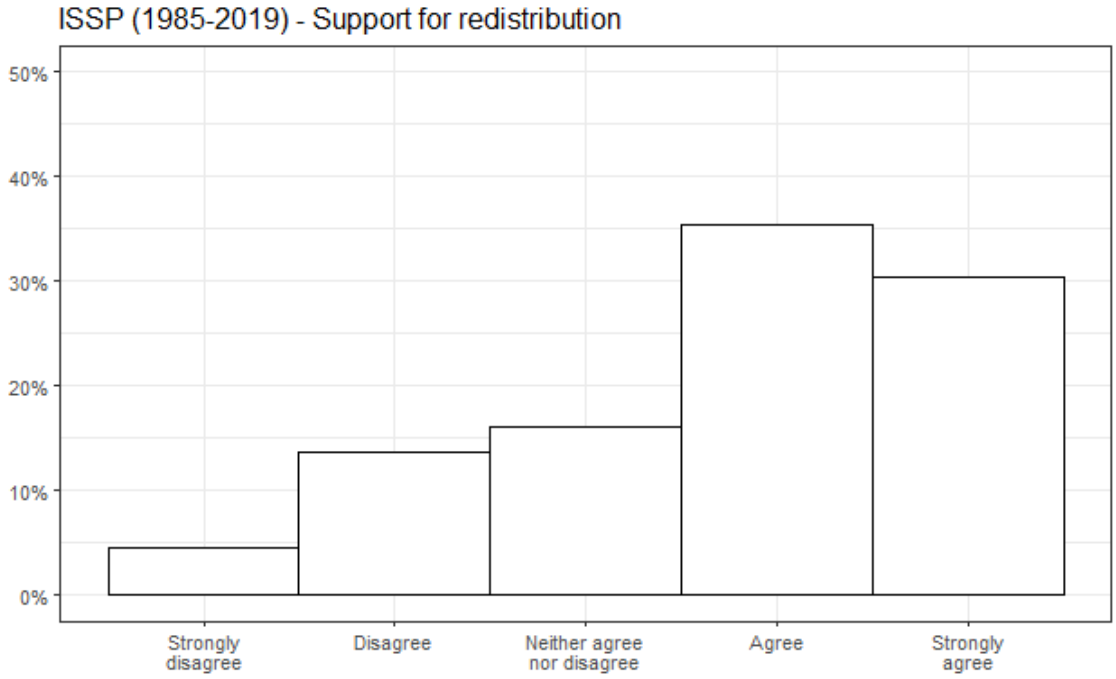


Figure A2.1. Distribution of redistributive preferences in the ISSP.

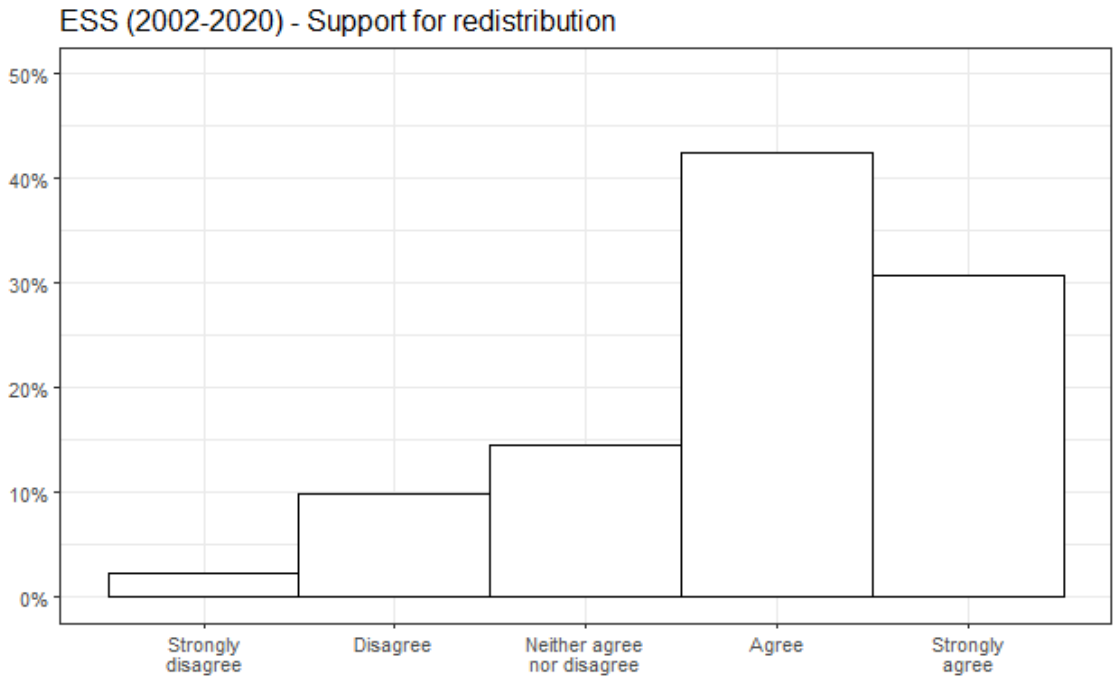


Figure A2.2. Distribution of redistributive preferences in the ESS.

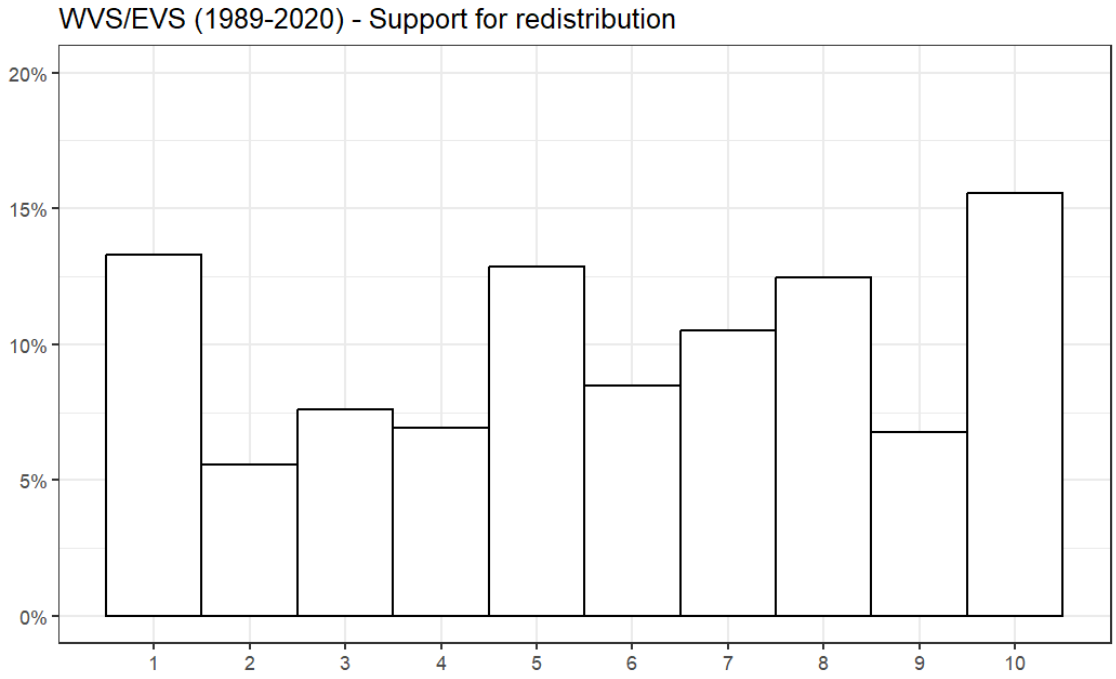


Figure A2.3. Distribution of redistributive preferences in the WVS/EVS.

No one would remember the Good Samaritan if he only had good intentions; he had money, too.

–Margaret Thatcher

3 Paper 1 – Good Samaritan or Rich Samaritan?

The Effect of Inequality, Development and Income on Preferences for Redistribution

3.1 Abstract

When do people want redistribution? And when are people more divided over it? Previous studies have focused on the effects of income inequality, economic development and individuals' income position, but mostly separately and with some mixed results. This article theorises and tests the interactive effects of these three factors. First, support for redistribution is proposed to increase when both development and inequality are high. While inequality increases the need for redistributive policies due to self-interest, development enhances people's altruism by providing resources and state-capacity required for redistribution. Second, public opinion is expected to be more divided when both inequality and development are low. In these cases, the costs of redistribution go to a broader segment of the population and involve a larger share of their income. The analyses use multilevel models to estimate over-time effects with survey data consisting of 368,619 respondents in 281 surveys from 86 countries over three decades. The results support the hypotheses, showing that support for redistribution is higher in developed unequal countries, and that the difference in preferences between the rich and poor is largest in less affluent equal countries.

3.2 Introduction

The distribution (and redistribution) of economic resources has long been a central theme of the political science literature. Income inequality is linked to many problems in society: crime, low political trust, low social capital and even obesity (Deaton 2003; Pettit & Western 2004; Picket & Wilkinson 2015). Redistributive policies serve as the main tool for governments to address this: tax and transfer programs ameliorate income disparities by taxing incomes from higher earners and transferring them to lower earners. The main driver for governments to implement such policies, especially in democracies, is public opinion since it is linked to voting behaviour (Evans & Tilley 2012) and thus influences public policy (Gilens 2005; Dalton 2013; Erikson 2015; Beramendi & Rehm 2016).

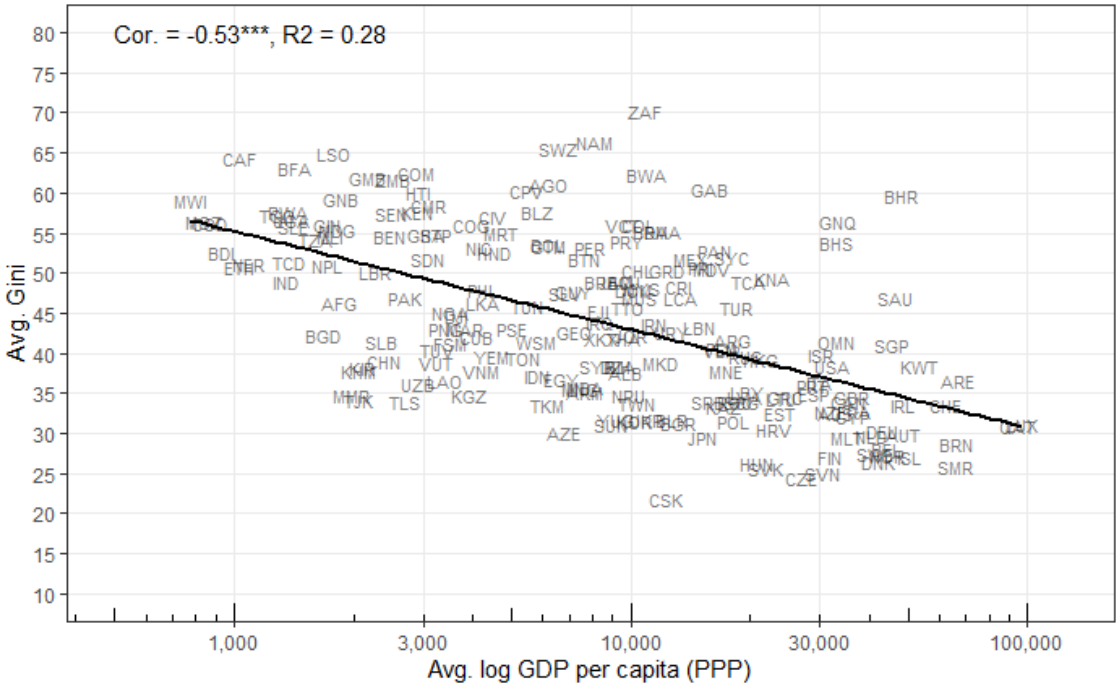


Figure 3.1 Relation of economic development and income inequality.

Each point indicates a country-year labelled by the abbreviation of country name. Data from the World Income Inequality Database.

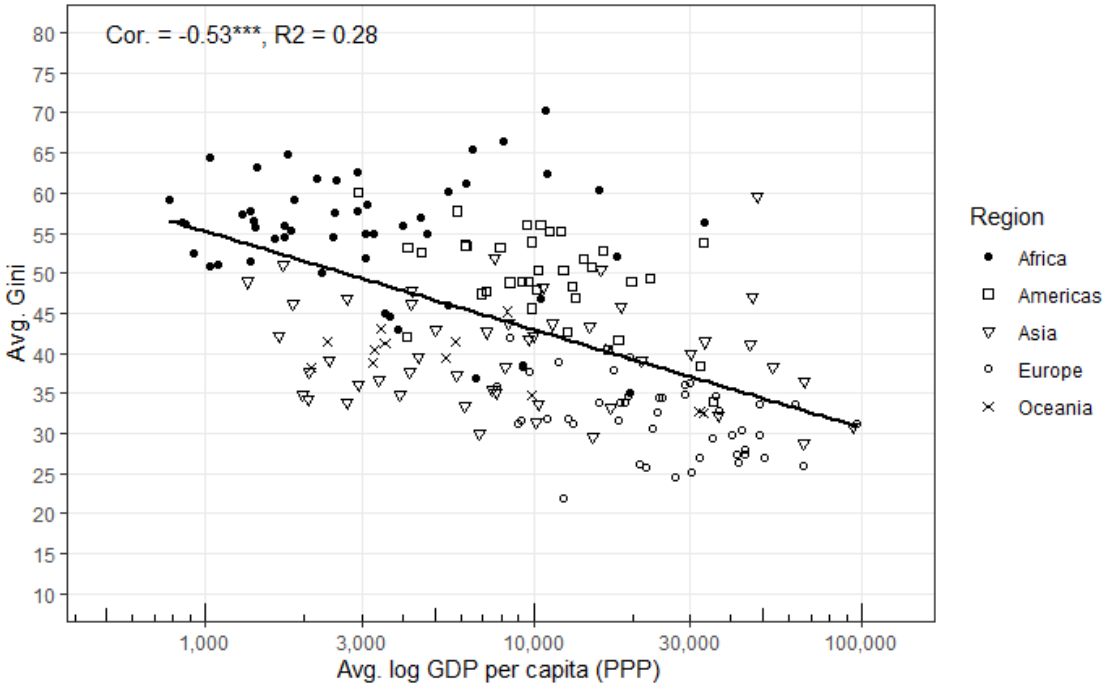


Figure 3.2 Relation of economic development and income inequality.

Each point indicates a country-year with the shape indicating world region. Data from the World Income Inequality Database.

Richer countries tend to have more equal income distributions (Theyson & Heller 2015; Inglehart 2018), as illustrated in *Figure 3.1*. However, levels of income inequality have been rising in recent decades, especially in advanced democracies (Kenworthy & Pontusson 2005; Atkinson 2015; Piketty *et al.* 2019). This is a worrying trend that attests to the importance of this topic. Whether rising inequality will generate a response that compells governments to ameilorate income disparities has brought renewed interest in understanding people's preferences for redistribution (e.g., Dion & Birchfield 2010; Mérola & Helgason 2016; Schmidt-Catran 2016; Rueda & Stegmueller 2019). Two questions in particular have received attention on this matter. When is aggregate support for redistribution higher? And when are preferences for redistribution more divided among the public? The literature in this area has generally sought to address these questions by examining the effects of three key factors: income inequality, economic development and income position. However, findings have varied between strong consensus and contradictory results.

One area of conflicting results has been the effect of inequality on preferences. In the seminal work of Romer (1975) and of Meltzer and Richard (1981; 1983), they argue that support for redistribution increases with income inequality because more people stand to gain from redistribution. On the one hand, several studies have found this effect to be "very weak, or even non-existent" (Perotti 1996, p. 172; Bassett *et al.* 1999; Moene & Wallerstein 2001; Lübker 2007; Iversen & Soskice 2009). On the other hand, studies with longitudinal designs have found that inequality does indeed increase support for redistribution (Rueda & Pontusson 2010; Lupu & Pontusson 2011; Schmidt-Catran 2016; Sealey 2018). One exception is a study by Kenworthy and McCall (2008) that found a non-significant effect, although the sample was limited to eight Western democracies over two decades.

Even more disagreement exists over the effect of economic development. On the one hand, economic development has been proposed to increase support for redistribution because rising affluence makes people more altruistic (Peters & Rose 1978; Alt 1979; Blomberg & Kroll 1999; Stevenson 2001; Rueda 2018; Gilens & Thal 2018). On the other hand, scholars have argued that people are less generous when the poor can afford to cover their basic needs (Wilensky 1975; Kluegel 1987; Shivo & Uusitalo 1995; Clark & Inglehart 1998; Dion & Birchfield 2010). Consistent with the first view, an experimental study by Mérola and Helgason (2016) found that people support redistribution more when they become more affluent. But observational evidence is mixed. In cross-national studies, the effect of economic development has varied between significantly positive, (Sealey 2018; Weisstanner 2022), significantly negative (Dion & Birchfield 2010; Jæger 2013), and non-significant (Schmidt-Catran 2016).

One explanation proposed for conflicting results is that inequality and redistribution have different cross-sectional and longitudinal relations due to reverse causality (Weakliem *et al.* 2005; Kenworthy & McCall 2008): rising inequality increases redistribution, but increased redistribution also lowers inequality. This explanation follows the 'thermostatic' model of public opinion developed by Wlezien (1995). According to the model, "the public adjusts its preferences for "more" or "less" policy activity in response to what policymakers actually do" (Wlezien 1995, p. 981). Thus, the public acts as a thermostat: when governments increase social spending, support for redistribution goes down. Consequently, we can also expect the public to view changes in the income distribution as a policy outcome of tax and transfer programs: if inequality drops, support for increasing redistribution will also drop.[15] Indeed, longitudinal studies by Milanovic (1999; 2000), Aalberg (2003), and Kenworthy and Pontusson (2005) have shown that rising inequality in advanced democracies during the 1980s and 1990s led to more redistribution. Still, even longitudinal studies have not been able to confirm the public opinion mechanism behind the median-voter hypothesis (Milanovic 2000; Kenworthy & McCall 2008), perhaps because of limited samples.

One area of agreement is the effect of income position. As noted by Iversen and Soskice (2001, p. 885), "income and skills are unambiguously the most important variables in explaining social policy preferences". Numerous studies have confirmed that people with lower positions on the income distribution tend to be more supportive of redistribution (Corneo & Gruner 2000; Alesina & Giuliano 2011; Cruces *et al.* 2013; Evans & De Graaf 2013; Kriesi *et al.* 2008).[16] Even though the relationship between income and redistributive preferences has

[15] Ideally, these mechanisms could be tested with structural equation models with data on inequality, economic development, public spending, party positions, and public opinion. This study focuses on the interactive effect of inequality and development on public opinion in order to maximize the robustness of the findings for those specific effects.

[16] Many researchers in this area also emphasise the role of social insurance and risk (Sinn, 1995; Iversen and Soskice, 2001; Mares, 2003; Moene & Wallerstein, 2003; Rehm, 2009), and social mobility and life-cycle profiles (Benabou & Ok, 2001; Haider & Solon, 2006; Alesina & Giuliano, 2011). To summarise, they point out that attitudes towards state-intervention in the economy – even if solely determined by self-interest – are also shaped by the prospect of future income as a function of age, education and occupational class, among other factors. In an analysis of the European Social Survey, Rueda and Stegmueller (2019, pp. 62-65) build a model to predict respondents' expected income and find that it is better at predicting support for redistribution than current income. Still, most research measures income position as a function of household income due to data availability.

been widely replicated, its strength varies substantially across countries (Dion & Birchfield 2010; Beramendi & Rehm 2016; Andersen *et al.* 2021). As a result, the effect of income has been used as a proxy for public division over redistributive preferences: the stronger the effect of income, the more the public is divided over the issue of redistibution. This effort has, however, led to more conflicting results, and disagreements have spilled over to this area.

Although inequality is often associated with higher levels of political polarisation among political parties (McCarty *et al.* 2003; 2016; Pontusson & Rueda 2008; Voorheis *et al.* 2015), evidence is mixed for its effect on the polarisation of public opinion (e.g., Iversen & Soskice 2015; Gu & Wang 2022). On redistributive preferences, scholars have actually argued that inequality reduces polarisation because it weakens the effect of income position (Dion & Birchfield 2010; Curtis & Andersen 2015; Dimick *et al.* 2015; Schmidt-Catran 2016). Inequality can make public preferences more uniform for several reasons: more people stand to gain from redistribution, the costs fall on a smaller segment of the population, and the rich become more altruistic. Still, evidence for such a moderating effect from inequality has varied between significant (Dimick *et al.* 2018), "mixed" (Schmidt-Catran 2016, p. 133) and non-significant (Dion & Birchfield 2010).

The effect of economic development on public division over redistribution has received less attention, and evidence here is also mixed. If the rich view welfare policies as a 'luxury good', as some scholars suggest (Durr 1996; Stevenson 2000; Rueda 2018; Mérola & Helgason 2016; Gilens & Thal 2018), it follows that affluent countries should display more uniform preferences because the rich are more altruistic. In contrast, other scholars have argued the opposite, that the rich are more altruistic in poorer countries because they view the goal of redistribution as covering the 'basic needs' of the poorest members of society (Dion & Birchfield 2010; Andersen *et al.* 2021). One possible explanation for the conflicting evidence here is, again, methodological: the longitudinal and cross-national effects of development on the relation between income and preferences may differ due to reverse causality, as public opinion can also affect macro-economics. In this case, support for redistribution may hinder economic growth.

This article seeks to reconcile some of these contradictory results on preferences for redistribution by examining the interrelated effect of these three factors: income inequality, economic development and income position. In doing so, this article makes three main contributions to the literature on preferences for redistribution. First, it builds on the theoretical mechanisms from previous scholarship showing that preferences are shaped both by self-interest and altruism, proposing that support for redistribution is high when inequality and development are higher, and that preferences are more divided when inequality and development are lower. As in Margaret Thatcher's retelling of the *Good Samaritan* parable, people support redistribution not only when they have good intentions, but when they have money as well.

Second, the study uses multilevel models with mixed effects to estimate the longitudinal effects of inequality and economic development on support for redistribution. Studies in this

area have often looked at cross-sectional relations with the implicit assumption that they reflect over-time effects (e.g., Dion & Birchfield 2010; Gu & Wang 2022). However, due to the potential for reverse causality (i.e., public opinion shaping public policy; see Andersen *et al.* 2005), these relations may not accurately estimate the longitudinal of inequality or development over time. By controlling for country random effects and de-meaning country-level variables, this study contributes to a growing body of research that estimates longitudinal effects with cross-national survey data (Fairbrother 2013; 2016; Schmidt-Catran 2016; Sealey 2018; Andersen *et al.* 2021).

Finally, the data for this research combines the World Values Survey and the European Values Study to analyse a large cross-national survey sample of 368,619 respondents in 281 surveys from 86 countries. The countries in this sample vary in terms of development and inequality as well as cultural and historical background, thus offering a better insight into economic attitudes that accounts for regional and cultural factors.

3.3 Theory

There are two main theoretical drivers that have been used to explain variations in preferences for redistribution: self-interest and altruism. Self-interest implies that people's preferences aim to maximise their material well-being (Romer 1975; Meltzer & Richard 1981; 1983). Altruism (also referred to as 'other-regarding concerns' and 'positive inequity aversion') suggests that people can also be motivated by a desire to promote other people's welfare (Alesina & Giuliano 2011; Rueda 2018; Cavaillé 2017). Both ideas have been used to explain why inequality and development determine preferences for redistribution, as they enhance self-interest among lower-earners and altruism among higher-earners. This section outlines the theory from previous research for why inequality and development are expected to increase public support for redistribution and decrease public division over it. Furthermore, this article proposes that these effects are interdependent and, therefore, conditional on each other. People are less tolerant of inequality in developed countries, and people are more divided over redistribution in developing countries with low inequality. The conceptual models for the hypotheses are summarised in *Table 3.1* as a two-by-two grid.

Table 3.1 Conceptual model on support for redistribution by economic development and income inequality.

		Economic Development	
		Low	High
Income Inequality	Low	Low Support High Division	Low Support Low Division
	High	Low Support Low Division	High Support Low Division

3.3.1 Supply and Demand for Redistribution

Most approaches to preferences for redistribution part from the model based on self-interest developed by Romer (1979) and Meltzer and Richard (1981), also known as the RMR model. The 'median-voter hypothesis' derived from it proposes that government policy is determined by the distance of the median voter's income from the mean. The basic assumptions of the

model are that people aim to maximise their individual material well-being and that redistribution involves tax and transfer programs that produce net costs for people above the mean income and net benefits for those below it. Assuming there are no deadweight or transaction costs, this implies that those below the mean would support a 100% tax rate and everyone above it would support a tax rate of zero (Rueda & Stegmueller 2017, p. 36). But, if such inefficiencies occur, people's support for redistribution should increase as a function of their distance from the mean income. Given the right-skew of income distributions, and assuming that tax and transfer programs redistribute from those above the mean income to those below it, the model predicts that the median voter will demand redistribution. Therefore, by increasing the distance between the median and mean incomes, the RMR model predicts that inequality drives support for redistribution. In line with this, several studies have found that inequality has a positive effect on support for redistribution (Rueda & Pontusson 2010; Lupu & Pontusson 2011; Schmidt-Catran 2016; Sealey 2018).

Economic development involves various social transformations, including rising affluence and increased state-capacity, that may drive support for redistribution by enhancing self-interest among the poor and altruism among the rich. As a country becomes more affluent, this can drive support among the poor because there is more income to distribute, and the rich may be more willing to pay for it because of the diminishing marginal utility of income (Alt 1979; Durr 1993; Stevenson 2001; Sealey 2018; Weisstanner 2022). Moreover, economic development also entails greater state-capacity, which can enhance public trust in the state, thus making people more open to redistribution. State-capacity is the ability of a state to collect taxes, enforce the rule of law and provide public goods in an effective and efficient way. Economic development is often referred to either as a prerequisite for or a consequence of state-capacity. As Besley and Persson (2010, p. 1) note, "a striking feature of economic development is an apparent symbiotic evolution of strong states and strong market economies". This is why economic development is theorised to increase political trust (Fukuyama 1995; Inglehart 2018), which in turn makes people more confident in the government and thus more supportive of state-intervention (Glaeser & Schleifer 2003; Daniele & Geys 2015; Pitlik & Kouba 2015). Further research has found that well-being enhances political trust (Catterberg & Moreno 2005), and rising political trust in Asian countries, particularly China, has been attributed to high levels of economic growth (Wang 2005; Wong, Wan & Hsiao 2011; Lyu & Li 2018).

Other research has increasingly highlighted the role that altruism plays in shaping preferences, explaining that the rich view redistribution as a 'luxury good' they are more open to paying for as they become more affluent (Durr 1993; Stevenson 2001; Rapoport & Vidal 2007; Rueda 2018; Mérola & Helgason 2016). This view is summarised by Rapoport and Vidal (2007, p. 1231), who write that "once individuals have satisfied their own physiological constraint in the course of economic development, they devote resources to shaping their altruistic preferences, increasing their social degree of altruism above its natural level". The main proposition derived from this is that economic development increases support for redistribution because the rich become more altruistic due to their rising affluence. Studies show that people are more willing to pay for redistribution when their incomes rise and

economic conditions are good (Peters & Rose 1978; Alt 1979; Blomberg & Kroll 1999; Stevenson 2001). Furthermore, altruism can also explain why inequality increases support for redistribution among the rich. Dimick et al. (2015) find evidence for this, arguing that "because individuals care about the welfare of others, relatively affluent individuals are willing to support more redistribution than they would if they were merely self-interested" (p. 10).

This article argues that the effects of inequality and development moderate each other in a 'supply and demand' way. Inequality drives the need for redistribution: the poor have more incentives for it, the rich become more altruistic, and it creates negative social externalities for all. Meanwhile, development provides the resources and state-capacity necessary to implement redistributive policies effectively and efficiently, enhancing the benefits, especially for the poor, while diminishing the costs perceived by the rich. Therefore, average support for redistribution is higher when both inequality and development are higher, creating the optimal conditions for welfare programs to have broad positive effects. Put differently, people support redistribution when inequality provides the demand to reduce income disparities, and development provides the supply of resources and capacity to do so.

This mechanism can be understood through the analogy of pie-splitting, a situation where people receive uneven slices of pie, which is commonly used to model redistribution (Iversen & Soskice 2006; Alesina & Tabellini 2007; Cavallo 2012). In this analogy, economic development is the size of the pie as a whole and income inequality is how evenly-distributed the pie is. Redistribution, then, is the process of taking parts of the largest pie slices, and rationing them in favour of those with smaller slices. As a result, the pie is distributed more fairly. However, redistributing pies (as with incomes) can be a messy business, carrying deadweight costs and transaction costs. Some people may take more than they are supposed to receive, others may not give as much as they should, and those who are rationing it may corruptly keep some for themselves. Ultimately, waste and inefficiency from redistribution will cause the size of the pie as a whole to shrink, and the smaller the pie is to start with, the more difficult it will be to avoid this. Therefore, people weigh the benefit of redistribution to its overall economic costs. Ideally, then, redistribution is at its most useful when there is a large pie that is unevenly distributed.

The conceptual model for the first hypothesis is summarised in *Table 3.1*. When inequality is low, demand for redistribution is low. In sum, H3.1 contends that inequality increases support for redistribution, but development moderates this effect because the economic resources and state-capacity condition the efficiency and effectiveness of redistributive policies.

> *H3.1: Support for redistribution is higher when both income inequality and economic development are higher.*

3.3.2 Who Pays and How Much?

Besides aggregate support for redistribution, scholars have also sought to understand public division over redistribution, particularly by identifying factors that moderate the relationship between income position and preferences. Based on dynamics related to the ones outlined above, previous scholarship has presented reasons why income inequality and economic development could have such an effect (Dion & Birchfield 2010; Mérola & Helgason 2016; Schmidt-Catran 2016; Curtis *et al.* 2021). Both inequality and development can make preferences more uniform by enhancing the self-interest of middle-income earners and by driving the altruism of higher-income earners, thereby weakening the effect of income position.

Inequality can weaken the effect of income position because a larger share of the population stands to gain from redistribution, and their expected utility becomes more uniform. Dion and Birchfield (2010, p. 319) hypothesise that "widespread income inequality will also yield more uniform attitudes across income groups toward redistribution. Because income inequality corresponds to large segments of society with unfulfilled need relative to the societal average, there should be more consensus among income groups on the need for redistribution". Although the interaction of income and inequality is non-significant in the analysis of Dion, Schmidt-Catran (2016, p. 124) finds evidence for this, arguing that inequality reduces differences in preferences because "the group that is likely to oppose redistribution becomes smaller". A similar mechanism is presented by Lupu and Pontusson (2011), who consider how income groups ally with each other based on the disparities between them. They contend that the preferences of middle-earners are closer to those lower-earners when the differences between them are smaller than their differences with higher-earners. Therefore, the more skewed the income distribution is, the more similar people's preferences become. Although this mechanism refers to the skewness of the distribution and not its Gini coefficient, as pointed out by Schmidt-Catran (2016, p. 124-6), they are in practice highly correlated (0.71 in Lupu & Pontusson 2011, p. 326). Moreover, inequality can also make preferences more uniform by making the rich more open to redistribute in order to oppose social unrest (Alesina and Rodrik 1994; Dion and Birchfield 2010, p. 319). In line with this, Rueda and Stegmueller (2016) demonstrate that inequality indeed makes the rich more open to redistribution because they take into account the externalities of inequality, specifically crime. Similarly, Curtis and Andersen (2015) find that occupational classes converge in their preferences as inequality increases, particularly due to managers and professionals becoming more supportive of redistribution.

Economic development can also make preferences for redistribution more uniform. As Mérola and Helgason note (2016, p. 1111), economic growth creates positive perceptions of a common fate: "a feeling of different groups being not only 'on the same boat' but also being on a 'desirable boat'". This in turn leads to more social affinity, increasing support among middle- and higher-earners (Lupu & Pontusson 2011; Alt & Iversen 2017). Moreover, economic growth can also make the rich more altruistic. Based on the assumption of diminishing marginal utility of income and wealth, and the notion that the rich view welfare programs as a 'luxury good', they become more open to redistribution as overall affluence rises

(Durr 1993; Stevens 2000; Rueda 2018). This explains why differences in preferences can be expected to be lower when countries are more affluent.

Building on this literature, this article argues that the moderating effects of inequality and development on the relationship between income position and preferences for redistribution also moderate each other, implying a three-way interaction. Since inequality affects who pays for redistribution and development affects how much is paid, it follows that these effects should compound. High inequality makes preferences more uniform because there is more of a need for redistribution and its costs fall on a smaller segment of the population. Meanwhile, development has a similar effect because it creates positive perceptions of a common fate and lowers the costs of redistribution. It follows, then, that lower levels of inequality and development will increase public division on this issue. But these effects are not additive. Lower inequality implies that a larger segment of the population stands to lose from redistribution and low economic development means that the rich are not that rich to begin with. As a result, the effect of income is strongest in countries that are equal and poor because the population is more evenly split between those who benefit from redistribution and those who pay for it, and the latter are not that affluent to begin with. Therefore, as outlined in *Table* **3.1**, the effect of income is expected to be strongest in countries with low inequality and low development, while it is expected to be weaker in countries that are more unequal, affluent or both.

> *H3.2: The negative effect of income percentile on support for redistribution is moderated by the interaction of inequality and development so that this effect is stronger with low inequality and low development.*

3.4 Data & Methods

3.4.1 Sample

To test the hypotheses, this study uses the Integrated Values Survey (IVS; the combination of the World Values Survey and the European Values Study; Inglehart 2020; EVS 2020), a pooled cross-sectional time-series dataset of cross-national surveys of weighted random representative samples of about 1,500 respondents starting from 1981. This dataset includes attitudinal and socio-demographic data that allows for a comparative and over-time analysis of the relationship between people's attitudes and their income as well as national factors. The original sample[17] consists of 571,543 respondents in 391 surveys from 88 countries, and the final sample without missing data consists of 368,619 respondents in 281 surveys from 86 countries.[18]

[17] The original sample filters out data from (1) surveys conducted in the first waves of the WVS and EVS, once the question on income equality was included; (2) countries surveyed more than once; and (3) sovereign countries based on UN membership (territories excluded are Hong Kong, Kosovo, Northern Cyprus, Northern Ireland, Macao, Palestine, Puerto Rico and Taiwan).

[18] Missing data is outlined in *Appendix Table A3.1*, which can occur for three reasons: (1) country-level data points are unavailable; (2) questions were not asked in a particular country-year survey; (3) or respondents did not answer a question. Fortunately, none of the items or variables are missing for over 15% of cases – the usual threshold to require imputation (Enders, 2003; Banks et al., 2004; Luengo et al., 2010).

3.4.2 Support for Redistribution

The dependent variable in the analysis is individual-level support for redistribution, measured by the 'Income Equality' question from the IVS surveys (Item E035). The item uses a ten-point scale whereby 1 indicates support for less redistribution and 10 indicates support for more redistribution. The item is worded as follows:[19]

> *How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal.*

This question has been used as the outcome variable in numerous studies (Ansell & Samuels 2010; Pepinsky & Welborne 2011; Hayward & Kemmelmeier 2011; Iglesias, López & Sántos 2013), as have other questions on other economic issues like business ownership (Bjornskov & Paldam 2012) and individual responsibility to provide (Sealey 2018; Andersen *et al.* 2021). Survey questions with ten-point scales such as this have been found to be more useful than five-point scales because they have higher convergent and discriminant validity while maintaining similar means (Coelho & Esteves 2007). The distributions for support for redistribution in each survey of the IVS are illustrated in the *Figures A3.1–A3.21*, along with the mean values indicated by the vertical line.

3.4.3 Income Percentile

Income percentile operationalises respondents' rank position on the income distribution based on the 'Scale of Incomes' question in the IVS (Item X047), which uses country-specific gross household income scales labelled by national currency adapted to ten categories (10 per cent lowest to 10 per cent highest income category). The item is worded as follows:

> *Here is a scale of incomes and we would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come into, after taxes and other deductions: (1) First step, (10) Tenth step.*

Despite the item's limitations for measuring raw income, it has internal validity when used as a rank measure of household income within surveys (Donnelly & Pop-Eleches 2018). Each respondent is assigned a percentile value (1–100) based on their income position relative to the rest of the respondents from the same country-year survey, as done in previous research (Fairbrother 2013). This maximises the variance of respondents' income without biasing the variable.

[19] The direction of the question is reversed for clarity so that higher values represent more support for redistribution.

3.4.4 Economic Development

One of the best proxies for economic development is Gross National Income (GNI) per capita using purchasing power parity measured in international dollars that have the same purchasing power in a given country as the US dollar has in the United States (Marsh 2014). This measure captures the average purchasing power of individuals in a country and corrects for currency exchange rates. The data for GNI per capita is extracted from the World Bank and the analyses use the common logarithm of the value.

Since GNI per capita reflects the mean income of a country, it is essentially an aggregation of an individual-level variable (income). Whether this is considered a country-level variable, or an individual-level variable can be a matter of interpretation. For the purposes of this study, GNI per capita is conceptualized as a country-level variable, since people do not vary in this regard based on individual-level characteristics. Meanwhile, the measure of income percentile captures the individual-level variable that places respondents in the income distribution.

3.4.5 Income Inequality

This study uses the Gini coefficient to measure income inequality. While there is no shortage of methods for measuring income inequality (Coulter 1989; Cowell 2011; McGregor *et al.* 2019), the Gini coefficient is the preeminent one used (Timmons 2010). The Gini is the ratio of the Lorenz curve of a population's income with the line of perfect equality. Thus, it ranges from 0 (perfect equality) to 100 (perfect inequality). As McGregor *et al.* (2019) explain "the Gini coefficient is simple to calculate and can be explained using the familiar graphical representation".

Gini data is retrieved from the UNU-WIDER World Income Inequality Database (WIID 2021). The WIID builds on the data originally from Deininger and Squire (1996). It compiles Gini estimates from high quality sources, allowing for comparative studies of relatively large numbers of countries and years. Moreover, the WIID expands the number of observations–both in time and space–and is more transparent in terms of standards and documentation. However, the operationalisation of Gini can present some difficulties because there are numerous sources of data–meaning that there can be multiple observations for one country-year–and these sources vary in the methods used to compute estimates. This can lead to some trade-offs between sample size, comparability, and reliability. As Timmons writes (2017, p. 747), "the more that is done to ensure uniformity, the smaller the N." The WIID includes quality scores based on "how much information is provided by each observation, under the understanding that the more information we have about the survey and methodology used to produce the estimates, the better" (UNU-WIDER 2021, p. 15). These quality scores are based on seven main dimensions on which surveys vary: geographical unit (national, urban, rural, etc.); population covered (all, economically active, etc.); age covered (all, working age, etc.); income share unit (household, person, tax unit, etc.); the unit of analysis (household, person); the equivalency scale (for example, whether there is an adjustment for household size and its type); and income definition (gross income, net income, consumption, etc.).

Two steps are used to make the data compatible while simultaneously minimizing missing data and mitigating serial correlation. First, the observations with the highest quality scores are filtered for each source. Second, five-year moving averages are taken so there is one observation per each country-year. This criterion closely follows other studies that have used the WIID dataset (Li *et al.* 1998; Chong 2004; Reuveny & Li 2003; Timmons 2010; Ha 2012; De Haan & Sturm 2017).

3.4.6 Control Variables

Various socio-demographic measures are used as controls in the analyses due to the possible endogeneity they might create between the independent variables and support for redistribution: education, religiosity, marital status, gender and age. A study of the WVS by Alesina and Giuliano (2011) shows that support for redistribution is associated with older respondents, women, lower educational attainment and non-married. Moreover, religiosity has been linked to less support for redistribution by numerous studies (Guiso, Sapienza, & Zingales 2003; Brammer, Williams, & Zinkin 2007; Renneboog & Spaenjers 2012). The IVS includes questions for these variables. Gender (Item X001) is coded as a categorical variable: 'Male' and 'Female'. Age (Item X003) is coded as a continuous variable. Marital status (Item X007) is coded as a categorical variable: 'Single', 'Married/Cohabitation', 'Divorced/Separated' and 'Widowed'. Educational attainment (Item X025) is coded as an ordinal variable: (1) 'Low', (2) 'Medium' and (3) 'High'.[20] Religious attendance (Item F028) is coded as the reverse of the 8-point scale from the IVS (more indicating higher religiosity).

3.5 Analysis

The main analysis consists of a series of mixed-effect models predicting preferences for redistribution. The models specify random components for the intercept and the coefficients for year and income percentile (when included), allowing their effects to vary by country. Moreover, the models include mean and de-meaned values for country-level variables (i.e., Gini and GNI per capita). This method has been proposed to estimate longitudinal effects of national factors on individual-level attitudes (Mundlak 1978; Bell, Fairbrother, & Jones 2019), and similar methods have been used in recent studies of pooled cross-sectional time-series datasets (Fairbrother 2013; 2016; Schmidt-Catran 2016; Sealey 2018). The mean values for Gini and GNI per capita control for the potential cross-sectional relation that inequality and development have with attitudes and the effect of income position. Their de-meaned values, meanwhile, capture the effect of their changes over time. The longitudinal design of the models is important because cross-sectional relationships can be biased due to reverse causality, since

[20] The categorisation of education is based on the mapping used by the WVS (see WVS Codebook Appendix 4A). Low education: no formal, less than primary, primary, lower secondary or vocational not considered upper secondary. Middle education: upper-secondary or post-secondary non-tertiary. High education: short-cycle tertiary, bachelor, master, doctoral or higher.

"the distribution of income is more equal in nations where public opinion is more egalitarian" (Andersen *et al.* 2005, p. 261).

By including random intercepts for country and random slopes for year, the models account for differences in attitudes between countries due to time-invariant factors and time trends due to unmeasured variables. Economic attitudes can be affected by factors that are time-invariant (i.e., constant between countries over time) or time-varying (i.e., vary within countries over time). A country's region and majority religion can have important effects on how its population views social policies (Dion & Birchfield 2010; Andersen *et al.* 2021). Historical background can also be a potential source of endogeneity between public opinion and social policy. For example, countries with communist legacies have been associated with economic stagnation (Benjamin & Kautsky 1968; Crafts & Toniolo 2010; Harrison 2012) and weaker economic-based political cleavages (Gijsberts & Nieuwbeerta 2000; Rohrschneider & Whitefield 2009; Saarts 2016). Meanwhile, the independent variables (inequality and development) are time-varying, but other factors that can influence attitudes over time. For example, some scholars have noted that immigration can hinder support for redistribution due to inter-group dynamics and how the public perceives the recipients of such policies (Finseraas 2008; Duch & Rueda; 2014; Alesina *et al.* 2018). Furthermore, models that include income percentile also include random slopes by country because the relationship between income and preferences can also vary by country due to unmeasured variables. If this relationship affects levels of inequality or development, it could bias the results unless the model account for it.

3.6 Results

The means, standard deviations and bivariate correlations for all the variables at individual-level are outlined in *Appendix Table A3.2*. Virtually all correlations are statistically significant due to the large amount of data. Unsurprisingly, income percentile is the best predictor of support for redistribution. *Figure 3.3* displays the cross-sectional and longitudinal relations of Gini and GNI per capita with average support for redistribution and its correlation with income percentile. These are the relations pertinent to the study. It shows that countries with more inequality display less support, albeit weakly, and that richer countries display more support. As pointed out by others (Andersen *et al.* 2005; Sealey 2018), the negative relation between inequality and support can be due to reverse causality: countries where people are more tolerant of inequality tend to eventually become less equal. Meanwhile, the positive relation with economic development is consistent with the notion that affluence enhances altruism. *Figure* **3.4** shows that the longitudinal relation between Gini and support is non-significant, while it is positive and significant for GNI per capita. Based on this preliminary evidence, increases in inequality do not appear to affect preferences, but increases in development do. Moving on to the relationship between income and support, *Figure 3.5* shows that this effect is stronger in countries that are more equal and countries that are richer. Regarding the longitudinal relation, *Figure 3.6* shows that increases in Gini and GNI per capita are associated with a weaker relation between income and preferences, which is consistent with the hypothesis that low inequality and high development make preferences more uniform. Still, these preliminary results must be

taken with a grain of salt, as they do not consider individual-level controls. More importantly, in order to estimate the longitudinal and cross-sectional effects accurately, they must be considered simultaneously.

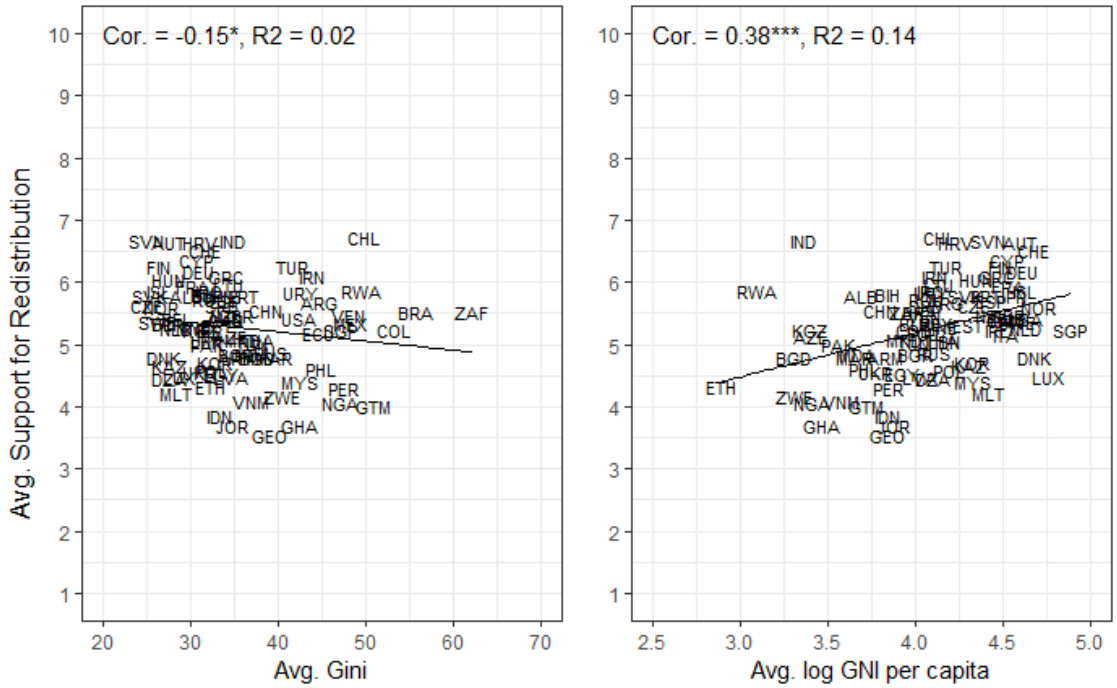


Figure 3.3 Cross-sectional relation of support for redistribution with income inequality and economic development.

Y-axis indicates the weighted mean for the response to the 'Income Equality' item of the IVS for each country-year survey. The X-axes indicate mean Gini coefficient and mean log GNI per capita (PPP), respectively, observed in the sample.

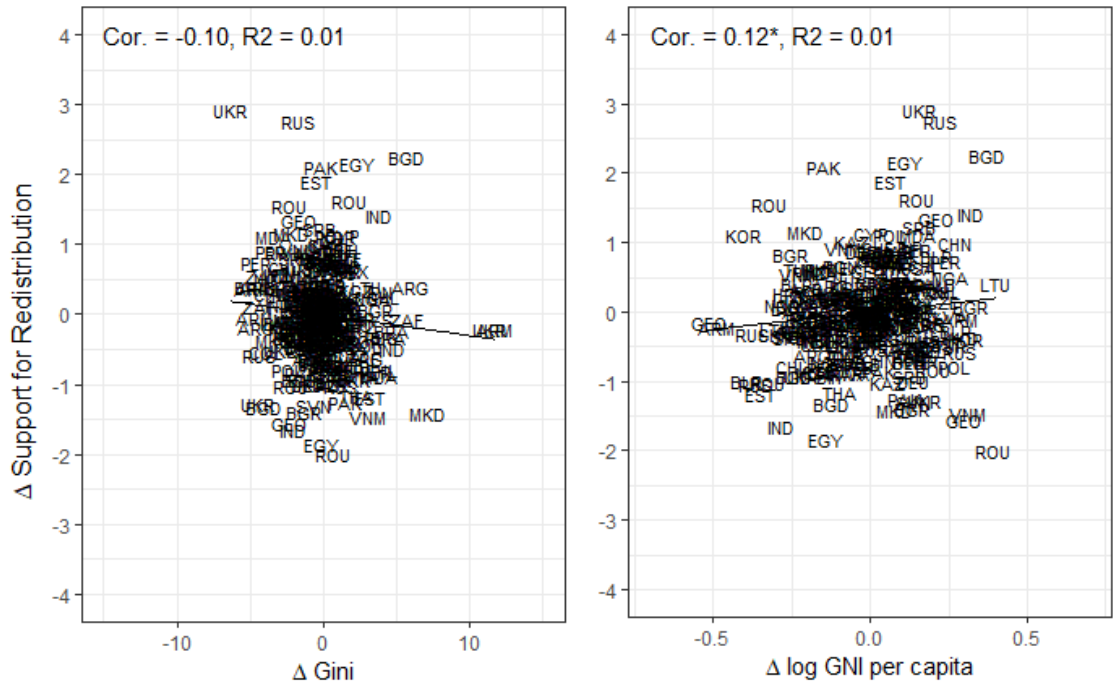


Figure 3.4 Longitudinal relation of support for redistribution with income inequality and economic development.

Y-axis indicates the weighted mean for the response to the 'Income Equality' item of the IVS for each country-year survey. The X-axes indicate change in Gini coefficient and change in log GNI per capita (PPP), respectively.

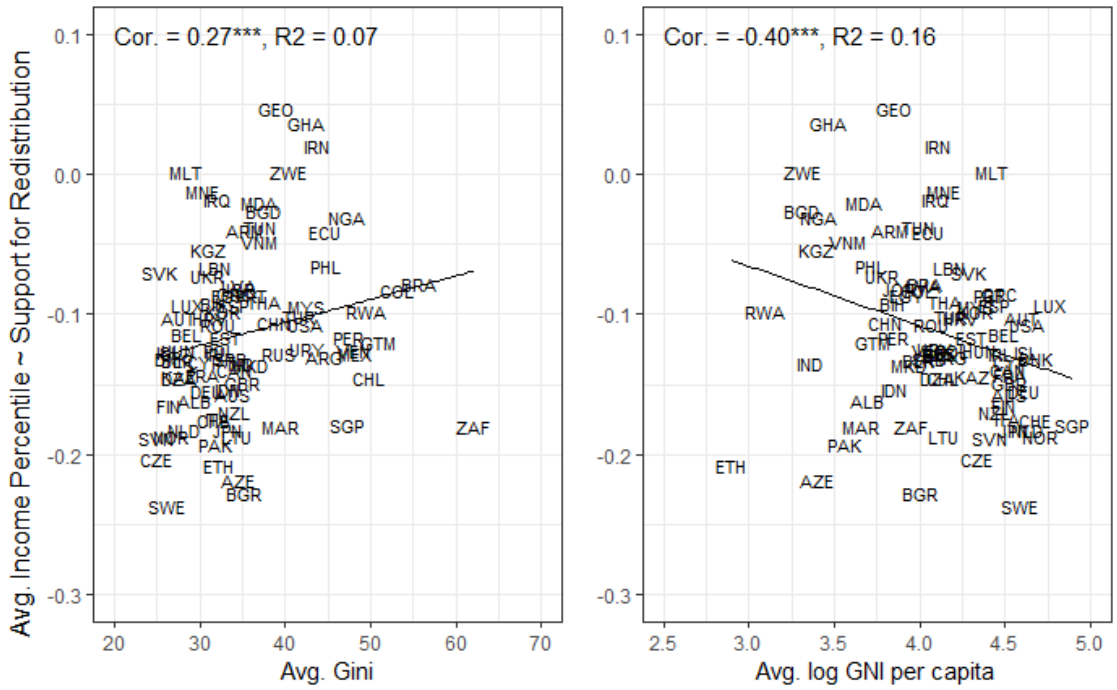


Figure 3.5 Cross-sectional relation of the correlation between income percentile and support for redistribution with income inequality and economic development.

Y-axis indicates change in the weighted correlations between household income percentile and the response to the 'Income Equality' item of the IVS for each country-year survey. The X-axes indicate mean Gini coefficient and mean log GNI per capita (PPP), respectively, observed in the sample.

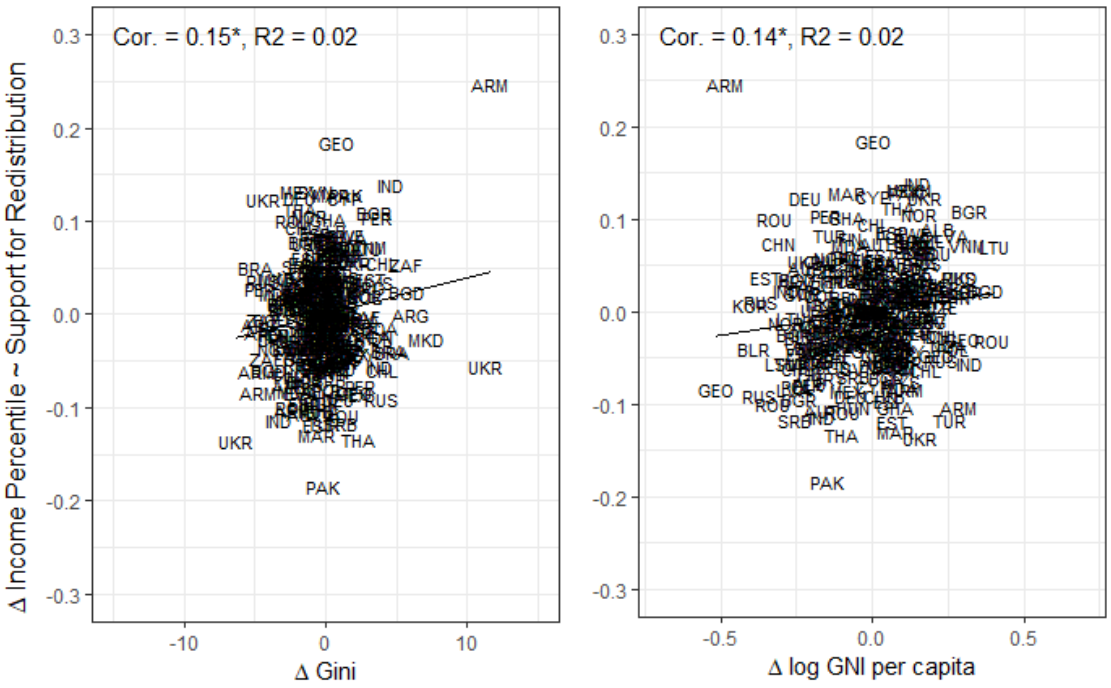


Figure 3.6 Longitudinal relation of the correlation between income percentile and support for redistribution with income inequality and economic development.

Y-axis indicates change in the weighted correlations between household income percentile and the response to the 'Income Equality' item of the IVS for each country-year survey. The X-axes indicate change in Gini coefficient and change in log GNI per capita (PPP), respectively.

Table 3.2 shows the MLMs fitted to individual-level support for redistribution with standardised coefficients.[21] Model 1 includes the control variables used in the analysis as well as country fixed effects and country trends. Consistent with previous studies, support for redistribution is lower among respondents that are male, highly-educated, younger and married. The exception here is religious attendance, which has a negative but non-significant effect.

Table 3.2 Standardised mixed-effects models on the effects of inequality, development and income on for redistribution.

	Support for Redistribution					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Fixed Effects						
Constant	5.407***	5.395***	5.083***	5.434***	5.389***	5.392***
	(0.093)	(0.093)	(0.087)	(0.096)	(0.096)	(0.096)
Year (1980 = 0)	0.327*	0.372**	0.210	-0.244	-0.223	-0.230
	(0.182)	(0.188)	(0.183)	(0.188)	(0.187)	(0.187)
Male (Ref. = Female)	-0.165***	-0.164***	-0.148***	-0.165***	-0.148***	-0.148***
	(0.010)	(0.010)	(0.009)	(0.010)	(0.009)	(0.009)
Age	0.122***	0.121***	0.075***	0.120***	0.074***	0.073***
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Marital Status (Ref. Single)						

[21] The standardized coefficients indicate estimated effects once all variables (except categorical ones: i.e., gender and marital status) are normalized so the mean is zero and the standard deviation is one. This makes the coefficients more easily comparable. The results with non-standardised coefficients are outlined in *Appendix Table A3.3*.

Married	-0.115***	-0.113***	-0.035***	-0.112***	-0.034***	-0.034***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Divorced	-0.019	-0.017	-0.065***	-0.015	-0.065***	-0.065***
	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)
Widowed	0.081***	0.084***	0.035	0.084***	0.034	0.033
	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
Religious Attendance	-0.010	-0.010	-0.016	-0.013	-0.016	-0.016
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Education	-0.472***	-0.471***	-0.309***	-0.471***	-0.306***	-0.305***
	(0.010)	(0.010)	(0.011)	(0.010)	(0.011)	(0.011)
Income Percentile					-0.492***	-0.510***
					(0.034)	(0.035)
Cross-Sectional Effects						
μ Gini		-0.226	-0.068	-0.062	-0.049	-0.072
		(0.201)	(0.201)	(0.207)	(0.203)	(0.207)
μ GNI			0.402**	0.481***	0.428**	0.477***
			(0.169)	(0.176)	(0.172)	(0.175)
μ Gini x μ GNI				0.279	0.252	0.270
				(0.414)	(0.407)	(0.414)
μ Gini x Income Percentile						0.013
						(0.076)
μ GNI x Income Percentile						-0.136**
						(0.065)
μ Gini x μ GNI x Income Percentile						-0.083
						(0.153)
Longitudinal Effects						
Δ Gini		0.207***	0.223***	0.230***	0.234***	0.234***
		(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Δ GNI			0.689***	0.633***	0.641***	0.642***
			(0.049)	(0.051)	(0.051)	(0.051)
Δ Gini x Δ GNI				0.116***	0.107***	0.106***
				(0.032)	(0.031)	(0.031)
Δ Gini x Income Percentile						0.057***
						(0.020)
Δ GNI x Income Percentile						0.111***
						(0.020)
Δ Gini x Δ GNI x Income Percentile						-0.249***
						(0.039)
Random Effects						
Country	X	X	X	X	X	X
Country x Year	X	X	X	X	X	X
Country x Income Percentile					X	X
Observations						

Country	86	86	86	86	86	86
Respondents	368,619	368,619	368,619	368,619	368,619	368,619
Marginal R^2	0.012	0.015	0.026	0.020	0.024	0.024
Conditional R^2	0.124	0.158	0.176	0.153	0.160	0.187
Log-Likelihood	-920,594.9	-920,524.3	-918,830.7	-920,424.6	-918,779.1	-918757.8
Chi-squared	–	141.3***	3387.1***	3187.7***	3291.0***	42.3***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Symbols μ and Δ indicate mean and demeaned values for country-level variables, respectively. GNI indicates log GNI per capita (PPP) in 2017 international dollars. For marital status, married includes cohabitation and divorced includes separated. Significance: ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

Turning to the main independent variables, I first examine the proposition that support for redistribution increases as a function of the interaction of income inequality and economic development. The results in Models 2 & 3 show that change in inequality and development have positive direct effects on support, consistent with previous findings. Specifically, Model 2 shows that change in Gini has a significant positive effect (0.207, $p < 0.001$), indicating that a 1-point increase in Gini is associated with an increase of 0.043 points. Model 3 shows that change in GNI also has a significant positive effect (0.689, $p < 0.001$), indicating that a 1-point increase in log GNI per capita is associated with an increase of 2.063 points. Interestingly, the effect of GNI is about three times stronger than that of Gini (comparing standardised coefficients), suggesting that economic development actually plays a more important role in the formation of redistributive preferences than levels of income inequality. Consistent with H3.1, Model 4 shows that the interaction of change in GNI and Gini has a significant positive effect (0.116, $p < 0.001$), indicating that inequality leads to more support for redistribution in affluent countries. Furthermore, the Chi-squared (λ^2=3,187.7, $p < 0.001$) indicates that the inclusion of the interaction enhances the explanatory power of the model while keeping it parsimonious.

To better understand the interaction effects and how they are related to the hypothesis, the effects from the coefficients in Model 4 are displayed in *Figure 3.7*. The graph displays show the fitted values of support for redistribution depending on levels of Gini and GNI per capita, which vary between one standard deviation above and below their mean, while all other variables in the models set to their means (Fox & Andersen 2006). In line with H3.1, *Figure* **3.7** illustrates how economic development and income inequality interact in their relationship with preferences for redistribution. The ribbons surrounding the fitted lines indicate the 95% confidence interval for the fitted values. The effect of Gini appears to be stronger in affluent countries. In a rich country with a GNI per capita of $22,000 where Gini increases from 32 to 42, support for redistribution increases from an estimated 5.4 (±0.2) to 6.0 (±0.2). In contrast, in a country of $9,000, the increase is from an estimated 4.8 (±0.2) to 5.1 (±0.2). Furthermore, the marginal effect of Gini conditional on GNI per capita is displayed in *Figure 3.8*. A 1-point rise in Gini increases support for redistribution by an estimated 0.033 points in a country of $9,000, and by 0.061 points in a country of $22,000. In other words, inequality increases support for redistribution almost twice as much in a rich country.

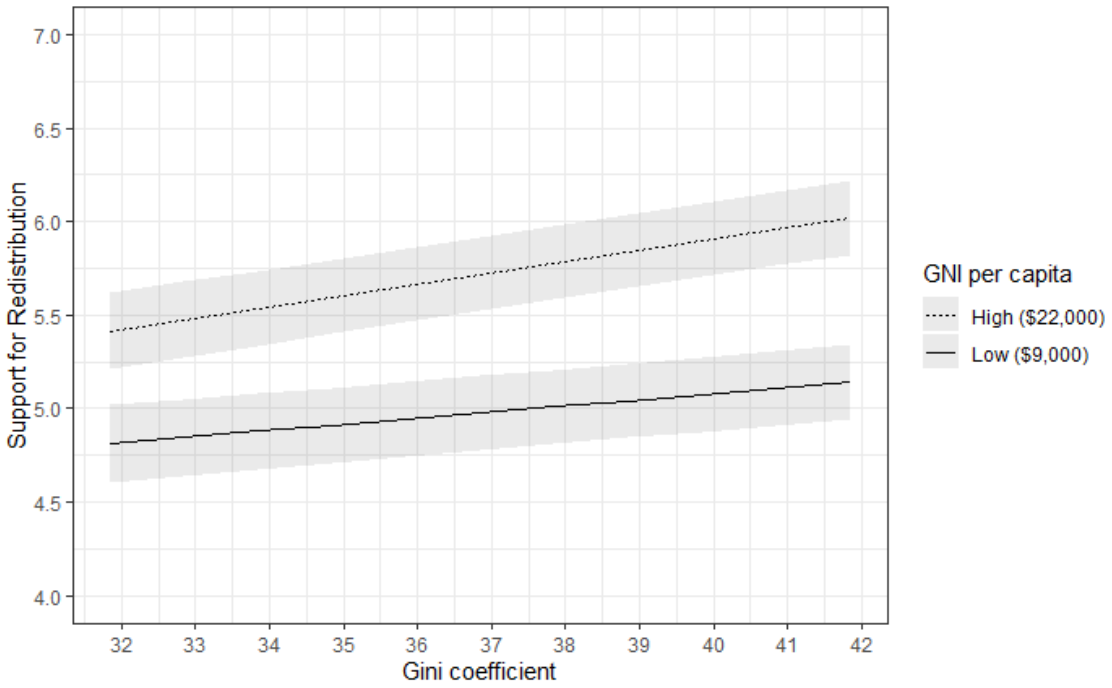


Figure 3.7 Predicted support for redistribution based on Gini and GNI per capita.

Based on longitudinal effects from Table 3 Model 4.

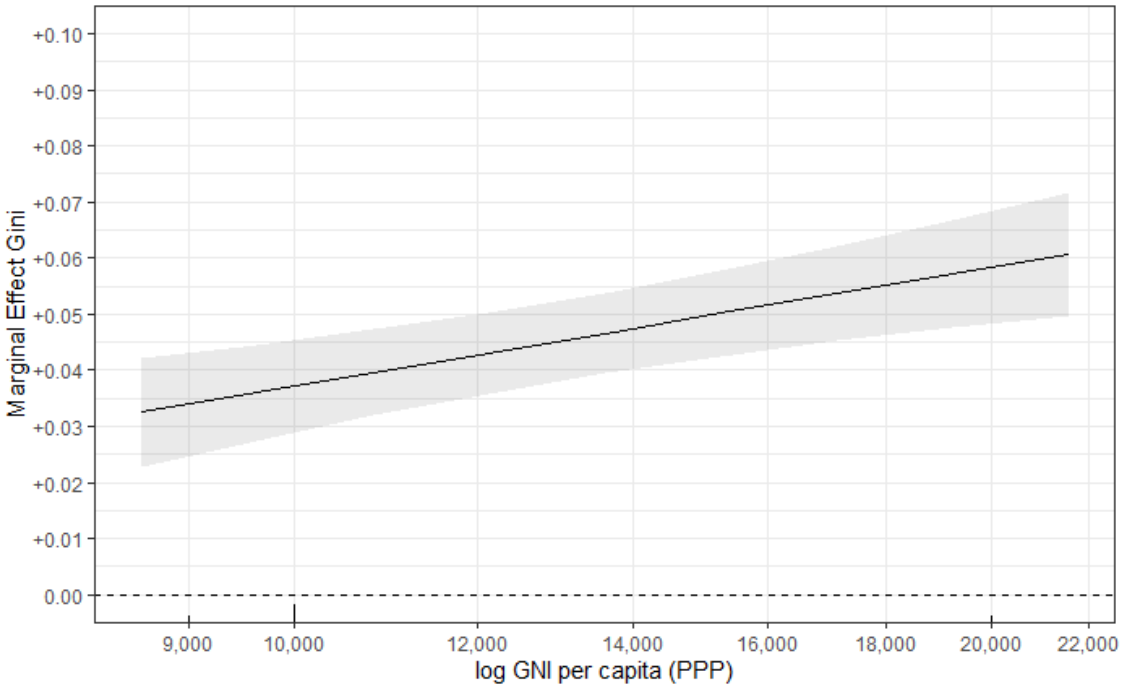


Figure 3.8 Marginal effect of Gini on support for redistribution conditional on GNI per capita.

Based on longitudinal effects from Table 3 Model 4.

Next, I turn to the effect income percentile and the moderating role of inequality and development. Model 5 shows that individuals' household income percentile has a significant negative effect (-0.492, $p < 0.001$), indicating that a difference of one decile is associated with

a drop of 0.086 points in support. *Figure 3.9* displays the relationship between income percentile and support for the overall sample as well as for each country-year survey. Respondents with higher incomes are predictably less supportive of redistribution, although there is a lot of heterogeneity in this relationship across surveys. H3.2 attempts to explain the variation in the effect of income percentile as a function of Gini and GNI per capita. Thus, Model 6 includes the three-way interaction of income percentile, GNI per capita and Gini. The effect of the three-way interaction is significantly negative (-0.249, $p < 0.001$) and the Chi-squared (λ^2=42.3, $p < 0.001$) again indicates that its inclusion contributes to the explanatory power of the model while keeping it parsimonious. These results are consistent with the notion that the effects between inequality, development and income are interdependent, though the complexity of the interaction makes it difficult to interpret without viewing the marginal effects.

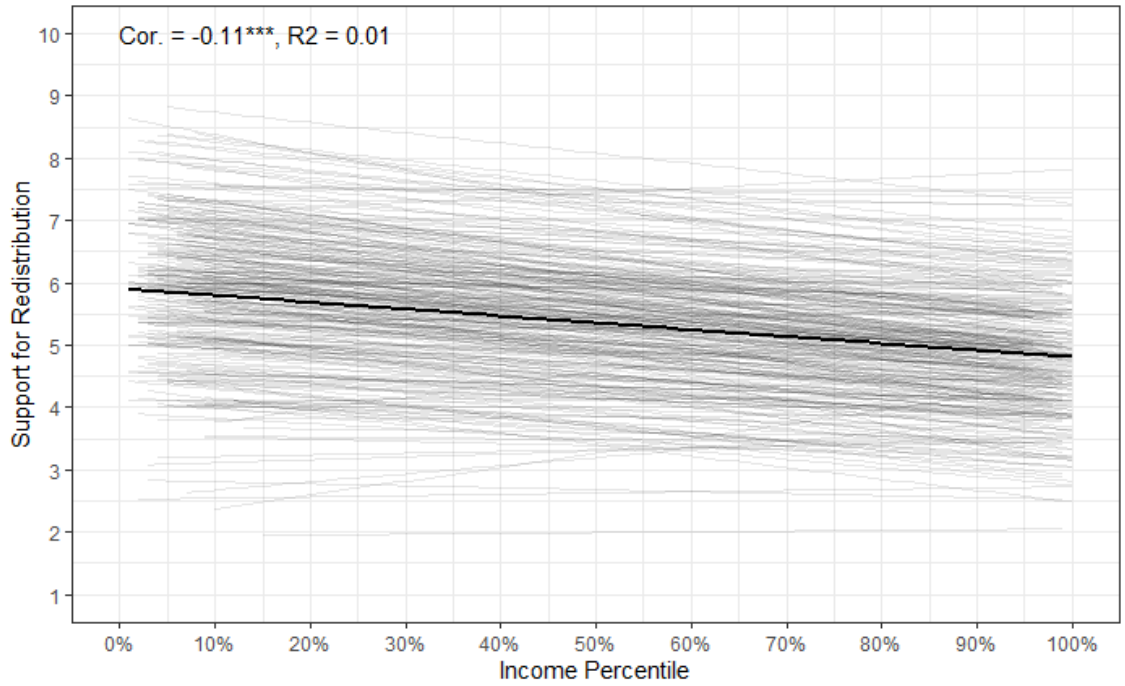


Figure 3.9 Trendlines of the relation between income percentile and support for redistribution by country-year survey.

Figure 3.10 explores the relationship between respondents' income position and their support for redistribution at varying levels of development and inequality. The graph shows that lower earners tend to support redistribution more than higher earners, regardless of levels of development and inequality. However, the relationship is not identical in all cases. In developing countries, inequality increases support among the rich but has little effect on the poor, while in developed countries, inequality increases support for both the poor and the rich, albeit slightly more for the poor. *Figure 3.11* displays the marginal effect of income percentile conditional on Gini and GNI per capita. Following H3.2, the effect is strongest in countries with low inequality and low development, where the estimated effect of a 1-point difference in income percentile is -0.014. These results follow the theory: inequality weakens the effect of income because the costs of redistribution are concentrated on a small segment of the population, and development also weakens this effect by reducing its costs. Moreover, these

two moderating effects are offset by each other because the reduced costs of redistribution fall on a smaller segment of the population.

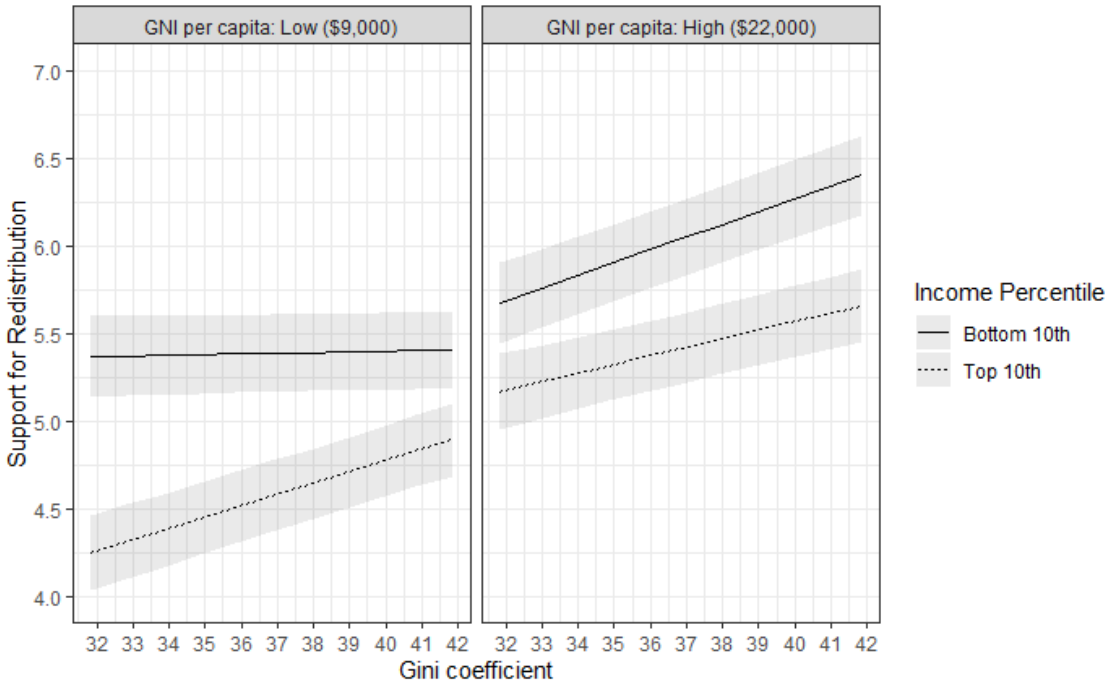


Figure 3.10 Predicted support for redistribution based on Gini, GNI per capita and income percentile.

Based on longitudinal effects from Table 3 Model 6.

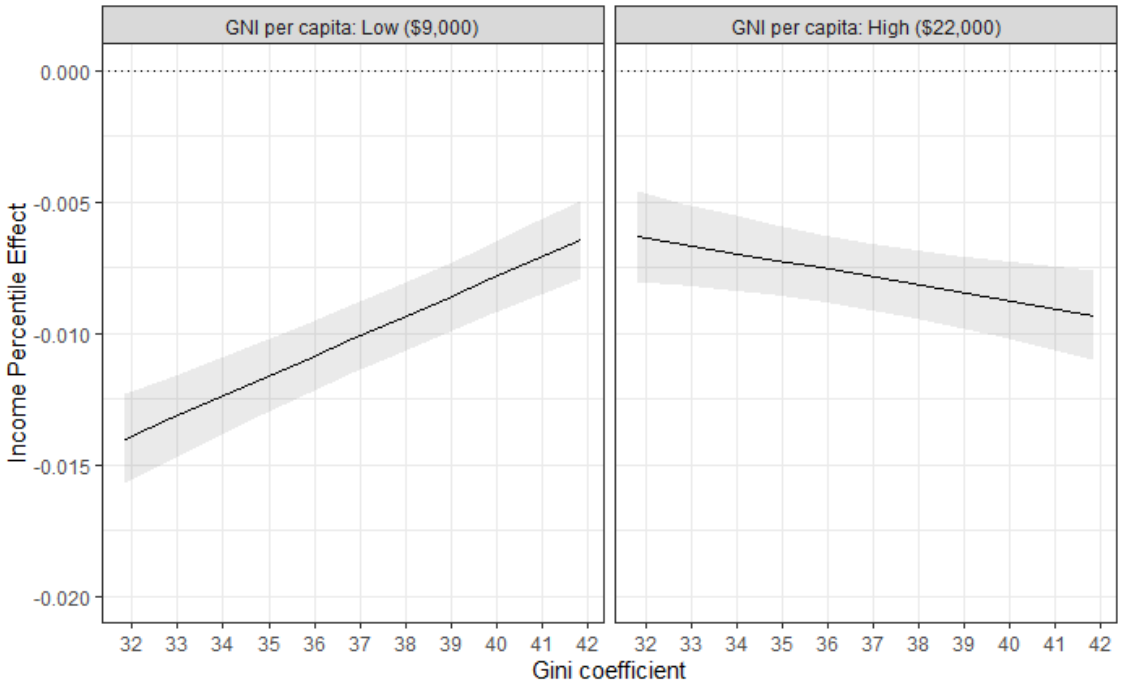


Figure 3.11 Marginal effect of income percentile conditional on Gini and GNI per capita.

Based on longitudinal effects from Table 3 Model 6.

In sum, the results show that development, inequality and income position are important predictors of individuals' support for redistribution and that their effects are interdependent on

each other. Consistent with H3.1, support for redistribution rises as countries become affluent and unequal. Meanwhile, income percentile is shown to have a negative effect, but this varies by country. Consistent with H3.2, the effect of income percentile is strongest in countries that are poor and equal. These dynamics are reflected in the trend in support for redistribution among OECD countries shown in *Figure 3.12*. Support generally increased in the 1990s, a period that saw broad economic growth accompanied with rising levels of inequality. Meanwhile, support was flatter during the period following the Great Recession of 2008, during which economic growth slowed down and rising inequality stabilized. Lastly, *Figure 3.13* shows the relationship between average support for redistribution and the effect of income percentile (cross-sectional and longitudinal). Higher support for redistribution is correlated with more division over redistribution (i.e., the negative effect of income percentile is stronger). Based on the results, this may be because richer countries are generally more equal.

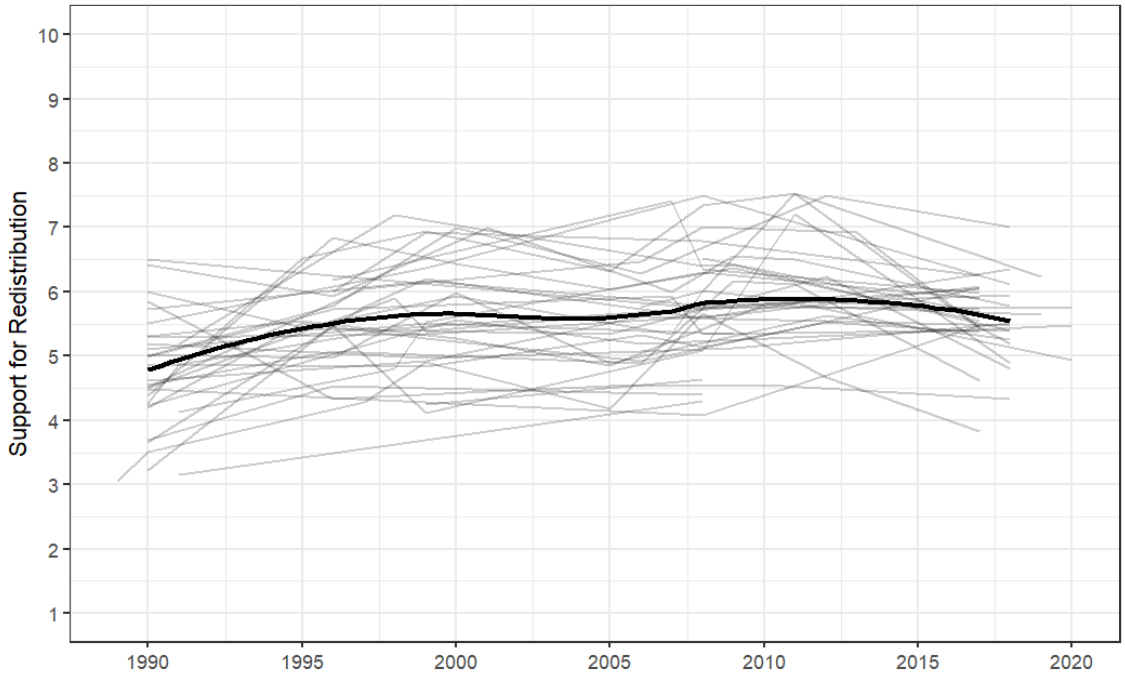


Figure 3.12 Average support for redistribution over time across OECD countries.

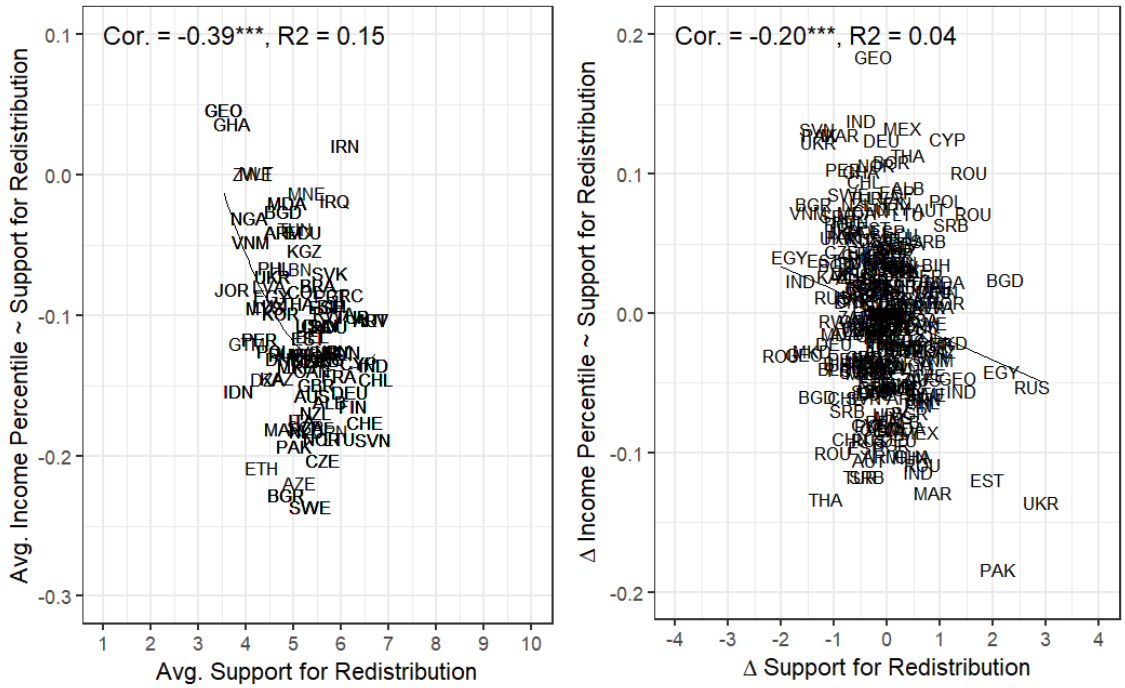


Figure 3.13. Cross-sectional and longitudinal relations between average support for redistribution and the relation between income percentile and support for redistribution.

3.7 Discussion

The study offers new insights into how individual and national economic conditions influence public opinion on redistribution. The direct effects of the independent variables are consistent with previous research showing that support for redistribution increases with inequality (Romer 1975; Meltzer & Richard 1981; 1983; Lupu & Pontusson 2011; Rueda & Pontusson 2010; Schmidt-Catran 2016; Sealey 2018) and development (Rueda 2018; Sealey 2018; Gilens & Thal 2018), and that public division decreases with inequality (Dion & Birchfield 2010; Schmidt-Catran 2016) and development (Mérola & Helgason 2016). Building on this literature, the present article shows that these mechanisms are not simply additive, but are actually interdependent. The results show strong support for a triple interaction, leading to two main findings.

First, support for redistribution is higher when countries are both more unequal and more affluent. Previous studies have found these effects separately, showing that support for redistribution increases with economic development (Peters & Rose 1978; Alt 1979; Blomberg & Kroll 1999; Stevenson 2001; Rueda 2018; Gilens & Thal 2018) and income inequality (Romer 1975; Meltzer & Richard 1981; 1983; Finseraas 2009; Rueda & Pontusson 2010; Schmidt-Catran 2016; Sealey 2018). This study shows that these effects are conditional on each other: a 1-point increase in log GNI per capita roughly doubles the effect of Gini on support for redistribution. Income inequality increases demand for redistribution because income disparities become greater, and more people go from being net contributors to tax and transfer programs to net beneficiaries instead. In poorer countries, though, this demand is tempered by the lack of resources and state-capacity. Redistributive programs can lead to economic costs

that stifle the development of the country, and the lack of state-capacity makes these programs more vulnerable to waste and mismanagement. In contrast, affluent countries can ameliorate rising inequality in a more cost-effective way: the risks to the economy are lower, the costs to taxpayers are relatively smaller, and the state-capacity ensures better efficiency and effectiveness. As a result, people are more supportive of redistributive programs when the need from inequality is coupled with high development.

The second finding is that the effect of income position is stronger when countries have lower inequality and lower development. The results show that the effect of income percentile is largest in equal developing countries (i.e., low Gini and low GNI per capita), which is roughly twice as strong as in countries that are developed, unequal or both. Previous studies have suggested that the effect of income position is moderated by development and inequality (Dion & Birchfield 2010; Schmidt-Catran 2016), although these interactions have been done separately. This article offers an explanation for the triple interaction by proposing that these moderating effects are interdependent because inequality determines *who* pays and development determines *how much*. Countries with low inequality are more evenly divided between net payers and net beneficiaries of redistribution. Due to self-interest, when the net payers make up a larger share of the population, public opinion is likely to be more divided. At the same time, in less affluent countries, the net payers are less likely to be altruistic because the relative costs of redistribution are higher.

An additional takeaway comes from the relative strength that national- and individual-level factors have in determining preferences for redistribution. National conditions appear to be substantially more influential than individual factors, particularly for higher-income earners. The interacted effect of country-level Gini and GNI per capita are over twice as strong as the effect of individual-level income percentile. As the triple interaction shows, the rich are even more sensitive to national conditions: they display little support for redistribution in equal developing countries but very high support in unequal developed ones. This finding reflects the moral drawn by Margaret Thatcher's retelling of the *Good Samaritan* parable: faced with injustice, people are more generous when they have more money. A good Samaritan is usually a rich Samaritan.

There are some limitations to this study, though, based on the available data in the IVS that offer avenues for future research. First, the cross-national comparison relies on observable changes in 86 countries, which are surveyed an average of three times. Although the analyses yield remarkably significant results, future research could conduct similar analyses on cross-national surveys that are more frequent, such as the European Social Survey (ESS) or the Global Barometer Surveys. Second, as is often the case with cross-national analyses, there is potential for omitted variable bias. The models account for reverse causality by including random effects and de-meaning country-level variables. But the possibility of there being other factors that affect public opinion as well as macro-economic factors cannot be discounted, such as political or institutional ones. Such factors could be controlled for by merging more datasets with the sample, such as the Comparative Manifesto Project or the Chapel Hill Expert Survey. Still, this would come at the cost of reducing the sample size and, thus, generalizability of the

findings. Finally, different types of survey questions could be used to test the validity of the hypotheses. Support for redistribution is estimated using the 10-point question on income equality from the IVS. Other surveys, like the ESS, for example, use a Likert scale for a similar question on income redistribution, and ask respondents about their household income in absolute terms. Still, the ESS is not without its own limitations, as it is constrained to European countries that share regional and cultural similarities, which can lead to issues of endogeneity and lack of variance in terms of development and inequality. This is the main strength of the IVS, which surveys countries from every region of the world simultaneously.

One avenue for future research could be to disaggregate the underlying mechanisms behind the effect of economic development (i.e., rising affluence and state-capacity). The simplest way of doing this would be to would be to specify individual income and GNI per capita to predict redistributive preferences. The problem here is that such as model would obviate the role of self-interest, which is determined by the distance between a person's income from the mean, so a model that included income, mean income and income distance would be rank deficient. One solution for disaggregating the effects of affluence and state-capacity would be to specify a model that included separate variables for affluence and state-capacity. For example, Hanson and Sigman (2013) have created a remarkable state-capacity index. Another solution could be to use a mediation model to account for the underlying mechanism for why state-capacity enhances altruism, namely that it increases political trust.

Another avenue for future research is the disaggregation of gains and losses regarding redistributive preferences. If respondents could be disaggregated between those who are below/above the mean income, and can thus between those who could expect net gains (losses) from redistribution, it would allow to distinguish between changes that have to do specifically with enhancing self-interest as opposed to altruism. This article measures income position as percentiles, which is optimal for estimating public division because it has the advantage of a uniform distribution, but it cannot tell us whether a specific individual can expect to gain or lose from redistribution, nor how much. Future research could operationalise income in a way that reflects the net utility that people can expect from tax and transfer programs in order to understand better he micro-level mechanisms that drive preferences for redistribution.

The practical implications of the findings are straightforward: public opinion in rich democracies is unlikely to tolerate high levels of inequality like the ones that exist in poorer countries. If people know that the state has the means and resources necessary to curve high inequality, they are likely to support more redistribution, even if it implies direct costs to themselves. Numerous scholars have pointed to the worrying trend of rising income inequality in advanced democracies (Kenworthy & Pontusson 2005; Atkinson 2015; Piketty *et al.* 2019). If this trend continues, it follows from the analysis that voters are likely to demand more redistributive policies and be more united around such demands, especially in rich democracies where income disparities are widening, like the United States (Jacobs & Skocpol 2005; Bonica *et al.* 2013). Income equality can therefore be expected to become a crucial valence issue in advanced democracies in coming years. Conversely, the findings suggest the opposite in case in developing countries. Political leaders may not need to be overly-concerned with enacting tax and transfer programs if they lack the resources or state-capacity for it because the public

is sensitive to these limitations. In fact, the main concern for developing countries is that low inequality may polarisation between those who want to cut back on redistributive policies and those who want to keep them as they are.

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3.9 Appendix Tables

Appendix Table A3.1 Missing data for Paper 1.

Variable	Not asked/ Not available	Does not know/ Does not respond
Support for Redistribution	2.6%	3.7%
Income Percentile	1.5%	9.4%
GNI per capita	1.9%	–
Gini	10.3%	–
Gender	0.0%	0.1%
Age	0.2%	0.2%
Marital Status	0.0%	0.9%
Education	9.9%	0.8%
Religious Attendance	2.0%	1.9%

Appendix Table A3.2 Means, standard deviations, and correlations of variables.

	Variable	Mean	SD	*1*	*2*	*3*	*4*	*5*	*6*
1	Support for Redistribution	*5.34*	*2.98*						
2	Gini	*36.85*	*8.90*	-0.03					
3	Log GNI per capita	*4.13*	*0.42*	0.09	-0.32				
4	Income Percentile	*0.51*	*0.28*	-0.11	0.02	-0.01			
5	Year (1980 = 0)	*27.41*	*7.51*	0.02	-0.15	0.48	0.00		
6	Male	*0.48*	*0.50*	-0.03	0.02	-0.02	0.05	-0.02	
7	Age	*43.45*	*16.80*	0.05	-0.18	0.23	-0.15	0.11	-0.01
8	Married	*0.62*	*0.48*	-0.01	-0.02	-0.06	0.12	-0.03	0.04
9	Single	*0.24*	*0.42*	-0.01	0.08	-0.01	0.02	0.00	0.08
10	Divorced	*0.07*	*0.25*	0.02	-0.04	0.10	-0.09	0.04	-0.06
11	Widowed	*0.07*	*0.26*	0.03	-0.05	0.03	-0.17	0.02	-0.15
12	Education	*2.02*	*0.74*	-0.09	-0.05	0.08	0.30	0.01	0.04
13	Religious Attendance	*4.37*	*2.54*	-0.04	0.23	-0.28	-0.01	-0.05	-0.04

	Variable	Mean	SD	*7*	*8*	*9*	*10*	*11*	*12*
8	Married	*0.62*	*0.48*	0.17					
9	Single	*0.24*	*0.42*	-0.47	-0.71				
10	Divorced	*0.07*	*0.25*	0.09	-0.35	-0.15			
11	Widowed	*0.07*	*0.26*	0.37	-0.36	-0.16	-0.08		
12	Education	*2.02*	*0.74*	-0.19	-0.06	0.13	0.02	-0.14	
13	Religious Attendance	*4.37*	*2.54*	-0.02	0.06	-0.04	-0.08	0.03	-0.08

Notes: N = 368,619. Almost all the correlation are statistically significant (p<0.001) due to the size of the sample.

Appendix Table A3.3 Non-standardised mixed-effects models on the effects of inequality, development and income on for redistribution.

	Support for Redistribution					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Fixed Effects						
Constant	5.406***	5.777***	3.151**	7.218	7.403	6.412
	(0.266)	(0.562)	(1.182)	(4.824)	(4.708)	(5.419)
Year (1980 = 0)	0.021*	0.025*	0.011	-0.016	-0.015	-0.014
	(0.009)	(0.012)	(0.012)	(0.012)	(0.012)	(0.015)
Male (Ref. = Female)	-0.165***	-0.164***	-0.148***	-0.165***	-0.148***	-0.148***
	(0.010)	(0.010)	(0.009)	(0.010)	(0.009)	(0.009)
Age	0.004***	0.004***	0.002***	0.004***	0.002***	0.002***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Marital Status (Ref. Single)						
Married	-0.115***	-0.113***	-0.035**	-0.112***	-0.034**	-0.034**
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Divorced	-0.019	-0.017	-0.065**	-0.015	-0.065**	-0.065**
	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)
Widowed	0.081***	0.084***	0.035	0.084***	0.034	0.033
	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
Religious Attendance	-0.002	-0.002	-0.003	-0.002	-0.003	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Education	-0.321***	-0.320***	-0.210***	-0.320***	-0.208***	-0.207***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Income Percentile					-0.865***	-1.114
					(0.059)	(3.100)
Cross-Sectional Effects						
μ Gini		-0.013	-0.004	-0.092	-0.082	-0.078
		(0.012)	(0.012)	(0.131)	(0.128)	(0.147)
μ GNI			0.530*	-0.157	-0.165	0.080
			(0.222)	(1.155)	(1.127)	(1.295)
μ Gini x μ GNI				0.021	0.019	0.018
				(0.032)	(0.031)	(0.036)
μ Gini x Income Percentile						0.040
						(0.084)
μ GNI x Income Percentile						0.042
						(0.744)
μ Gini x μ GNI x Income Percentile						-0.009
						(0.021)
Longitudinal Effects						
Δ Gini		0.043***	0.046***	0.047***	0.047***	0.036***
		(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Δ GNI			2.030***	1.857***	1.881***	1.571***
			(0.144)	(0.151)	(0.150)	(0.159)
Δ Gini x Δ GNI				0.071***	0.065***	0.200***

				(0.019)	(0.019)	(0.028)
Δ Gini x Income Percentile						0.023**
						(0.007)
Δ GNI x Income Percentile						0.600***
						(0.102)
Δ Gini x Δ GNI x Income Percentile						-0.265***
						(0.041)
Random Effects						
Country	X	X	X	X	X	X
Country x Year	X	X	X	X	X	X
Country x Income Percentile					X	X
Observations						
Country	86	86	86	86	86	86
Respondents	368,619	368,619	368,619	368,619	368,619	368,619
Marginal R^2	0.012	0.015	0.026	0.020	0.024	0.024
Conditional R^2	0.124	0.158	0.176	0.153	0.160	0.187
Log-Likelihood	-920,594.9	-920,524.3	-918,830.7	-920,424.6	-918,779.1	-918757.8
Chi-squared	–	141.3***	3387.1***	3187.7***	3291.0***	42.3***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Symbols μ and Δ indicate mean and demeaned values for country-level variables, respectively. GNI indicates log GNI per capita (PPP) in 2017 international dollars. For marital status, married includes cohabitation and divorced includes separated. Significance: ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

Appendix Table A3.4 Country-level summary of IVS dataset.

Country	Abbv.	Year	Resp.	Gini	GNIpc	Avg. Support	Income Percentile ~ Support
Albania	ALB	1998	949	27	3,110	6.11	-0.24
Albania	ALB	2002	976	32	4,800	5.03	-0.18
Albania	ALB	2008	1,270	30	8,260	6.19	-0.07
Algeria	DZA	2014	1,105	28	12,710	4.45	-0.14
Argentina	ARG	1995	858	48	9,790	5.06	-0.10
Argentina	ARG	1999	1,239	51	11,280	6.08	-0.13
Argentina	ARG	2013	937	40	19,650	6.09	-0.15
Argentina	ARG	2017	933	40	23,000	5.50	-0.14
Armenia	ARM	1997	1,754	47	2,240	4.57	0.21
Armenia	ARM	2008	1,256	31	8,790	4.74	-0.12
Armenia	ARM	2011	1,062	31	8,310	5.16	-0.10
Armenia	ARM	2018	1,409	33	13,250	4.68	-0.14
Australia	AUS	1995	1,771	34	20,160	5.42	-0.11
Australia	AUS	2005	1,244	34	31,360	5.33	-0.18
Australia	AUS	2012	1,007	35	41,520	6.12	-0.20
Australia	AUS	2018	1,660	33	48,660	4.80	-0.13
Austria	AUT	1999	1,175	26	27,170	6.32	-0.21
Austria	AUT	2008	1,221	29	41,660	7.46	-0.03
Austria	AUT	2018	1,376	28	56,530	6.15	-0.07
Azerbaijan	AZE	1997	1,517	35	2,560	5.14	-0.22
Bangladesh	BGD	1996	1,366	36	1,150	3.85	0.01
Bangladesh	BGD	2002	1,379	33	1,510	3.47	-0.09
Bangladesh	BGD	2018	1,197	43	4,760	7.03	0.00
Belarus	BLR	1996	1,823	28	4,040	4.35	-0.17
Belarus	BLR	2000	941	28	5,780	5.74	-0.16
Belarus	BLR	2008	1,305	28	13,780	5.37	-0.09
Belarus	BLR	2011	1,506	27	16,170	6.13	-0.13
Belarus	BLR	2018	1,315	25	18,650	5.07	-0.11
Belgium	BEL	1999	1,474	29	26,030	5.44	-0.10
Belgium	BEL	2009	1,350	28	38,480	5.38	-0.13
Bosnia and Herzegovina	BIH	2001	1,136	30	5,190	4.88	-0.13
Bosnia and Herzegovina	BIH	2008	1,160	33	9,360	6.74	-0.06
Brazil	BRA	1991	1,629	60	6,760	5.18	-0.12
Brazil	BRA	1997	1,081	60	8,310	5.29	-0.12
Brazil	BRA	2006	1,460	54	11,350	5.31	-0.06
Brazil	BRA	2014	1,415	51	15,430	5.91	-0.03
Brazil	BRA	2018	1,566	53	14,530	5.90	-0.07
Bulgaria	BGR	1997	858	35	5,570	5.67	-0.25
Bulgaria	BGR	1999	892	35	5,730	4.93	-0.32
Bulgaria	BGR	2006	909	34	11,110	5.27	-0.30
Bulgaria	BGR	2008	1,269	34	13,650	3.45	-0.15
Bulgaria	BGR	2017	1,339	39	20,870	4.93	-0.12
Canada	CAN	2000	1,692	34	28,590	5.54	-0.10

Country	Abbv.	Year	Resp.	Gini	GNIpc	Avg. Support	Income Percentile ~ Support
Canada	CAN	2006	1,754	34	37,500	5.24	-0.17
Chile	CHL	1996	930	54	7,750	5.92	-0.21
Chile	CHL	2000	1,120	54	9,220	6.98	-0.09
Chile	CHL	2006	900	48	13,840	6.28	-0.05
Chile	CHL	2012	874	47	20,490	7.39	-0.21
Chile	CHL	2018	873	46	23,730	7.02	-0.17
China	CHN	2001	115	39	3,160	5.23	-0.03
China	CHN	2007	392	38	6,830	4.86	-0.20
China	CHN	2013	1,878	39	11,830	6.55	-0.09
Colombia	COL	1998	2,985	56	6,660	4.80	-0.06
Colombia	COL	2005	2,757	54	8,120	5.51	-0.08
Colombia	COL	2012	1,460	53	11,560	5.98	-0.10
Colombia	COL	2018	1,498	49	14,460	4.70	-0.09
Croatia	HRV	1999	884	31	9,660	6.91	-0.07
Croatia	HRV	2008	1,226	32	20,090	6.80	-0.13
Croatia	HRV	2017	1,308	30	26,410	6.22	-0.11
Cyprus	CYP	2006	1,021	30	28,320	5.74	-0.12
Cyprus	CYP	2008	768	30	34,260	6.03	-0.21
Cyprus	CYP	2011	973	32	34,190	7.51	-0.01
Cyprus	CYP	2019	861	30	39,830	6.18	-0.19
Czechia	CZE	1998	902	25	14,760	4.77	-0.16
Czechia	CZE	1999	1,666	23	15,110	5.52	-0.21
Czechia	CZE	2008	1,372	27	26,270	6.42	-0.25
Czechia	CZE	2017	1,334	25	36,630	5.77	-0.20
Denmark	DNK	2008	1,080	27	41,740	4.15	-0.12
Denmark	DNK	2017	3,057	27	56,070	5.45	-0.14
Ecuador	ECU	2013	1,196	45	10,990	5.44	0.02
Ecuador	ECU	2018	1,174	44	11,530	4.95	-0.10
Egypt	EGY	2001	2,676	33	6,080	2.68	-0.04
Egypt	EGY	2008	3,004	31	8,890	4.21	-0.08
Egypt	EGY	2013	1,523	36	10,930	6.70	-0.13
Estonia	EST	1999	819	36	9,070	4.14	-0.08
Estonia	EST	2008	1,300	32	21,640	5.07	-0.05
Estonia	EST	2011	1,465	33	23,530	7.21	-0.24
Estonia	EST	2018	1,099	32	35,620	4.87	-0.10
Ethiopia	ETH	2007	1,441	32	790	4.33	-0.21
Finland	FIN	1996	896	24	19,590	6.83	-0.23
Finland	FIN	2000	860	27	26,630	6.44	-0.09
Finland	FIN	2005	919	28	32,190	6.02	-0.14
Finland	FIN	2009	970	28	38,470	6.39	-0.21
Finland	FIN	2017	1,068	26	47,520	5.55	-0.15
France	FRA	1999	1,244	31	24,790	6.12	-0.15
France	FRA	2006	877	30	33,070	5.87	-0.16
France	FRA	2008	1,343	31	35,860	5.79	-0.14
France	FRA	2018	1,675	29	47,700	5.98	-0.13

Country	Abbv.	Year	Resp.	Gini	GNIpc	Avg. Support	Income Percentile ~ Support
Georgia	GEO	1996	1,893	41	2,160	3.39	-0.04
Georgia	GEO	2008	1,262	40	7,100	3.28	0.23
Georgia	GEO	2009	1,355	40	6,960	4.13	0.02
Georgia	GEO	2014	1,145	37	11,420	4.87	0.00
Georgia	GEO	2018	1,989	37	14,040	1.98	0.02
Germany	DEU	1997	1,634	29	24,520	6.07	-0.03
Germany	DEU	2006	1,048	32	34,690	6.39	-0.25
Germany	DEU	2008	1,772	32	38,160	7.06	-0.14
Germany	DEU	2013	1,918	32	46,040	6.90	-0.21
Germany	DEU	2017	1,870	31	54,060	5.46	-0.13
Germany	DEU	2018	1,448	30	56,290	5.18	-0.18
Ghana	GHA	2007	1,421	43	2,490	3.21	0.14
Ghana	GHA	2012	1,552	42	3,590	4.18	-0.07
Greece	GRC	2008	1,261	34	29,940	6.50	-0.05
Greece	GRC	2017	1,112	34	28,490	5.67	-0.12
Guatemala	GTM	2004	886	51	5,310	4.01	-0.12
Hungary	HUN	2008	1,247	27	19,330	6.29	-0.09
Hungary	HUN	2009	696	27	19,790	6.49	-0.23
Hungary	HUN	2018	1,171	28	30,680	5.37	-0.06
Iceland	ISL	2009	676	28	33,610	5.64	-0.14
Iceland	ISL	2017	1,444	25	53,920	6.10	-0.12
India	IND	1990	2,294	33	1,190	5.03	-0.11
India	IND	1995	1,337	32	1,560	7.26	-0.25
India	IND	2001	1,595	32	2,190	6.82	-0.13
India	IND	2006	1,575	39	3,210	6.18	0.00
India	IND	2012	3,591	39	4,800	8.08	-0.19
Indonesia	IDN	2001	848	30	4,770	3.72	-0.18
Indonesia	IDN	2006	1,660	33	6,420	3.63	-0.11
Indonesia	IDN	2018	3,178	37	11,310	4.18	-0.18
Iran	IRN	2000	1,636	44	10,300	5.35	0.08
Iran	IRN	2007	2,438	43	16,190	6.84	-0.04
Iraq	IRQ	2006	1,929	32	10,100	6.05	0.02
Iraq	IRQ	2013	1,160	33	15,470	5.69	-0.05
Ireland	IRL	1999	815	32	23,540	4.85	-0.16
Ireland	IRL	2008	542	32	38,350	5.62	-0.10
Italy	ITA	1999	1,470	32	25,550	4.98	-0.19
Italy	ITA	2005	651	33	30,180	5.06	-0.19
Italy	ITA	2009	905	32	34,610	5.03	-0.14
Italy	ITA	2018	1,582	33	43,580	5.60	-0.17
Japan	JPN	2010	1,773	33	35,890	5.79	-0.18
Jordan	JOR	2001	1,079	36	6,380	3.55	-0.11
Jordan	JOR	2014	1,192	33	9,080	3.86	-0.05
Kazakhstan	KAZ	2011	1,500	28	17,790	5.67	-0.17
Kazakhstan	KAZ	2018	1,095	27	22,950	3.66	-0.12
Kyrgyzstan	KGZ	2003	994	33	2,090	5.58	-0.07

Country	Abbv.	Year	Resp.	Gini	GNIpc	Avg. Support	Income Percentile ~ Support
Kyrgyzstan	KGZ	2011	1,462	29	2,950	4.87	-0.04
Latvia	LVA	1996	1,125	33	5,830	4.54	-0.16
Latvia	LVA	2008	1,259	36	19,270	4.44	0.01
Lebanon	LBN	2013	1,146	32	14,880	5.05	-0.07
Lithuania	LTU	1997	894	32	6,930	5.74	-0.24
Lithuania	LTU	1999	785	33	7,630	6.16	-0.19
Lithuania	LTU	2008	1,164	35	20,070	5.63	-0.20
Lithuania	LTU	2018	1,188	37	35,220	6.38	-0.12
Luxembourg	LUX	1999	580	27	46,240	4.34	-0.08
Luxembourg	LUX	2008	1,173	30	71,610	4.65	-0.10
North Macedonia	MKD	1998	605	34	5,360	6.23	-0.16
North Macedonia	MKD	2001	973	34	5,980	5.69	-0.13
North Macedonia	MKD	2008	1,358	43	10,290	3.66	-0.16
North Macedonia	MKD	2019	785	32	16,770	4.70	-0.10
Malaysia	MYS	2006	1,190	46	17,040	4.34	-0.06
Malaysia	MYS	2012	1,298	40	22,140	4.34	-0.05
Malaysia	MYS	2018	1,313	41	27,350	4.54	-0.17
Malta	MLT	2008	751	28	26,110	4.21	0.00
Mexico	MEX	1996	1,245	50	8,770	4.93	-0.17
Mexico	MEX	2000	1,136	50	10,850	5.98	-0.21
Mexico	MEX	2005	1,385	48	12,390	4.91	-0.16
Mexico	MEX	2012	1,913	46	16,830	5.64	0.01
Mexico	MEX	2018	1,696	46	19,710	5.26	-0.10
Moldova	MDA	1996	932	41	3,170	3.97	-0.03
Moldova	MDA	2002	842	39	4,040	4.28	0.05
Moldova	MDA	2006	995	35	5,950	5.21	-0.10
Moldova	MDA	2008	1,182	34	6,830	5.97	0.00
Montenegro	MNE	2008	1,187	30	14,020	5.29	-0.01
Morocco	MAR	2001	779	40	3,810	3.91	-0.05
Morocco	MAR	2007	1,159	39	5,500	5.67	-0.31
Netherlands	NLD	1999	925	27	29,670	4.85	-0.22
Netherlands	NLD	2006	734	30	41,280	5.39	-0.19
Netherlands	NLD	2008	1,282	29	45,110	5.14	-0.18
Netherlands	NLD	2012	1,556	28	48,080	5.56	-0.19
Netherlands	NLD	2017	1,969	27	55,500	5.40	-0.13
New Zealand	NZL	1998	973	36	18,460	5.64	-0.21
New Zealand	NZL	2004	761	33	23,670	5.47	-0.19
New Zealand	NZL	2011	674	33	31,260	5.85	-0.19
New Zealand	NZL	2020	822	34	42,570	4.92	-0.09
Nigeria	NGA	1990	876	47	1,940	3.33	0.03
Nigeria	NGA	1995	1,611	51	1,960	4.28	-0.05
Nigeria	NGA	2012	1,759	44	4,740	4.56	-0.07
Norway	NOR	1996	1,039	27	26,460	5.70	-0.20

Country	Abbv.	Year	Resp.	Gini	GNIpc	Avg. Support	Income Percentile ~ Support
Norway	NOR	2007	937	27	55,710	5.92	-0.24
Norway	NOR	2008	994	27	61,480	5.38	-0.23
Norway	NOR	2018	1,056	26	72,210	5.40	-0.08
Pakistan	PAK	2001	1,389	32	2,630	7.12	-0.38
Pakistan	PAK	2012	1,195	31	3,960	4.17	-0.14
Pakistan	PAK	2018	1,843	33	4,770	3.76	-0.06
Peru	PER	1996	956	50	4,440	4.24	-0.19
Peru	PER	2001	1,471	51	5,040	3.49	-0.01
Peru	PER	2006	1,369	49	6,680	3.51	-0.15
Peru	PER	2012	1,104	44	10,090	5.21	-0.14
Peru	PER	2018	1,344	43	12,450	5.04	-0.09
Philippines	PHL	2001	1,187	45	3,890	4.55	-0.09
Philippines	PHL	2012	1,199	44	6,990	4.70	-0.05
Poland	POL	1997	1,046	33	8,860	4.31	-0.21
Poland	POL	1999	1,046	32	9,960	4.89	-0.18
Poland	POL	2005	885	34	13,650	4.17	-0.07
Poland	POL	2008	1,108	33	17,980	5.72	-0.04
Poland	POL	2012	887	32	22,860	4.68	-0.09
Poland	POL	2017	1,061	30	28,820	3.80	-0.17
Portugal	PRT	2008	775	36	25,770	5.79	-0.09
Romania	ROU	1998	1,172	30	5,480	4.73	-0.21
Romania	ROU	1999	968	30	5,530	7.30	-0.01
Romania	ROU	2005	1,496	33	9,320	6.41	-0.22
Romania	ROU	2008	1,092	34	16,410	7.37	-0.04
Romania	ROU	2012	1,409	33	18,540	4.91	-0.04
Romania	ROU	2018	1,143	33	28,710	3.74	-0.14
Russia	RUS	1995	1,845	43	5,570	4.54	-0.22
Russia	RUS	1999	2,261	41	5,680	3.84	-0.12
Russia	RUS	2006	1,570	41	14,480	4.47	-0.09
Russia	RUS	2008	1,186	39	19,600	4.45	-0.07
Russia	RUS	2011	2,184	38	22,130	7.62	-0.18
Russia	RUS	2017	1,622	35	25,310	4.29	-0.09
Rwanda	RWA	2007	1,393	52	1,100	4.97	-0.10
Rwanda	RWA	2012	1,527	47	1,470	6.73	-0.09
Serbia	SRB	2001	969	35	6,490	5.25	-0.25
Serbia	SRB	2006	1,078	34	10,070	4.88	-0.20
Serbia	SRB	2008	1,257	32	12,300	6.42	-0.08
Serbia	SRB	2017	940	34	15,520	4.70	-0.06
Serbia	SRB	2018	1,120	33	16,830	6.85	-0.07
Singapore	SGP	2012	1,920	47	78,420	5.25	-0.18
Slovakia	SVK	1998	895	25	10,640	5.44	-0.13
Slovakia	SVK	2008	1,102	26	23,320	5.83	-0.04
Slovakia	SVK	2017	987	24	29,530	6.07	-0.04
Slovenia	SVN	1999	625	25	17,070	6.91	-0.24
Slovenia	SVN	2005	939	25	23,630	6.26	-0.25

Country	Abbv.	Year	Resp.	Gini	GNIpc	Avg. Support	Income Percentile ~ Support
Slovenia	SVN	2008	806	25	28,830	7.35	-0.18
Slovenia	SVN	2011	972	25	28,540	7.51	-0.22
Slovenia	SVN	2017	912	24	35,850	5.38	-0.06
South Africa	ZAF	1996	2,415	58	6,850	6.08	-0.23
South Africa	ZAF	2001	2,531	58	7,740	5.64	-0.18
South Africa	ZAF	2006	2,784	68	10,320	5.46	-0.13
South Africa	ZAF	2013	3,183	65	12,120	4.90	-0.18
South Korea	KOR	1990	1,097	34	8,340	5.84	-0.09
South Korea	KOR	1996	1,202	34	14,640	4.32	-0.11
South Korea	KOR	2005	1,196	30	25,010	4.54	-0.14
South Korea	KOR	2010	1,169	30	31,800	4.56	-0.08
South Korea	KOR	2018	1,245	36	42,660	4.34	-0.08
Spain	ESP	1995	847	35	16,120	5.50	-0.14
Spain	ESP	2000	831	32	21,440	5.89	-0.05
Spain	ESP	2007	1,053	33	31,630	5.31	-0.19
Spain	ESP	2008	895	33	32,340	5.90	-0.01
Spain	ESP	2011	1,026	35	31,310	5.86	-0.14
Spain	ESP	2017	863	35	39,540	5.71	-0.03
Sweden	SWE	1996	938	25	23,240	5.09	-0.22
Sweden	SWE	2006	932	26	38,660	4.88	-0.28
Sweden	SWE	2009	967	26	41,250	6.12	-0.24
Sweden	SWE	2011	1,098	27	45,520	6.09	-0.29
Sweden	SWE	2017	1,101	28	52,830	4.64	-0.15
Switzerland	CHE	1996	925	31	31,320	6.26	-0.19
Switzerland	CHE	2007	1,072	33	50,040	7.42	-0.16
Switzerland	CHE	2008	948	32	49,150	6.35	-0.22
Switzerland	CHE	2017	2,834	30	65,610	6.00	-0.13
Thailand	THA	2007	1,480	40	11,470	3.93	-0.22
Thailand	THA	2013	1,123	37	14,420	5.83	-0.07
Thailand	THA	2018	1,446	36	17,630	5.50	0.02
Tunisia	TUN	2013	1,049	37	9,780	5.04	-0.04
Turkey	TUR	1996	1,365	41	10,980	5.87	-0.02
Turkey	TUR	2001	2,901	43	9,050	6.87	-0.08
Turkey	TUR	2007	1,269	42	14,830	5.97	-0.06
Turkey	TUR	2009	2,022	41	15,430	6.53	-0.08
Turkey	TUR	2011	1,513	41	19,630	6.53	-0.15
Turkey	TUR	2018	2,118	42	27,520	5.77	-0.22
Ukraine	UKR	1996	2,039	42	3,640	4.36	-0.13
Ukraine	UKR	1999	1,116	33	3,650	3.65	-0.02
Ukraine	UKR	2006	900	28	7,650	4.05	-0.06
Ukraine	UKR	2008	1,305	27	8,980	3.28	0.05
Ukraine	UKR	2011	1,500	25	8,700	7.49	-0.21
United Kingdom	GBR	1999	596	35	24,330	5.28	-0.20
United Kingdom	GBR	2005	789	36	33,030	5.63	-0.11
United Kingdom	GBR	2009	1,011	35	34,780	5.59	-0.15

Country	Abbv.	Year	Resp.	Gini	GNIpc	Avg. Support	Income Percentile ~ Support
United Kingdom	GBR	2018	1,525	35	46,530	5.40	-0.14
United States	USA	1995	1,320	42	28,450	5.47	-0.10
United States	USA	1999	1,120	42	34,720	5.23	-0.05
United States	USA	2006	1,140	42	47,160	4.90	-0.12
United States	USA	2011	2,141	43	50,820	5.43	-0.15
United States	USA	2017	2,513	43	61,020	6.06	-0.11
Uruguay	URY	1996	904	41	8,890	5.93	-0.20
Uruguay	URY	2006	923	45	12,130	5.65	-0.13
Uruguay	URY	2011	889	41	17,390	5.97	-0.05
Venezuela	VEN	1996	1,062	50	11,160	5.48	-0.09
Venezuela	VEN	2000	988	47	11,610	5.49	-0.16
Vietnam	VNM	2001	920	36	2,280	4.66	-0.09
Vietnam	VNM	2006	1,424	35	3,160	5.02	-0.08
Vietnam	VNM	2020	1,200	40	7,910	2.63	0.02
Zimbabwe	ZWE	2012	1,500	40	2,070	4.16	0.00

Abbv. indicates abbreviation of country name. Resp. indicates number of respondents in country-year survey. GNIpc indicates GNI per capita (PPP) in international USD. Avg. Support indicates mean value of support for redistribution. Income Percentile ~ Support indicates correlation coefficient between respondents' income percentile and support for redistribution.

3.10 Appendix Figures

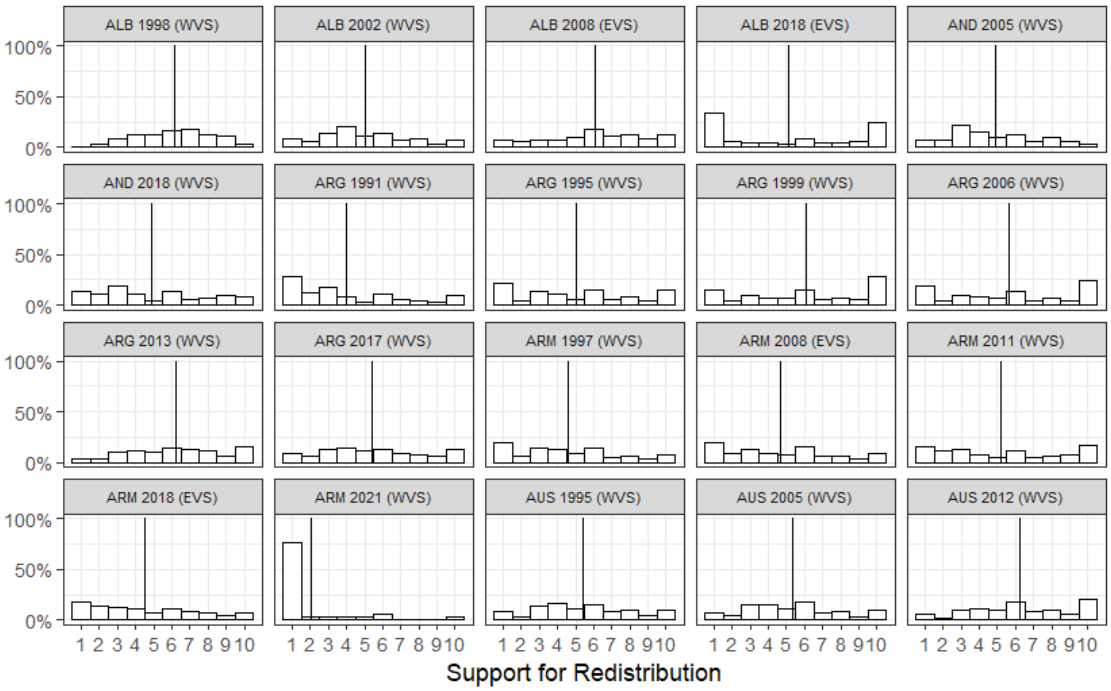


Figure A3.1. Distribution of support for redistribution in IVS (continued).

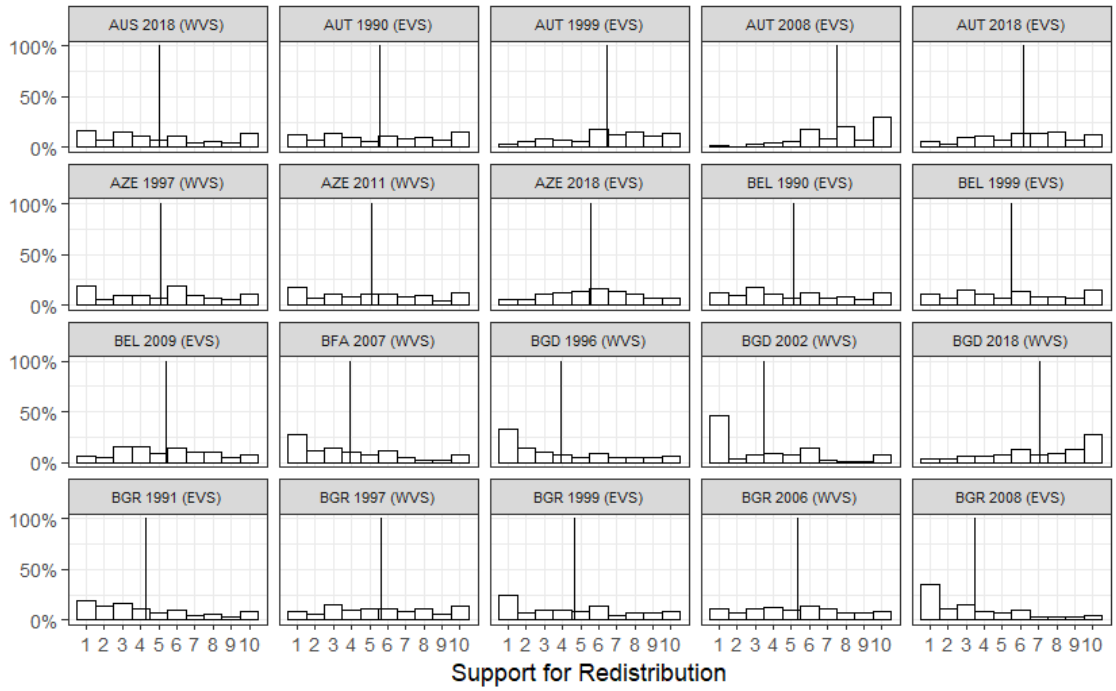


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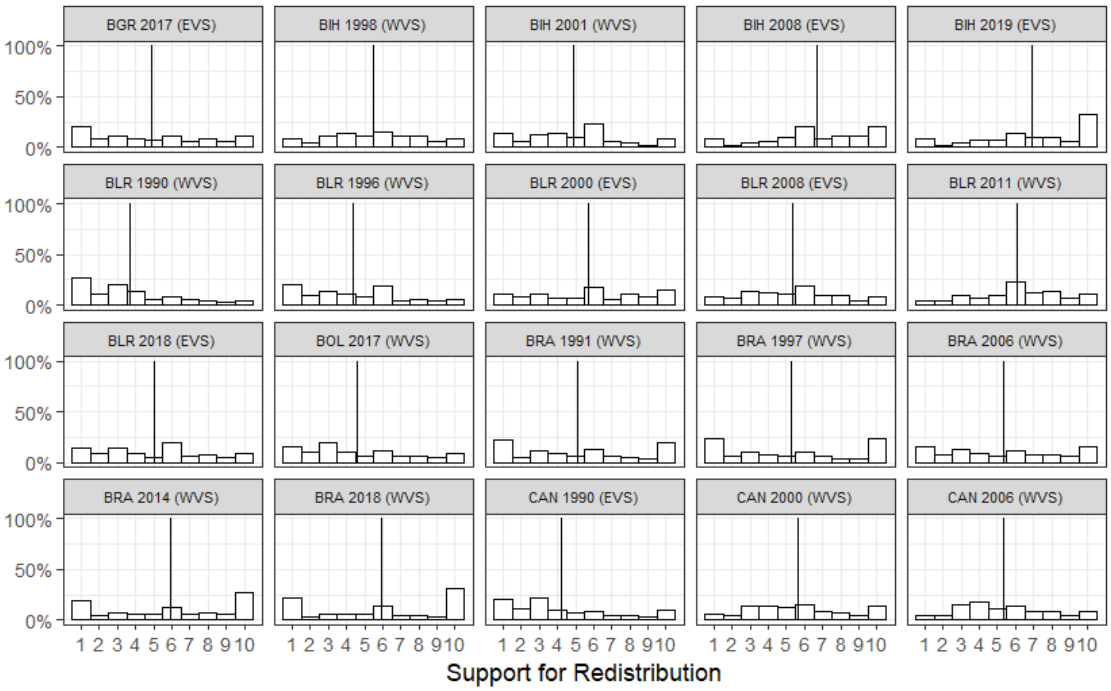


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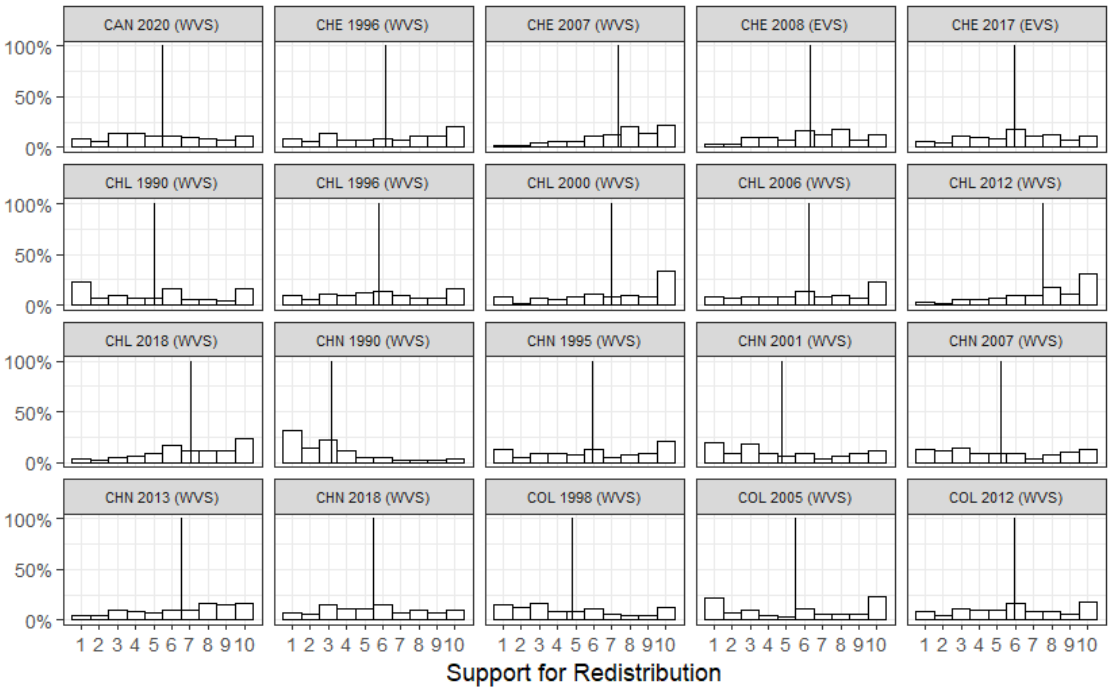


Figure A3.4. Distribution of support for redistribution in IVS (continued).

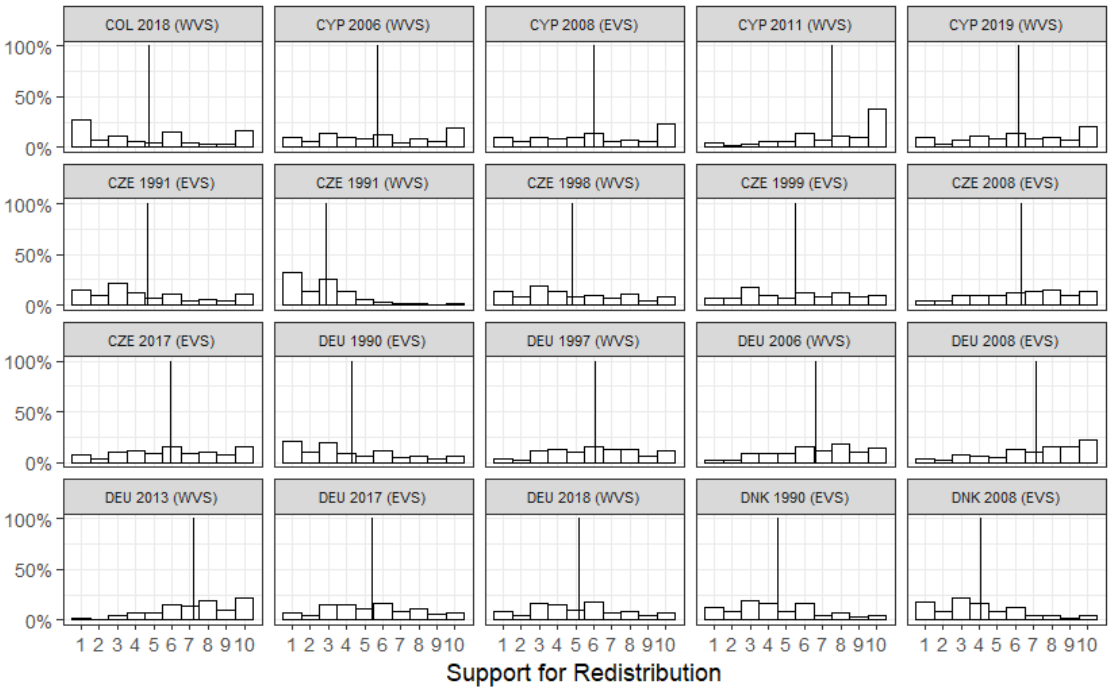


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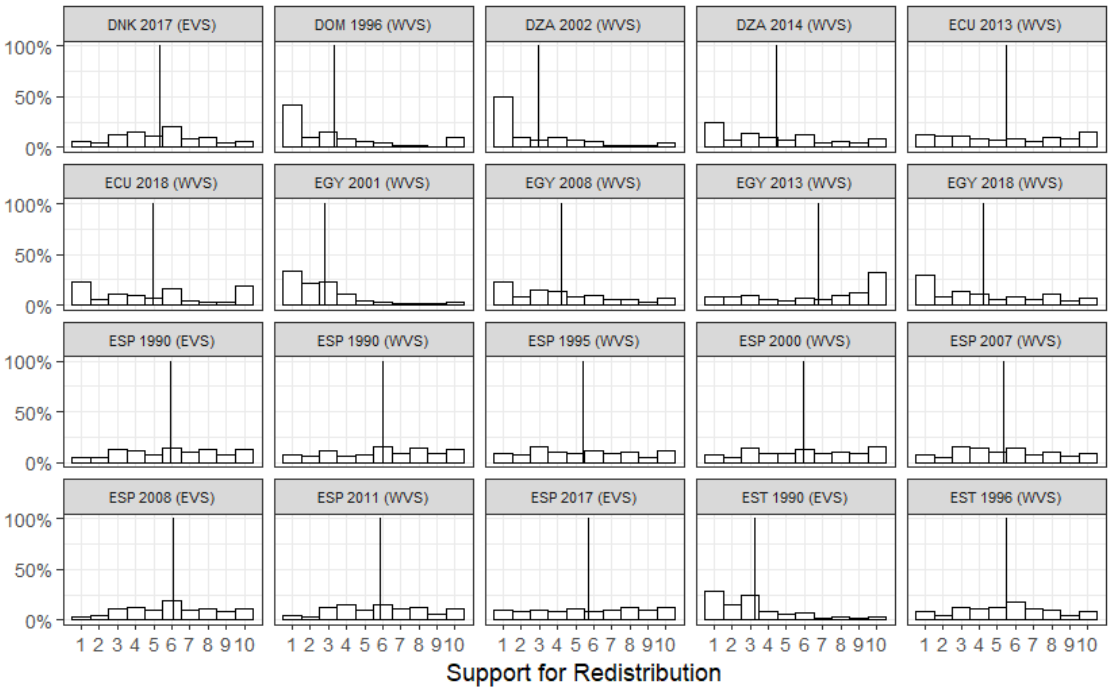


Figure A3.6. Distribution of support for redistribution in IVS (continued).

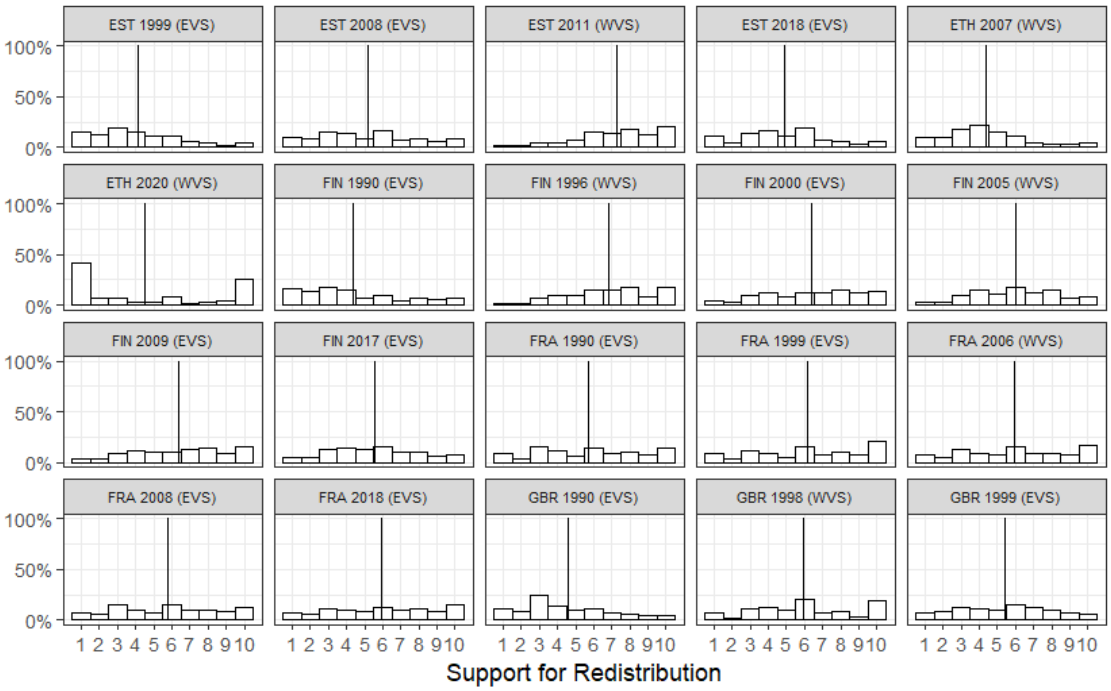


Figure A3.7. Distribution of support for redistribution in IVS (continued).

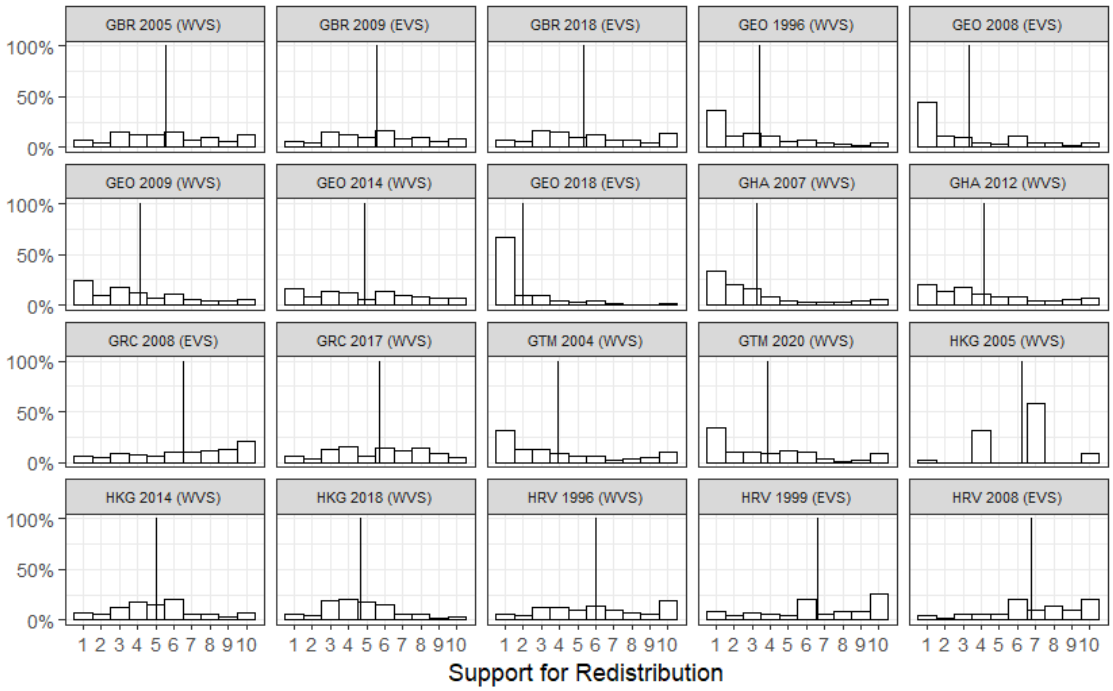


Figure A3.8. Distribution of support for redistribution in IVS (continued).

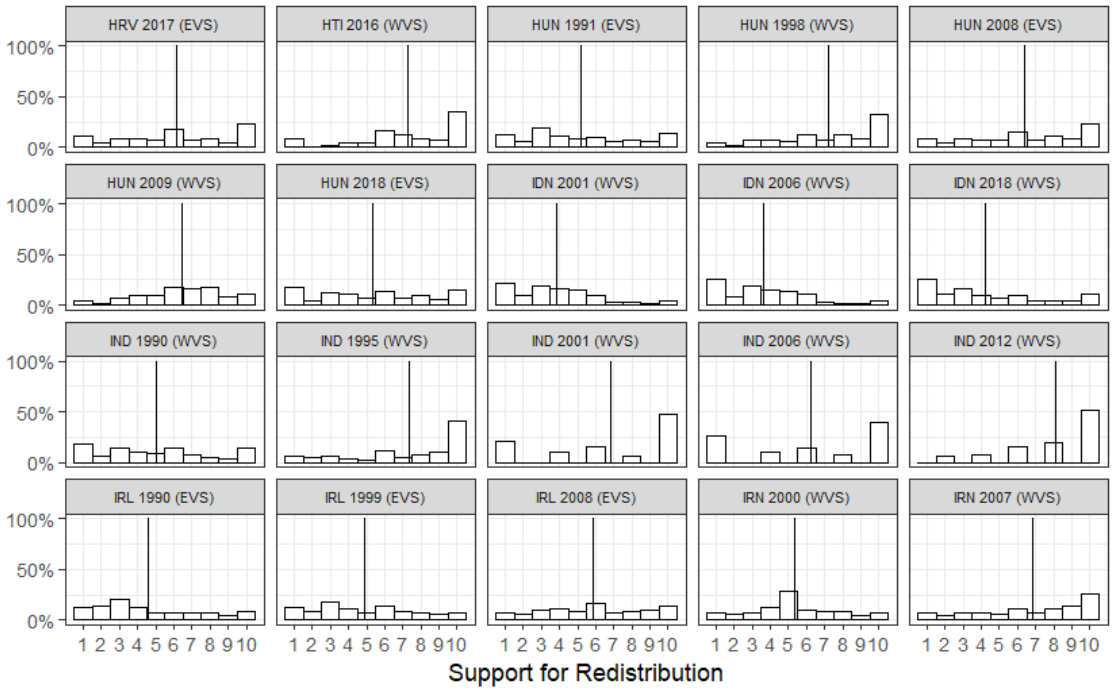


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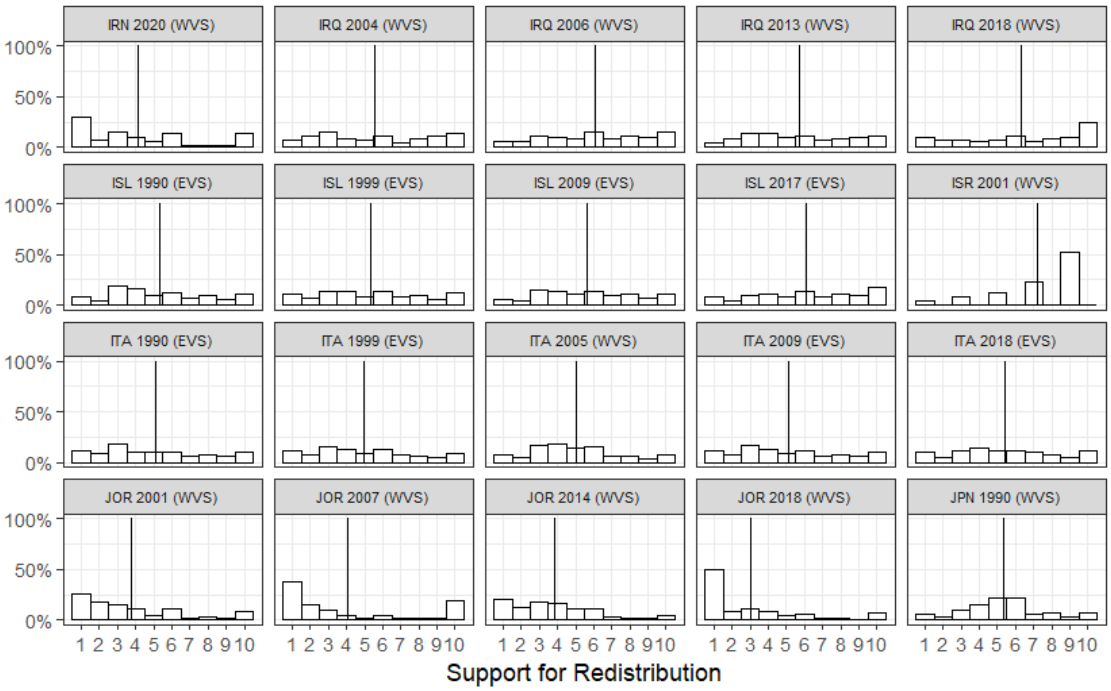


Figure A3.10. Distribution of support for redistribution in IVS (continued).

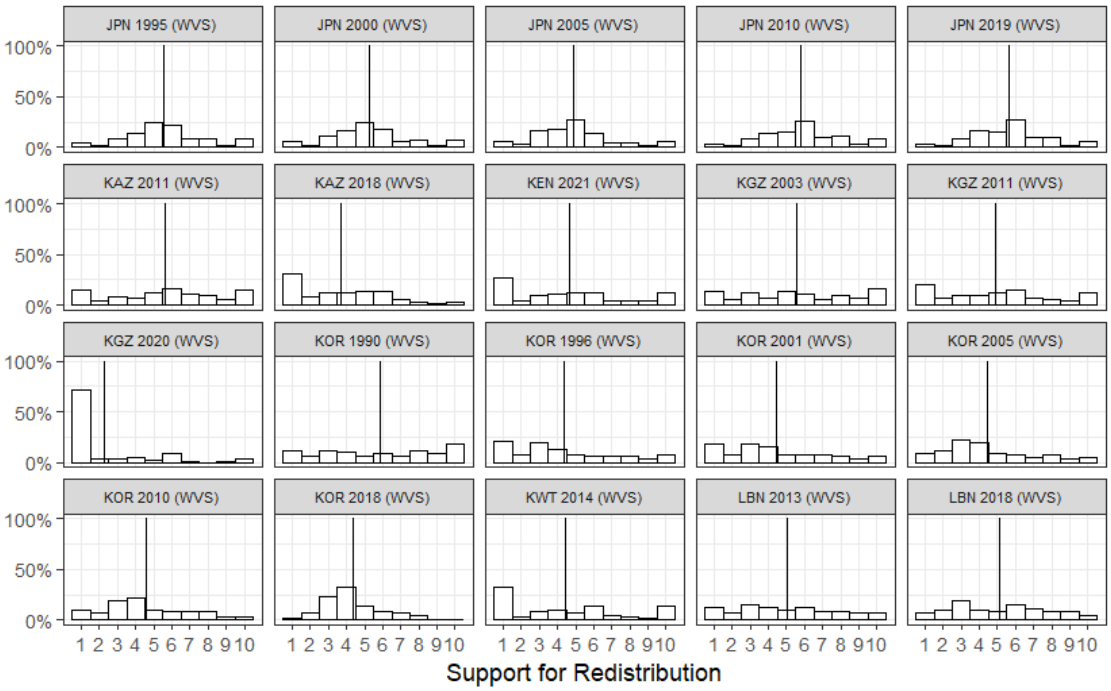


Figure A3.11. Distribution of support for redistribution in IVS (continued).

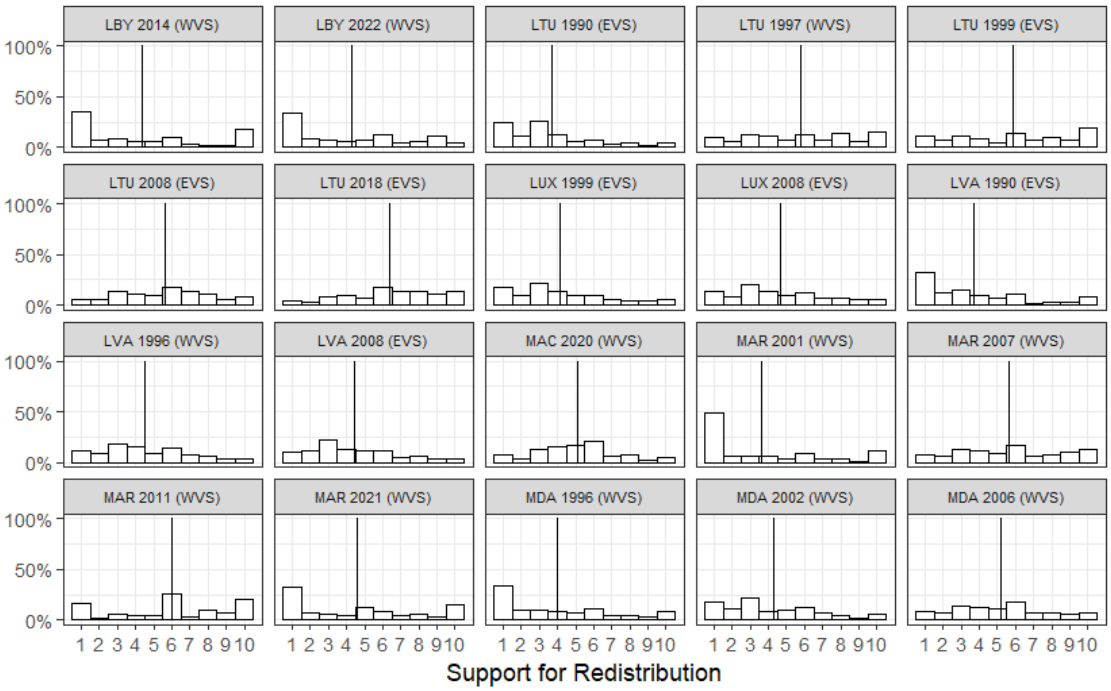


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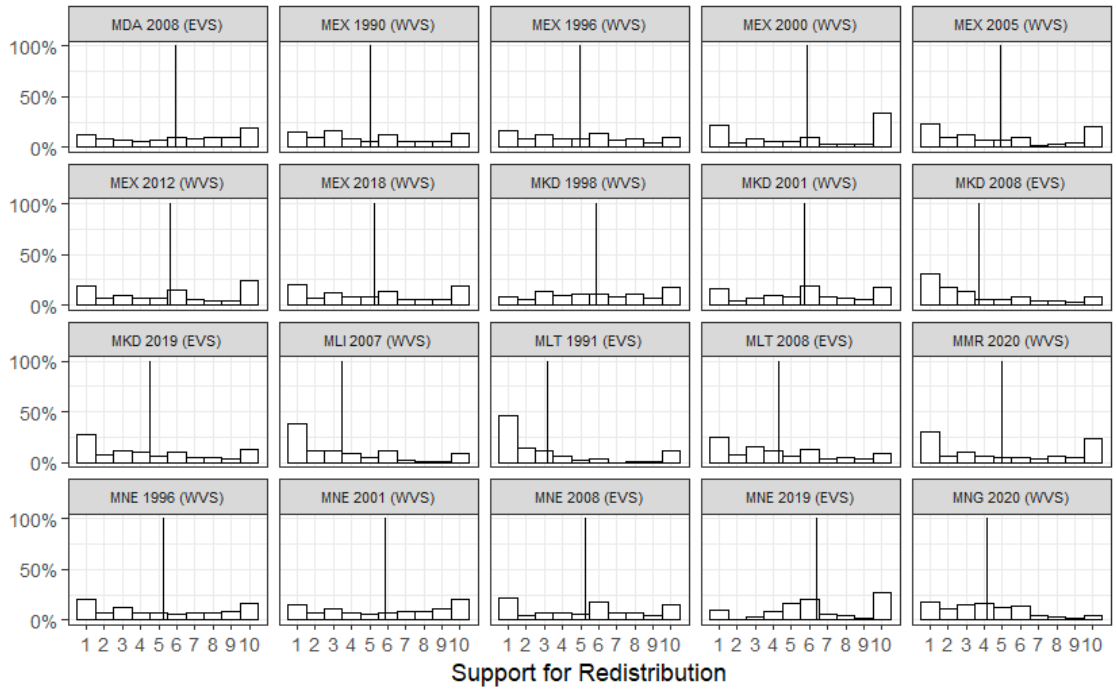


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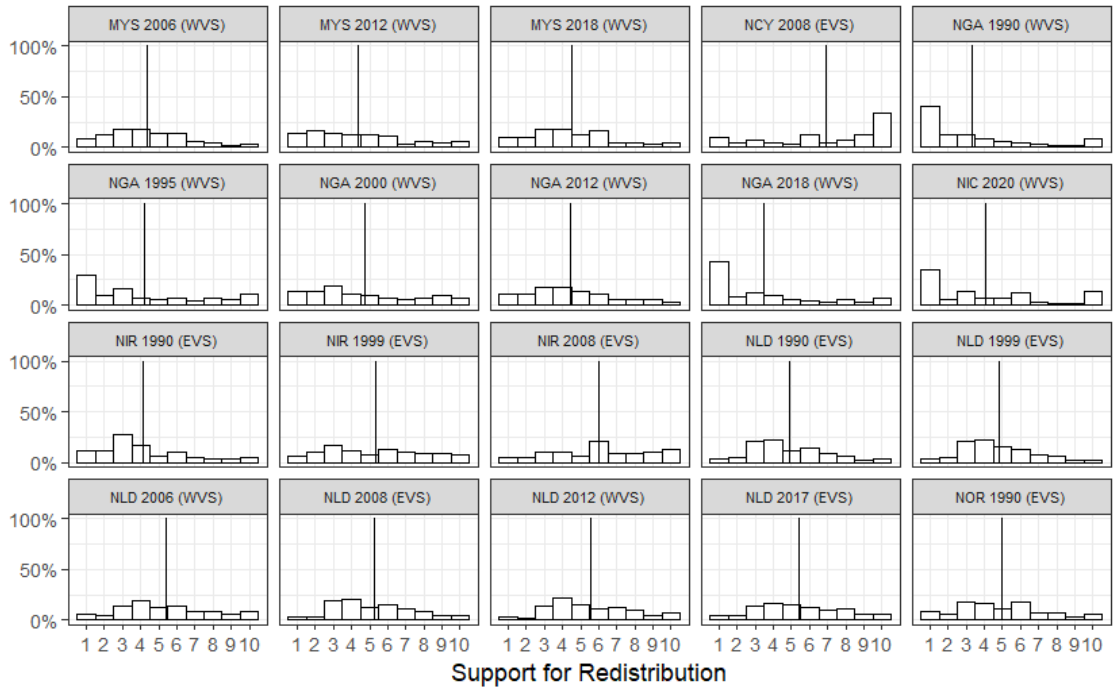


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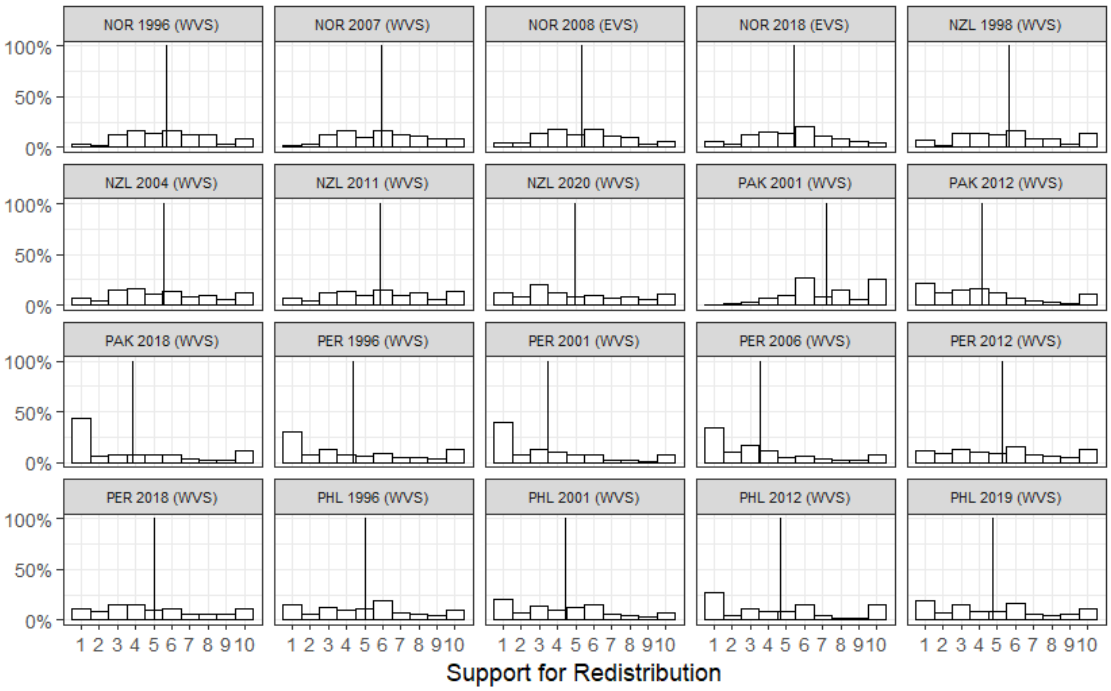


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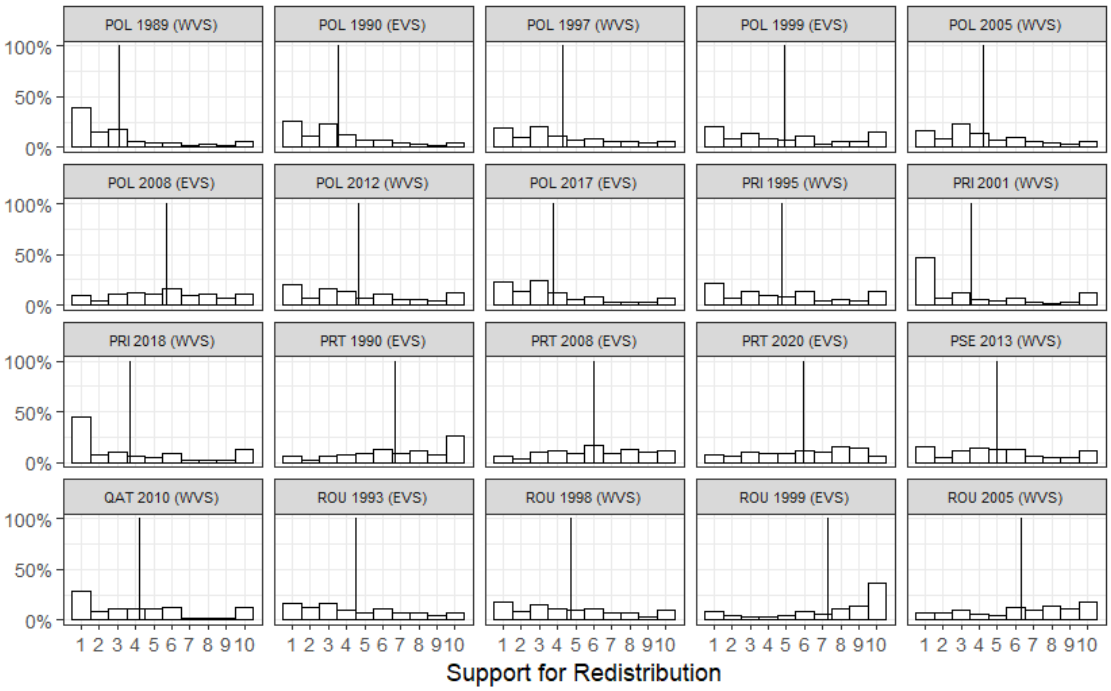


Figure A3.16. Distribution of support for redistribution in IVS (continued).

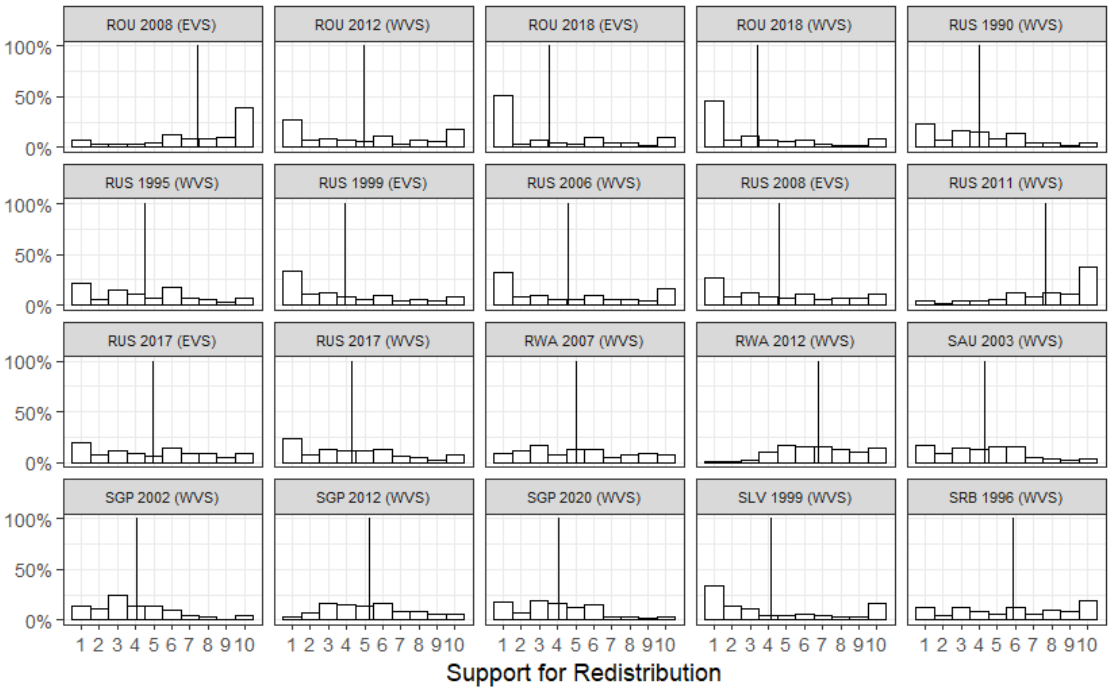


Figure A3.17. Distribution of support for redistribution in IVS (continued).

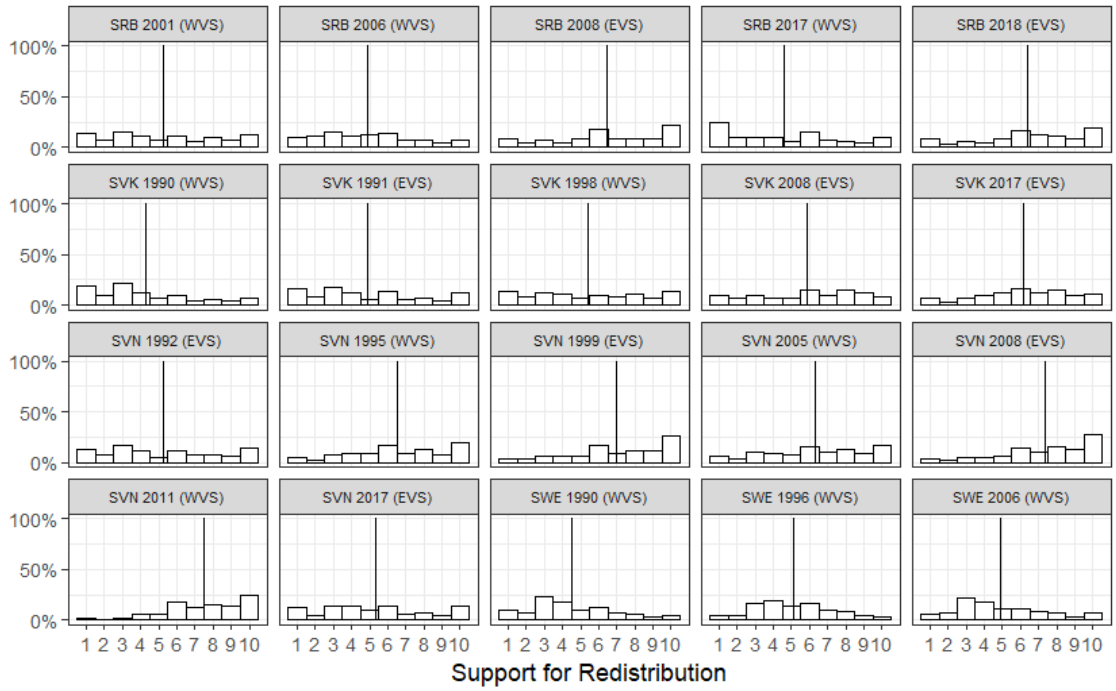


Figure A3.18. Distribution of support for redistribution in IVS (continued).

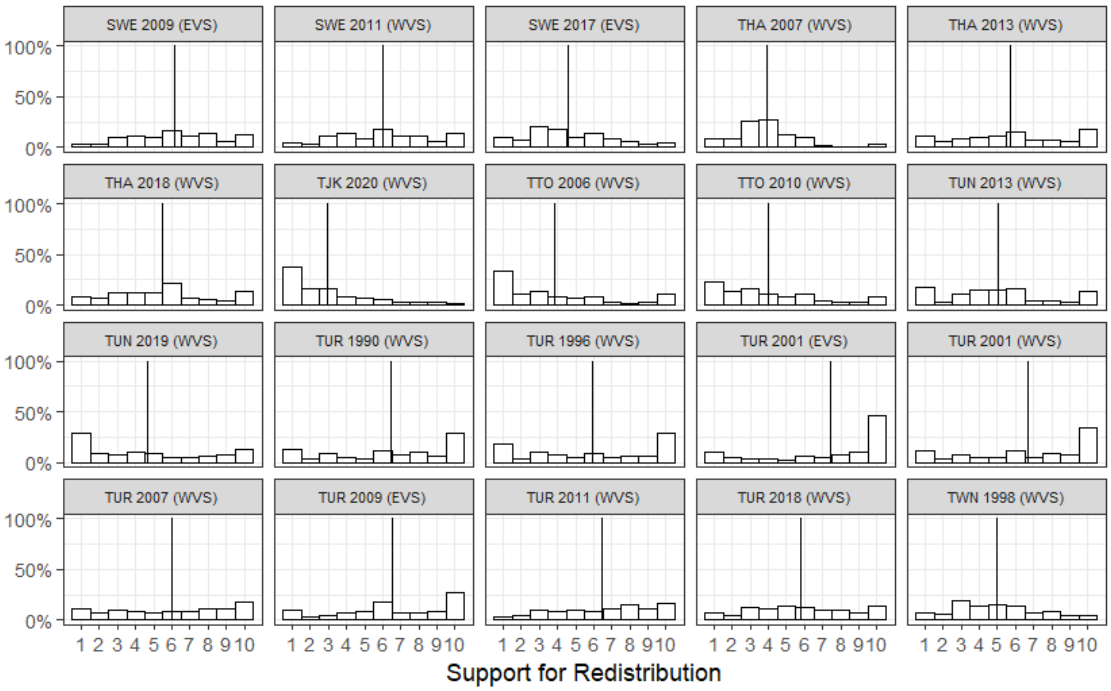


Figure A3.19. Distribution of support for redistribution in IVS (continued).

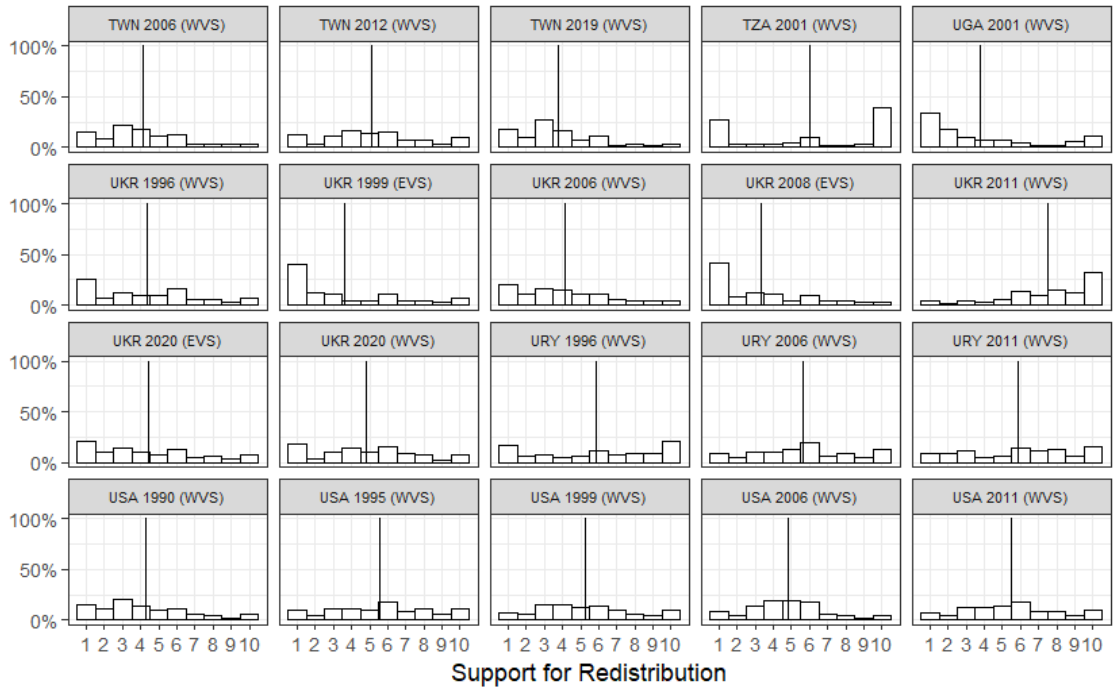


Figure A3.20. Distribution of support for redistribution in IVS (continued).

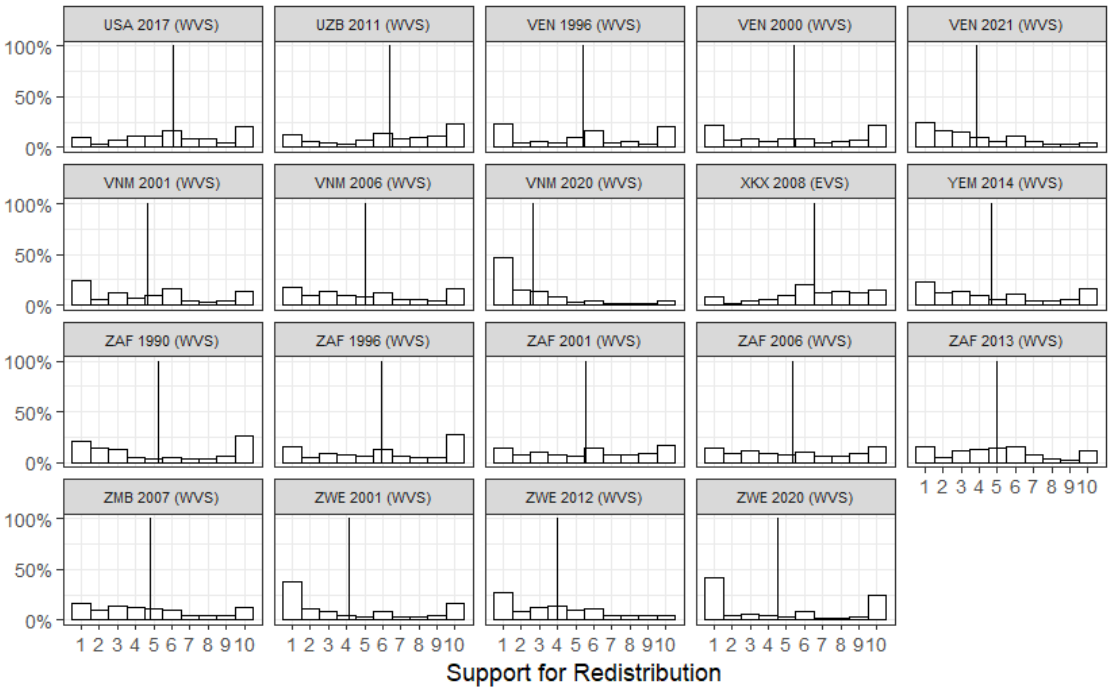


Figure A3.21. Distribution of support for redistribution in IVS (continued).

For every loss, there is a hidden gain. And for every gain, there is a hidden loss.

—Hazrat Inayat Khan

Whoever sows sparingly will also reap sparingly, and whoever sows generously will also reap generously. Each of you should give what you have decided in your heart to give, not reluctantly or under compulsion, for God loves a cheerful giver.

—2 Corinthians 9:6-7

4 Paper 2 – Absolute Gains, Relative Losses

How the Rich and Poor View Redistribution Differently

4.1 Abstract

How do people perceive the utility of redistribution? Support for redistribution is commonly understood as being determined by self-interest in a way that is monotonically proportional to net transfers. However, this implies that average support across populations should be stable over time, which is not the case. Altruism and prospect theory offer some explanations for this, suggesting that preferences can also be conditioned by other-regarding concerns and cognitive biases. This study integrates these ideas by making two distinctions regarding redistribution, namely absolute vs. relative utility, and gains vs. losses. An analysis of the European/World Values Survey suggests that the preferences of the poor are determined by absolute gains, while the preferences of the rich are determined by relative losses. In other words, the poor care about how much they gain from redistribution, whereas the rich care about the share of their income that they lose from it. These findings have important implications for the relationships between public opinion, economic development and redistributive policies.

4.2 Introduction

Redistribution is the main instrument that governments have at their disposal to address income inequality. High levels of inequality are associated with numerous health and social malaises, like higher obesity and crime, and lower social capital and trust (Deaton 2003; Pettit & Western 2004; Wilkinson & Pickett 2015). Public opinion on redistribution is highly relevant to this matter because people's attitudes influence how they vote and, by extension, the policies that governments are incentivised to enact (Anderson & Beramendi 2008, p. 12; Rueda & Stegmueller 2016, p. 8). After all, the core characteristic trait of democracy is, as Dahl wrote, "the continuing responsiveness of the government to the preferences of its citizens" (1973, p. 1). Given rising levels of income inequality, achieving a comprehensive understanding of the formation of redistributive preferences is a crucial first step toward knowing when governments are incentivized to enact redistribution.

Redistribution involves tax and transfer programs that entail losses for the rich and gains for the poor. Consequently, the utility from redistribution can be understood as the net outcome a person expects from such programs. The political economy literature has generally viewed preferences for redistribution through the lens of material self-interest, as formulated by the Romer-Meltzer-Richard (RMR) model. According to the RMR model, people seek to maximise their own material well-being, meaning that the more they can expect to gain from redistribution, the more they support it (Romer, 1975; Meltzer & Richard 1981). As a result, people's position in the income distribution largely determines their support for redistribution, with high-income individuals showing less preferences for redistribution than low-income individuals. This relationship has been documented in numerous studies (Bean & Papadakis 1998; Corneo & Gruner 2000; Fong 2001; Gilens 2005; Finseraas 2009; Alesina & Giuliano 2011; 2013; Rueda 2017; Dimick *et al.* 2018).

But do people perceive the utility from redistribution in absolute or relative terms? And do they perceive gains and losses differently? These two questions lie at the heart of how people form their preferences for redistribution. Extant literature is often agnostic on whether the utility of redistribution is perceived in absolute or relative terms. Although some recent studies have noted the importance of distinguishing between absolute and relative changes in income, and how it affects public opinion (Mérola & Helgason 2016; Weisstanner 2022), the vast majority of research carries the implicit assumption that people perceive gains and losses equally. But this assumption has implications that are inconsistent with well-established findings. If people perceive gains and losses equally, then aggregate support for redistribution should be stable over time and independent of changes in levels of economic development or income inequality because the utility of net gains would always be matched by the utility of net losses. In fact, studies have shown that support for redistribution varies substantially between and within countries over time and is affected by development and inequality (Lübker 2007; Dion & Birchfield 2010; Beramendi & Rehm 2016; Rueda 2018; Andersen *et al.* 2021). Moreover, most of the literature on the emergence of welfare states suggests that economic development is one of the primary predictors of social spending and redistributive programs (Kerr *et al.* 1960; Wilensky 1975; Peacock & Scott 2000; Stevenson 2001; Myles & Quadagno 2002; Barr 2020). These findings challenge the assumption that gains and losses are perceived equally because they imply that some people display less self-interest than others, depending

on the context. Therefore, in order to explain why public opinion on redistribution can change depending on macroeconomic factors, we must explore other mechanisms besides self-interest that can shape preferences for redistribution.

Two bodies of research that offer relevant insights are the literatures on altruism and prospect theory. Studies on altruism suggest that people's preferences are also motivated by other-regarding concerns and a dislike toward unequal outcomes (Bowles & Gintis 2000; Rapoport & Vidal 2007). As a result, the rich are more open to redistribution than they otherwise might be based purely on self-interest (Rueda 2018; Cavaillé 2014, Rueda & Stegmueller 2019). Meanwhile, prospect theory states that people's perceptions of utility can be distorted by cognitive biases such as the status quo bias and loss aversion (Tversky & Kahneman 1979). The status quo bias is the tendency for people to perceive utility in relation to a point of reference, while loss aversion is the tendency to overweigh losses compared to gains. In the case of redistribution, people's current income serves as the reference point from which they perceive the utility of tax and transfer programs. Since redistribution involves gains for low-income people and losses for high-income people, prospect theory can be a useful theoretical framework to inform how redistributive preferences are formed.

The present article aims to incorporate ideas from the literatures on altruism and prospect theory to the RMR model of redistribution by making two important distinctions. First, it distinguishes between *absolute* and *relative* utility from redistribution. The expected utility from redistribution concerns how much an individual can expect to gain or lose if all incomes were equalised. If redistributive policies were carried out to its fullest possible extent (without transaction costs or deadweight costs), then the income of every person in a population would become equal to the mean. Thus, the utility of redistribution is based on the difference between a person's income and their country's mean income. While absolute utility involves the absolute value of the income difference, relative utility is measured in relation to an individual's current income position. Second, the article distinguishes between the *rich* and the *poor*, which are defined as individuals whose incomes are above and below the mean income, respectively. Thus, the rich are those who can expect net losses from redistribution, while the poor are those who can expect to receive net gains from it. These distinctions between absolute and relative utility, and between gains and losses serve to capture important subtleties in how people form their redistributive preferences. In effect, the study treats the mean income of a country as a discontinuity cut-off, arguing that those below are more sensitive to absolute distance, and those above it are more sensitive to relative distance. It is worth noting that this does not imply that people's preferences are sensitive to crossing the cut-off, but rather that their preferences become more sensitive to a different measure of distance once they cross the cut-off.

This article also makes a novel methodological contribution by estimating the incomes for respondents from the Integrated Values Survey (IVS)–which comprises the World Values Survey and the European Values Survey–rather than using a scale or percentile measure of income. The main strengths of the IVS are its large size and cross-national variance, which offer reliable and generalizable insights into public opinion. However, the item concerning respondents' incomes has comparability and interpretability issues because the surveys use

different income scales and different currencies (Donnelly & Pop-Eleches 2018). In the present article, this problem is addressed in two steps. First, the income percentiles of the respondents are estimated based on their rank within the distribution of the income scale for their survey. Second, the raw incomes of the respondents are obtained by matching them to their corresponding country, year and income percentile within the World Income Inequality Database (WIID). This novel operationalisation allows for a more precise and reliable estimation of the raw incomes of IVS respondents, which paves the way for future research concerning income and its relation to both attitudes and socio-demographic factors using one of the largest cross-national survey datasets currently available.

The main finding from the results is that the poor support more redistribution based on income distance, while the rich support less redistribution based on income ratio. Therefore, self-interest based on absolute utility appears to explain the preferences of respondents below the mean income but not for respondents above it, following the arguments on altruism. Meanwhile, relative utility also plays a major role in shaping preferences, as suggested by the status quo bias, and this is more the case for those above the mean income, which is consistent with loss aversion. In sum, the poor care about how much they gain from redistribution, while the rich care about the share of their income that they lose. Furthermore, the results underscore two more important findings for the literature on public opinion and redistributive policies. First, they shed light on the ability of individuals to perceive their income position. As the results show, people are in fact quite aware of and sensitive to their position in the income distribution of their country, as well as their country's overall affluence, but it is important to measure it in relation to the mean income, and to differentiate between absolute and relative utility. Second, the results indicate that the public is more supportive of redistribution in affluent countries because the poor have more to gain from it and the rich are more willing to pay for it.

These findings have important implications for the emergence of welfare states, which has been the subject of long-standing debate. Economic theories have proposed that the social transformations from economic development are the ultimate drivers of the emergence of welfare states (Kerr *et al.* 1960; Wilensky 1975; Barr 2020), while institutionalist theories emphasise the role of left-wing political mobilization (Esping-Andersen 1990; Huber, Ragin & Stephens 1993; Piven & Cloward 2012; Hicks 2018). The findings offer a bridge between these two theories, as they suggest that economic development enhances the mobilization potential of the poor around redistributive policies in comparison to the rich.

4.3 Theory and Hypotheses

This paper aims to provide a more comprehensive understanding of the formation of redistributive preferences by complementing the RMR model based on self-interest with insights on altruism and prospect theory. In this section, I first conceptualize income position by distinguishing between income distance and income ratio, which reflect the absolute and relative utility of redistribution, respectively. Second, I review the RMR model and hypothesise about the effect of income distance on preferences. According to this model, preferences are primarily determined by self-interest, so they should reflect the absolute utility of

redistribution. Third, I theorise about the effects of altruism, and how it can weaken self-interest among the rich. Fourth, I theorise the implications of the status quo bias and loss aversion on redistributive preferences, and hypothesise the effect of income ratio. The status quo bias implies that people are also sensitive to the relative utility because they assess the gains and losses from redistribution in relation to their current income position. Loss aversion implies that the rich are more sensitive to the relative costs because people weigh relative losses more than relative gains. The theoretical effects of self-interest, the status quo bias and loss aversion are illustrated in *Figure 4.1*: support for redistribution is expected to be more sensitive to absolute gains than absolute losses, and more sensitive to relative losses than to relative gains.



Figure 4.1 Theoretical model on preferences for redistribution based on absolute and relative gains and losses.

4.3.1 Conceptualizing Income Position

The main independent variables used here are based on individuals' position on the income distribution. Income position measurements used in the literature can generally be classified into three groups: ordinal measures (e.g., Fong 2001; Gilens 2005; Rehm 2009; Alesina & Giuliano 2011; Loveless & Whitefield 2011), rank measures (e.g., Bean & Papadakis 1998; Cruces *et al.* 2013; Weisstanner 2022), and mean-centred measures (e.g., Corneo & Gruner 2000; Dion & Birchfield 2010; Rueda 2017). Ordinal measures group individuals by their raw income into ordinal scales (e.g., $0-9,999, $10,000-19,999, etc.). Rank measures are based on individuals' percentile position on the income distribution, and is typically grouped into scales (e.g., deciles, quintiles, quartiles, etc.). Mean-centred measures are based on the distance between an individual's income and the mean income of their country.

The main problem with ordinal and rank measures is that they do not reflect individuals' expected utility from redistribution. In other words, they cannot tell us whether someone can expect to gain or lose from tax and transfer programs. For example, a person with a gross household income of $20,000 would expect to gain from (and therefore support) redistribution in a country where the average income is $40,000, but would expect to lose from (and therefore be against) redistribution if the average income was $10,000. The same issue occurs with rank measures. Knowing an individual's position along the income distribution of their country still does not tell us whether they can expect to gain or lose from redistribution. A person at the 70th percentile of the income distribution in a country with low inequality will likely be on the losing side of redistribution, whereas in a country with very high inequality, they may find themselves below the mean income, and therefore expect to gain from it.

Mean-centred approaches address these problems: by measuring income position vis-à-vis the country's mean income, it can differentiate between those who gain and those who lose from redistribution. In this article, I use two mean-centred approaches to conceptualize income position: income distance and income ratio. Income distance refers to the difference between an individual's income and their country's average, making it the optimal proxy for absolute utility an individual can expect from redistribution, and has been used in previous studies (Corneo & Gruner 2000; Rueda 2017; Dimick *et al.* 2018). Income ratio refers to the ratio scale between an individual's income and the mean income of their country, making it an optimal proxy for the relative utility of redistribution. The approach used by of Dion & Birchfield (2010) is similar to this: they standardise income distance by country-year, resulting in a measure that is based in relation to the mean income. The absolute-relative distinction is important because it represents different aspects of the utility from redistribution: income distance captures absolute utility and income ratio captures relative utility.

The example outlined in *Table 4.1* illustrates the concepts of income distance and income ratio. The example consists of sets of five individuals from two countries with different levels of economic development. Country A has a mean income of $30,000 and Country B of $60,000. In each country, two people have incomes below the mean, one has an income equal to the mean, and two have incomes above the mean. As shown in the table, income distance refers to the value of the difference between income and mean income, and income ratio refers to the value of the ratio between income and mean income. Although these measures are related because both increase as a function of income, they capture distinct elements of income position, namely the absolute and relative utility of equalizing incomes. Thus, people with the same income distance can perceive the relative utility of redistribution differently depending on how rich their country is. For example, the same income distance of +$20,000 corresponds to different income ratios depending on whether the person is in Country A (Income Ratio = 1.67) or Country B (Income Ratio = 1.33). The same income distance corresponds to a higher income ratio when countries are poorer.

Table 4.1 Hypothetical example of income distance and income ratio.

Country	**Mean Income**	**Income**	**Income Distance** *(Income – Mean)*	**Income Ratio** *(Income/Mean)*
		$10,000	-$20,000	0.33
		$20,000	-$10,000	0.67
Country A	$30,000	$30,000	$0	1.00
		$40,000	$10,000	1.33
		$50,000	$20,000	1.67
		$40,000	-$20,000	0.67
		$50,000	-$10,000	0.83
Country B	$60,000	$60,000	$0	1.00
		$70,000	$10,000	1.17
		$80,000	$20,000	1.33

4.3.2 Self-Interest and Preferences for Redistribution

Material self-interest serves as the most common basis for understanding individuals' preferences for redistribution. The principles behind this idea can be traced back to rational choice theory (Downs 1957) and social choice theory (Arrow & Debreu 1954, Arrow 1974). The most popular version of this approach is the RMR model proposed by Romer (1975) and developed by Meltzer and Richard (1981), which assumes that voters seek to maximise their material well-being. Based on the RMR model, individuals' preferences for redistribution are determined by what they get out of it: the more they have to gain, the more they support it, and the more they have to lose, the less they support it.

The purpose of redistributive policies is to ameliorate income disparities through tax and transfer programs that have a net cost to higher-earners and a net benefit to lower-earners. For individuals with incomes below the national mean, their self-interest would be for a 100 percent tax rate so that all incomes were equal. Conversely, for those above the mean, their self-interest would be for a tax rate of zero in order to keep all their income. Nonetheless, tax and transfer programs can have deadweight costs (e.g., economic stagnation) and distortionary costs (e.g., the progressivity of tax brackets), which is why preferences are generally expected to be monotonically proportional to income position. This basic premise, that income position determines individuals' preferences for redistribution has been found in numerous studies (Bean & Papadakis 1998; Corneo & Gruner 2000; Fong 2001; Gilens 2005; Finseraas 2009; Alesina & Giuliano 2011; Rueda 2017; Dimick *et al.* 2018). Thus, the first hypothesis aims to replicate the role of self-interest based on absolute utility by estimating the effect of income distance on support for redistribution.

> *H4.1: There is a negative relationship between individuals' income distance and individuals' support for redistribution.*

4.3.3 Altruism

Although self-interest is widely viewed as the primary driver of preferences for redistribution, a growing body of research has brought attention to the role that altruism plays. Altruism's underlying psychological mechanisms have been the focus of numerous studies. Laboratory experiments have shown that people dislike unequal distributions (Tricomi *et al.* 2010) and they are concerned for the welfare of others regardless of reciprocity (Fehr & Gächter 2000; Charness & Rabin 2002; Charness *et al.* 2007; Klor & Shayo 2010; Lei & Vesely 2010; Aguiar *et al.* 2013). For example, in an experimental survey study, Bowles and Gintis (2000, p. 50) find that people display "a virtually unconditional willingness to share with others to assure them of some minimal standard".

Altruism has also gained growing attention in the literature on redistributive preferences as a complement to self-interest (Shayo 2009; Lupu & Pontusson 2011; Cavaillé 2014; Cavaillé & Trump 2015; Dimick *et al.* 2018; Rueda 2018; Rueda & Stegmueller 2019). Previous studies have exemplified this effect. People tend to favour social spending more in affluent countries (Rose, Rose & Peters 1978; Alt 1979; Blomberg & Kroll 1999; Stevenson 2001; Rueda 2018), which implies that people become more altruistic as they become richer. Moreover, the rich

tend to be more open to redistribution in cases of high inequality, ethnic homogeneity, and high crime (Rueda & Stegmueller 2016; Cavaille 2014; Rueda 2018). According to Rueda (2018), the rich view redistribution as a 'luxury good' that they are willing to pay once they are sufficiently well-off. Rapoport and Vidal (2007, p. 1231) summarise much of this literature, writing that "once individuals have satisfied their own physiological constraint in the course of economic development, they devote resources to shaping their altruistic preferences, increasing their social degree of altruism above its natural level".

The role of altruism in the formation of redistributive preferences has been conceptualised in various ways (see reviews by Fehr and Schmidt 2006; DellaVigna 2009). One of the most straightforward conceptions of altruism is as inequity aversion, meaning that "an equitable allocation is an equal monetary payoff for all players" (Fehr & Schmidt 2006, p. 639). In other words, just like people perceive the utility of redistribution based on how much they gain or lose, they also perceive utility in having less inequality. Of course, for the poor (those below the mean income), wanting more redistribution from altruism would be indistinguishable from self-interest because they can expect net gains from it. Even if a person below the mean income is driven by inequity aversion, they would still benefit from more redistribution. It is only for those who are above the mean income, for whom redistribution implies costs, that altruism drives preferences that go against their narrow individual economic self-interest. This distinction is noted by Rueda (2018, p.227), who describes altruism as "the willingness of individuals to make sacrifices in order to realize welfare gains for those in society who are worse off". Altruism is thus displayed when people's preferences are less reflective of their absolute utility as they get richer. Therefore, altruism is manifested in how people perceive absolute utility differently based on whether they can expect gains or losses. The less sensitive the rich are to how much they lose to redistribution compared to the poor, the more altruistic they are.

The second hypothesis, based on altruism, contends that the rich are less sensitive to the absolute utility of redistribution because they are not only concerned with their own material well-being, but have other-regarding concerns and want to limit inequality in their country. Studies suggest that the rich dislike inequality and are also negatively affected by some of its consequences, like more crime and political instability (Rueda & Stegmueller 2017). Redistribution, despite costs, holds benefits even for those who pay for it. Therefore, the rich are expected to perceive the absolute utility of redistribution differently from the poor.

> *H4.2: The negative effect of income distance on support for redistribution is weaker among individuals with incomes above the mean.*

4.3.4 Prospect Theory and Preferences for Redistribution

If preferences for redistribution simply reflected absolute utility, as self-interest would predict, then knowing what a person can expect to get out of tax and transfer programs should suffice to understand them. However, according to prospect theory, people do not always conform to rational decision-making processes that maximise their absolute utility (see Kahneman & Tversky 1979; Kahneman, Knetsch, & Thaler 1991; Kahneman 2013). Instead, people often

make decisions using heuristics, mental shortcuts that are emotionally satisfying, which can lead to cognitive biases, systematic patterns of irrational judgements. Two important cognitive biases that are at the core of prospect theory and can affect individuals' preferences for redistribution are the status quo bias and loss aversion (Kahneman, Knetsch, & Thaler 1991; Kahneman 2013; Samuelson & Zeckhauser 1988; Kahneman & Tversky 1979). Together, these biases can explain why the rich view redistribution in more relative terms than the poor.

The status quo bias is an irrational attachment to a point of reference provided by a current state of affairs. This is manifested in the tendency to maintain a previous decision or attitude by actively choosing the default option or by doing nothing. It is an emotional preference for the current situation that can cause individuals to make sub-optimal decisions. For example, Johnson *et al.* (1993) examined car buyers' preferences for car insurance plans. At the time of the study, Pennsylvania had an expensive default option that protected subscribers' rights to sue, while New York had a cheap default option that restricted their rights to sue. They found that car buyers preferred the default option that was offered regardless of their value: the expensive option was the most popular one in Pennsylvania and the cheap option was popular in New York. Since it is unlikely that the preferences of car buyers were so wildly across the two neighbouring states, their choices can be attributed to status quo bias in their decision-making process.

There are several explanations for the status quo bias. Scenarios that have already existed for a long time are perceived to be better compared to new hypothetical ones. Samuelson and Zeckhauser (1988) argue that one reason for this is uncertainty. They claim that a previous choice has advantages over the alternative because its utility is already known and as long as it is within a certain threshold, it will be maintained over uncertain alternatives. Additionally, people tend to underestimate the consequences that result from a lack of change and overestimate the negative consequences that result from change (Alesina & Drazen 1990; Fernandez & Rodrik 1991; Alesina & Passarelli 2019). Moreover, some motivations for the status quo bias can be seen as rational, given the possible transaction costs caused by informational and cognitive limitations. Collecting and processing data to judge a decision can have its own costs, so people stick with the current state of affairs because it is good enough. Furthermore, the status quo bias can be motivated by system justification, the "process by which existing social arrangements are legitimized, even at the expense of personal and group interest" (Jost & Banaji 1994, p. 2). People develop beliefs that justify the system they encounter because it serves a psychologically palliative function.

Regarding preferences for redistribution, an individuals' current position on the income distribution can serve as the status quo in relation to which they perceive utility and form their preferences. As a result, the status quo bias can distort how people perceive gains or losses from redistribution. The distribution of income is a core part of any society, and broad attempts at redistribution require a substantial departure from–or at least reform of–the existing social order. Redistribution thus runs counter to people's desire to maintain systems that have already existed for a long time as well as their reluctance towards changes that carry uncertainty and potentially negative consequences. Moreover, redistribution challenges the beliefs people use to justify the current distribution of income. These arguments are consistent with prospect

theory, which states that people change their preferences only if they perceive that departing from the status quo has clear advantages above a certain threshold. This effect can best be captured through the role of relative utility in the formation of preferences for redistribution, which can be proxied by income ratio.

The third hypothesis contends that support for redistribution is not solely determined by absolute utility (proxied by income distance), but also by relative utility (proxied by income ratio). Based on the mechanisms behind the status quo bias, people are more likely to support changes in the distribution of incomes when the benefits have a meaningful positive impact on their life compared to their current state of affairs. This means that preferences for redistribution are not only driven by how much people get from redistribution (i.e., absolute utility), but also how much they get in relation to their current income position (i.e., relative utility). The more people gain from redistribution in relation to their income, the more they are likely to support it, and the higher the share of income a person loses to redistribution, the less they are likely to support it. In other words, relative utility will explain unique variance in preferences for redistribution.

> *H4.3: There is a negative relationship between individuals' income ratio and individuals' support for redistribution that is independent of the effect of income distance.*

Another bias that can influence preferences for redistribution is loss aversion, the tendency for individuals to perceive relative losses more than relative gains (Tversky and Kahneman 1979). According to prospect theory, people do not only perceive utility in relative terms, but they also perceive gains and losses differently. As Tversky and Kahneman (1979, p. 274) point out, "individuals normally perceive outcomes as gains and losses, rather than as final states of wealth or welfare," and "losses loom larger than gains" (p. 279). Loss aversion in individual decision-making is corroborated by experimental evidence (Acemoglu *et al.* 2013). Recent studies also suggest that people display loss aversion when they make political decisions. For example, people view redistribution differently depending on whether it is conceived as taking from the rich or giving to the poor (Cavaillé 2014; Cavaillé & Trump 2015). In another study, Charité *et al.* (2015) explore how reference points and loss aversion shape individuals' preferences for redistribution in an experimental setting, finding that agents who are assigned the role of social planners redistribute much less from rich to poor when recipients are aware of their initial endowments. The authors claim that redistributors take into account that the loss experienced by the rich is larger than the benefits enjoyed by the poor. Moreover, in the context of redistribution, loss aversion can also be complemented by the self-serving bias: the tendency for people to attribute more responsibility to themselves in cases of success than failure (Shepperd, Malone & Sweeney 2008). Rich people may also be more likely to view redistribution in relation to their income position because their high income serves as a positive reference point. In contrast, the poor can be expected to view redistribution more in absolute terms because they are not incentivized to take their low income as a reference point. Therefore, we can expect those who gain and lose from redistribution to have different expected utility from the redistribution process.

The fourth hypothesis, based on loss aversion, contends that the rich are more sensitive to the relative utility of redistribution because people weigh perceived losses more than perceived gains. Thus, while H4.2 suggests that the effect of income distance is weaker for the rich, H4.4 suggests that effect of income ratio is stronger for the rich.

> *H4.4: The negative effect of income ratio on support for redistribution is stronger among individuals with incomes above the mean.*

The effects of altruism and loss aversion could theoretically counteract each other, given that altruism drives the rich to be less sensitive to their losses from redistribution, while loss aversion drives them to be more sensitive. However, to the extent that losses are perceived in relative terms, loss aversion would imply that the rich are more sensitive to relative, rather than absolute, utility. This notion was echoed in a study by McCaffrey and Baron (2005), who found that people were more amenable to paying for redistribution if the costs were labelled as 'fees' (i.e., a fixed value) rather than 'taxes' (i.e., percentages), suggesting that people perceive the costs of redistribution in relative terms. If the rich perceive utility in relative terms, then we can expect income ratio to have a stronger effect among those with incomes above the mean.

4.4 Data & Methods

4.4.1 Sample

To test the hypotheses, this study uses the Integrated Values Survey (IVS; the combination of the World Values Survey and the European Values Survey), a pooled cross-sectional time-series dataset of cross-national surveys of weighted random representative samples of about 1,500 respondents starting from 1981. This dataset includes attitudinal and socio-demographic data that allows for a comparative analysis on the relationship between people's economic attitudes and their income position. The original sample consists of 615,564 respondents in 425 surveys from 115 countries, and the final sample without missing data consists of 474,807 respondents in 369 surveys from 103 countries.[22]

4.4.2 Support for Redistribution

The dependent variable in the analysis is individual-level support for redistribution, measured by the reverse of the 'Income Equality' question from the IVS surveys (Item E035). The item uses a ten-point scale whereby 1 indicates support for less redistribution and 10 indicates support for more redistribution. The item is worded as follows:[23]

> *How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal.*

[22] Missing data is outlined in *Appendix Table 4.1*, which can occur for three reasons: (1) country-level data points are unavailable; (2) questions were not asked in a particular country-year survey; (3) or respondents did not answer a question. Fortunately, none of the items or variables are missing for over 15% of cases – the usual threshold to require imputation (Enders, 2003; Banks et al., 2004; Luengo et al., 2010).

[23] The direction of the question is reversed for clarity so that higher values indicate more support for redistribution.

This question has been used as the outcome variable in numerous studies (Ansell & Samuels 2010; Pepinsky & Welborne 2011; Hayward & Kemmelmeier 2011; Iglesias, López & Sántos 2013), as have other questions representing specific economic issues like business ownership (Bjornskov & Paldam 2012) and individual responsibility to provide (Sealey 2018; Andersen *et al.* 2021). Moreover, ten-point scale survey questions such as this have been found to be more useful than five-point scales because they have higher convergent and discriminant validity while maintaining similar means (Coelho & Esteves 2007).

4.4.3 Income Distance and Income Ratio

The two main independent variables in this study are income distance and income ratio, which reflect the absolute and relative utility from redistribution, respectively. Both variables are based on respondents' household income and their country's mean income, which is equivalent to GDP per capita.[24] These independent variables require operationalising respondents' household income and country-year GDP per capita. This is done by combining the IVS survey data with the World Income Inequality Database (WIID),[25] which collects yearly country data on the income distribution of countries as well as GDP per capita in 2017 PPP (purchasing power parity) and Gini estimates (see Gradín 2021) from different sources. The operationalisation of household income consists of two steps: first, respondents' income percentile is estimated based on the IVS question on income scales; secondly, respondents' household income is obtained by matching their income percentile with the WIID dataset.

The first step is to estimate the income percentile of IVS respondents. This is done using the 'Scale of Incomes' question of the IVS (Item X047), which has country-specific household income scales labelled by national currency adapted to ten categories (10 per cent lowest to 10 per cent highest income category) and is worded as follows:

> *Here is a scale of incomes and we would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come into, after taxes and other deductions: (1) First step, (10) Tenth step.*

Despite the item's limitations in terms of measuring raw income, it has internal validity when used as a distributional measure of income position within surveys (Donnelly & Pop-Eleches 2018). Each respondent is assigned a percentile value (1–100) based on their income position relative to the rest of the respondents from the same country-year survey. This maximises the variance of respondents' income without biasing the variable.

Secondly, respondents' income percentile values are matched with the WIID dataset. The WIID uses the Shorrocks-Wan approach (Shorrocks & Wan 2008) to produce synthetic distributions at the percentile level that offer comparable estimates of the net household income for each percentile group by country and year (see Gradín 2021, Appendix A). Therefore, joining IVS survey data with the WIID by income percentile provides a reliable and

[24] In the WIID database, GDP per capita is identical to the average income of all percentiles.
[25] The analysis uses the WIID Companion, which reports standardized data on income distributions that are comparable across countries (Gradín, 2021).

comparable estimate of respondents' household income. For each income scale, the median cumulative percentile is calculated based on the share of respondents that selected each scale. Then, each group is matched based on their percentile position with their corresponding raw income from the WIID.

Once individual household income is operationalised, the income distance and income ratio can be obtained by using on the mean income of their corresponding country and year. Income distance is the difference between income and the mean, while the income ratio is the ratio scale between income and the mean. Income distance is calculated as individuals' income minus the mean income, as shown in Eq. 4.1.

$$\text{Income Distance} = \text{Income} - \text{Mean income} \tag{4.1}$$

Income ratio is operationalised as the ratio scale between incomes and mean income, as shown in Eq. 4.2. Thus, a value of 1 indicates that a respondent's income is equal to mean income, a value of 2 indicates an income that is double the mean, and a value of 0.5 indicates an income half of the mean.[26] Income ratio is equivalent to the income share (the share of income that a percentile receives), but it is transformed to avoid artificial skews in the distribution (see *Figure 1.7*). As mentioned previously, a person's income serves as the reference point from which they perceive the prospective gains or losses from redistribution. Therefore, income ratio it captures effect of the status quo bias, given that it reflects the extent to which preferences are determined by the relative distance between the income and the mean.

$$\text{Income Ratio} = \frac{\text{Income}}{\text{Mean income}} \tag{4.2}$$

In sum, income distance represents the absolute gains and income ratio represents the relative gains an individual would receive if incomes were equalised through redistribution. The scatterplot in *Figure 4.3* shows how income distance and income ratio are distributed in relation to each other.

[26] In order to make the measure for income ratio symmetrical vis-à-vis the mean income, values below 1 are transformed using a Box-Cox transformation with a power parameter of -1 and a shift parameter of 1, as formulated in Eq. (4.3). This way, there is an equivalent distance between someone who makes twice the mean income and someone who makes half of it, or between someone who makes three-times the mean income and someone who makes one-third of it.

$$f(\text{Income Ratio}) = \begin{cases} \text{Income Ratio} & \text{if Income Ratio} \geq 1 \\ \dfrac{\text{Income Ratio}^{-1} - 1}{-1} + 1 & \text{if Income Ratio} < 1 \end{cases} \tag{4.3}$$

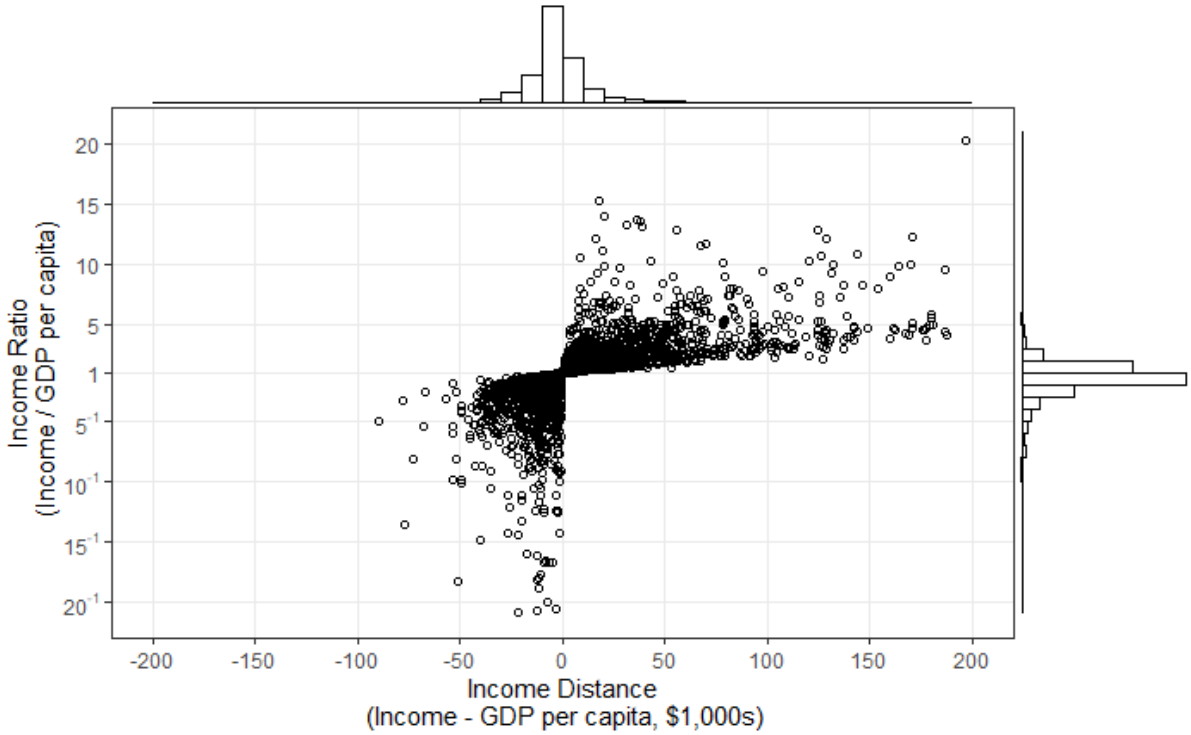


Figure 4.2 Scatterplot and distributions of income distance and income ratio.

4.4.4 Controls

Various socio-demographic measures are used as controls in the analyses due to the possible endogeneity they might create between income and preferences for redistribution: religiosity, marital status, gender and age. A previous study of WVS data showed that support for redistribution is associated with older respondents, women, lower educational attainment and non-married (Alesina & Giuliano 2011; Attewell 2021). Moreover, religiosity has been linked to less support for redistribution by numerous studies (Guiso, Sapienza, & Zingales 2003; Brammer, Williams, & Zinkin 2007; Renneboog & Spaenjers 2012; Stegmueller 2013). The IVS includes questions for these variables. Gender (Item X001) is coded as a categorical variable: 'Male' and 'Female'. Age (Item X003) is coded as a continuous variable. Marital status (Item X007) is coded as a categorical variable: 'Single', 'Married/Cohabitation', 'Divorced/Separated' and 'Widowed'. Religious attendance (Item F028) is coded as the reverse of the 8-point scale from the IVS (more indicating higher religiosity).

The analysis also controls for levels of income inequality in the country where (and when) a particular survey was conducted, since this could also drive support for redistribution. Country-level income inequality is included to account for differences in preferences for redistribution that are based on national considerations rather than individual ones, which is the focus of this article. Income inequality is measured using the Gini coefficient, which is also obtained from the WIID.

4.5 Analysis

The main analysis consists of ordinary least squares regression models with mixed effects predicting individuals' support for redistribution. The models assess the independent effects of each component while controlling for confounding variables. Since the data has a multilevel structure (individual respondents are nested in country-year surveys nested in countries), the analyses use mixed-effects models containing both fixed and random effects to address potential complications (clustering, nonconstant variance, underestimation of standard errors, etc.). This type of model has been proposed for analysing pooled cross-sectional time-series datasets (Schmidt-Catran & Fairbrother 2016; Bell, Fairbrother, & Jones 2019) and has been employed in similar studies (Fairbrother 2013; 2016; Rueda 2017; Schmidt-Catran 2016; Sealey 2018).

The models include random effects for country and country-year to account for unobserved confounding variables related to the differences between countries as well as variations within countries across time. This implies that the effects of country and country-year are drawn from a common normal distribution with estimated variance. The random effects include random intercepts and random slopes for the explanatory variables (i.e., income distance, income ratio, the rich/poor discontinuity, and their interactions). First, random intercepts for country capture differences that are due to time-invariant factors, such as region in the world or majority religion (Lübker 2007; Dion & Birchfield 2010; Andersen *et al.* 2021), and random intercepts for country-year capture differences within countries that are due to time-variant factors, such as changes in economic conditions. Second, random slopes capture systemic differences in the relation between attitudes and the variables of interest. For example, historical background can also be a potential source of endogeneity between public opinion and social policy: countries with communist legacies have been associated with economic stagnation (Benjamin & Kautsky 1968; Crafts & Toniolo 2010; Harrison 2012) and weaker economic-based political cleavages (Gijsberts & Nieuwbeerta 2000; Rohrschneider & Whitefield 2009; Loveless & Whitefield 2011; Saarts 2016). In sum, including random effects for country and country-year accounts for potential sources of endogeneity such as these.

4.6 Results

The main argument of this article is that people perceive the utility of redistribution in absolute or relative terms depending on whether they can expect net gains or losses from tax and transfer programs. In order to test the hypotheses derived from these arguments, I report on the results on respondents' support for redistribution based on their income distance and income ratio as well as whether their income is below the mean (i.e., poor) or above it (i.e., rich). Since H1 & H3 involve the direct effects of income distance and income ratio, I report on them first before addressing H2 & H4, which involve the difference in their effects among the rich and poor.

The means, standard deviations and intercorrelations of all variables are shown in *Appendix Table 4.2.* As expected, support for redistribution is negatively related with income distance (β=-0.12) and income ratio (β=-0.73), confirming that individuals with higher incomes are indeed less in favour of redistribution. The results of the OLS mixed-effects models are reported in *Table 4.2.* Although not the focus of this article's analysis, the results in Model 1

show interesting results regarding the control variables. Age and women are positively associated with support for redistribution. Widowers are more supportive than singles and divorcees, who are themselves more supportive than married respondents. Attending religious services is also associated with lower support, although this effect is only significant once the independent variables are included. Similarly, existing levels of inequality (measured as the Gini index, the only control variable measured at the macro-level) does not have a significant effect in Model 1, but it becomes significant in the following models, supporting the notion that inequality drives support for redistribution.

Table 4.2 Standardised mixed-effects models on the effects of income distance and income ratio on support for redistribution.

	Support for Redistribution					
	Model 0	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Constant	5.164***	5.221***	5.187***	5.201***	5.081***	5.098***
		(0.076)	(0.077)	(0.079)	(0.081)	(0.087)
Year (1980 = 0)		0.238*	0.300**	0.261**	0.297***	0.287**
		(0.095)	(0.094)	(0.094)	(0.092)	(0.091)
Country-Level Effects						
Gini		-0.145	-0.117	0.079	0.012	0.293*
		(0.146)	(0.146)	(0.136)	(0.139)	(0.137)
Individual-Level Effects						
Age		0.213***	0.141***	0.134***	0.125***	0.121***
		(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Married		-0.107***	-0.050***	-0.046***	-0.040***	-0.040***
		(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Divorced		-0.015	-0.066***	-0.075***	-0.081***	-0.080***
		(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
Widowed		0.147***	0.086***	0.069**	0.068**	0.062**
		(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Male		-0.187***	-0.165***	-0.162***	-0.161***	-0.161***
		(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Religious Attendance		-0.015	-0.022*	-0.020*	-0.022*	-0.020*
		(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Income Distance			-0.942***	-0.492***	-1.100***	-1.023***
			(0.073)	(0.048)	(0.101)	(0.086)
Income Ratio				-0.708***	0.076	-0.496***
				(0.106)	(0.066)	(0.109)
Discontinuous Effects						
Rich (Income > Mean)					-0.139***	0.003
					(0.020)	(0.036)
Rich x Income Distance					1.133***	1.483***
					(0.181)	(0.163)
Rich x Income Ratio						-1.435***
						(0.283)
Random Effects						
Country	X	X	X	X	X	X
Country-Year	X	X	X	X	X	X

Observations						
Respondents	474,807	474,807	474,807	474,807	474,807	474,807
Country-Year	363	363	363	363	363	363
Country	103	103	103	103	103	103
Log Likelihood	-1,180,666	-1,179,874	-1,177,123	-1,176,701	-1,176,346	-1,176,194
Chi-squared	–	1,582.4***	5,502.6***	844.4***	851.5***	163.0***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Random effects include random intercepts and random slopes for Income Distance, Income Ratio, Rich, and their interactions. For marital status, married includes cohabitation and divorced includes separated. Chi-squared indicates -2 times the change in log-likelihood from the previous model. Significance: ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

H4.1 is supported by the results from Model 2, which shows that income distance has a significant negative effect on support for redistribution ($\beta = -0.942$, $p < 0.001$). An increase in 1.00 standard deviation in the income distance is associated with a decrease of -0.942 standard deviations in support for redistribution. Put differently, there would be an estimated 1.50 points difference between a person making $10,000 above the mean income and someone making $10,000 below it. Moreover, the Chi-squared of Model 2 ($\lambda^2 = 5{,}502.6$, $p < 0.001$) is statistically significant and far larger than that of Model 1 (1,582.4). This indicates that income distance has substantially more explanatory power than the controls, as one would expect given that it is a proxy for respondents' absolute utility from redistribution. This finding is consistent with extant research on the RMR model, which holds that preferences for redistribution are driven by material self-interest.

H4.3 is supported by the results from Model 3, which shows that income ratio also has a significant negative effect ($\beta = -0.708$, $p < 0.001$), even when accounting for income distance. An increase in 1.00 standard deviation in the income ratio is associated with a decrease of -0.708 standard deviations in support for redistribution. Put differently, there would be an estimated 1.05 point difference between a person making twice the mean income and someone making half of it. Moreover, the Chi-squared of Model 3 ($\lambda^2 = 844.4$, $p < 0.001$) is statistically significant, indicating that income ratio adds to the explanatory power of income distance. This finding is consistent with the status quo bias, suggesting that preferences for redistribution are also motivated by relative utility. This means that while preferences for redistribution are motivated by self-interest, they are also biased by how much money they already make.

H4.2 and H4.4 argued that individuals' preferences for redistribution are not only determined by absolute and relative gains, but that these effects differ between those who gain and lose from redistribution. The effect of income distance is hypothesised to be weaker for the rich due to altruism (H4.2), and the effect of income ratio is hypothesised to be stronger for the rich due to loss aversion (H4.4). To address these claims, I turn to the discontinuous effects of income distance and income ratio.

Levels of support for redistribution based on income distance and income ratio are shown in the generalized additive models in *Figure 4.4*, using ranges from the 1st to the 99th percentiles. These graphs show that the relation between income position and redistributive preferences is quite different between those above and below the mean depending on whether

we measure income in absolute or relative terms. On the one hand, support increases by 1.2 points (4.9 to 6.1) as income distance drops from $0 to -$40,000, but oscillates between 5.0 and 4.7 as income distance rises from $0 to +$80,000. On the other hand, support only increases by 0.6 points (5.2 to 5.8) as the income ratio drops to 1/10, but it decreases by 0.9 points (5.2 to 4.3) as the income ratio reaches 5. This provides initial support that the poor are more sensitive to absolute gains and the rich are more sensitive to relative losses.

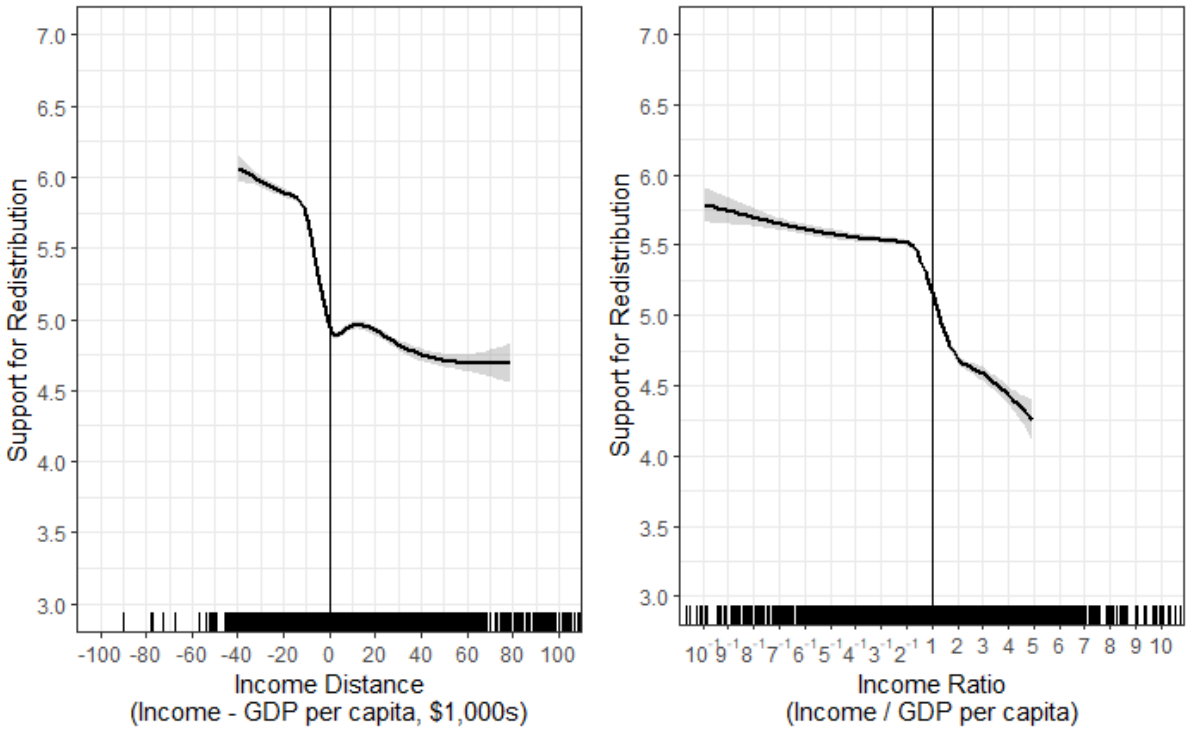


Figure 4.3 Generalized additive models predicting support for redistribution based on income distance and income ratio.

Still, the independent effects of absolute and relative gains cannot be implied simply from descriptive analyses because these variables are correlated and could be affected by confounding factors. Turning back to the results in *Table 4.2*, Model 4 shows support for H4.2, as the interaction of income distance with the rich is significantly positive ($\beta = 1.133$, $p < 0.001$). This suggests that those with incomes above the mean are less sensitive to the absolute utility from redistribution, lending support to the notion that their preferences are shaped by altruism. Meanwhile, Model 5 shows support for H4.3, as the interaction of income ratio with the rich is significantly negative ($\beta = -1.435$, $p < 0.001$). This suggests that the rich are substantially more sensitive to relative losses, as loss aversion would predict. Moreover, the explanatory power of the model rises substantially with the inclusion of discontinuous effects based on the rich/poor cut-off both for income distance ($\lambda^2 = 851.5$, $p < 0.001$) as well as income ratio ($\lambda^2 = 163.0$, $p < 0.001$).

To illustrate these effects, predicted levels of support for redistribution are estimated by setting the variables of interest to chosen values while holding all other variables to the mean. *Figure 4.5* presents the average predicted probabilities (and 95% confidence intervals) for income distances ranging from -$40,000 to +$80,000, and income ratios ranging from one-

tenth of the mean (1/10) to 5 times the mean. Income distance is shown to have a significant effect only for those with incomes below the mean, while income ratio only has a significant for those above it. As income distance drops from $0 to -$40,000, support rises from 5.2 to 6.8, but as income distance increases from $0 to +$80,000, support does not change significantly. Meanwhile, as the income ratio rises from 1 to 5, support drops by an estimated 0.7 points, but as the income ratio drops from 1 to 1/10 there is no significant change in support. These discontinuities in the effects provide evidence that the poor form their preferences based on the absolute utility of redistribution, while the rich do so based on relative utility.

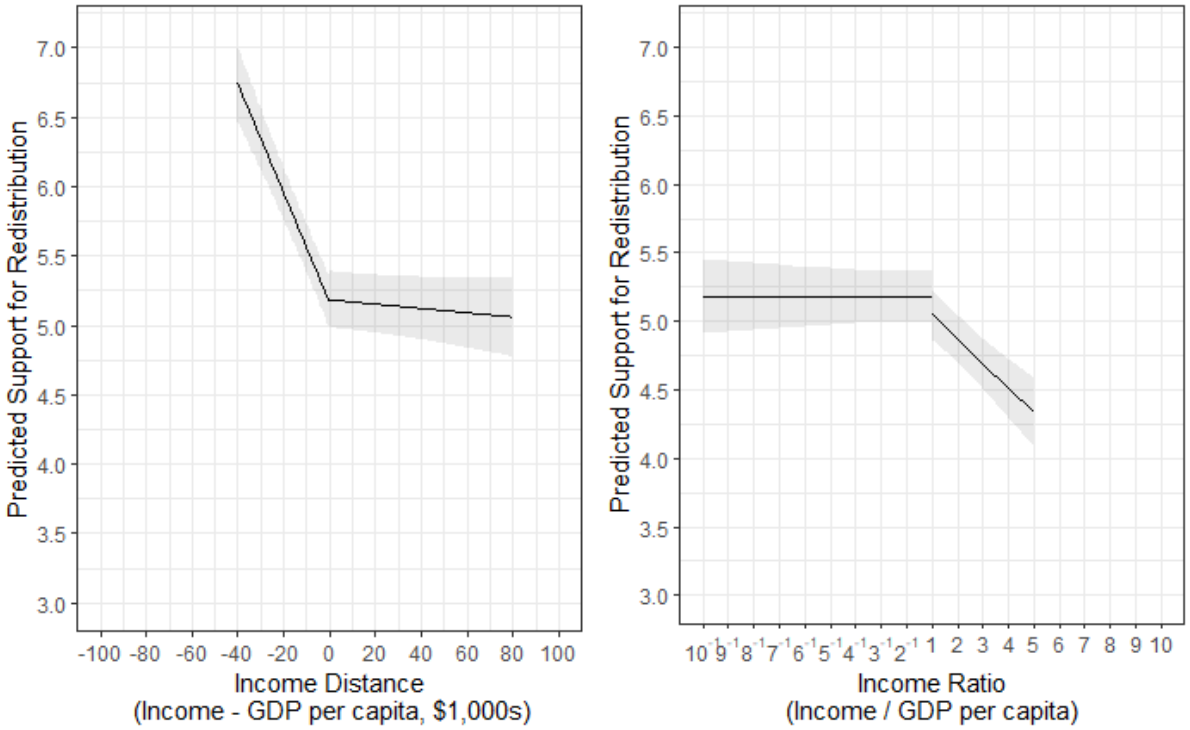


Figure 4.4 Predicted support for redistribution based on income distance and income ratio with 95% confidence intervals.

These results can also be disaggregated by individual-level income and country-level mean income to offer some insights into how the preferences for redistribution of income groups change as countries develop economically. *Figure 4.5* shows the predicted values for individuals with income ratios between 1/10 and 5 in a poor country ($5,000 mean income; one SD below the mean) and rich country ($50,000 mean income; one SD above the mean). The results show that support for redistribution among the poor is higher in affluent countries, but for the rich it stays unchanged. The estimated support for an individual earning 1/10 the average income an estimated 1.8 points higher in the rich country. Meanwhile, the estimated support for redistribution for someone making 5 times the average income is only 0.3 points lower in the rich country, and the confidence intervals overlap. This shows that support for redistribution among the poor tends to be higher in affluent countries, but for the rich it stays the same.

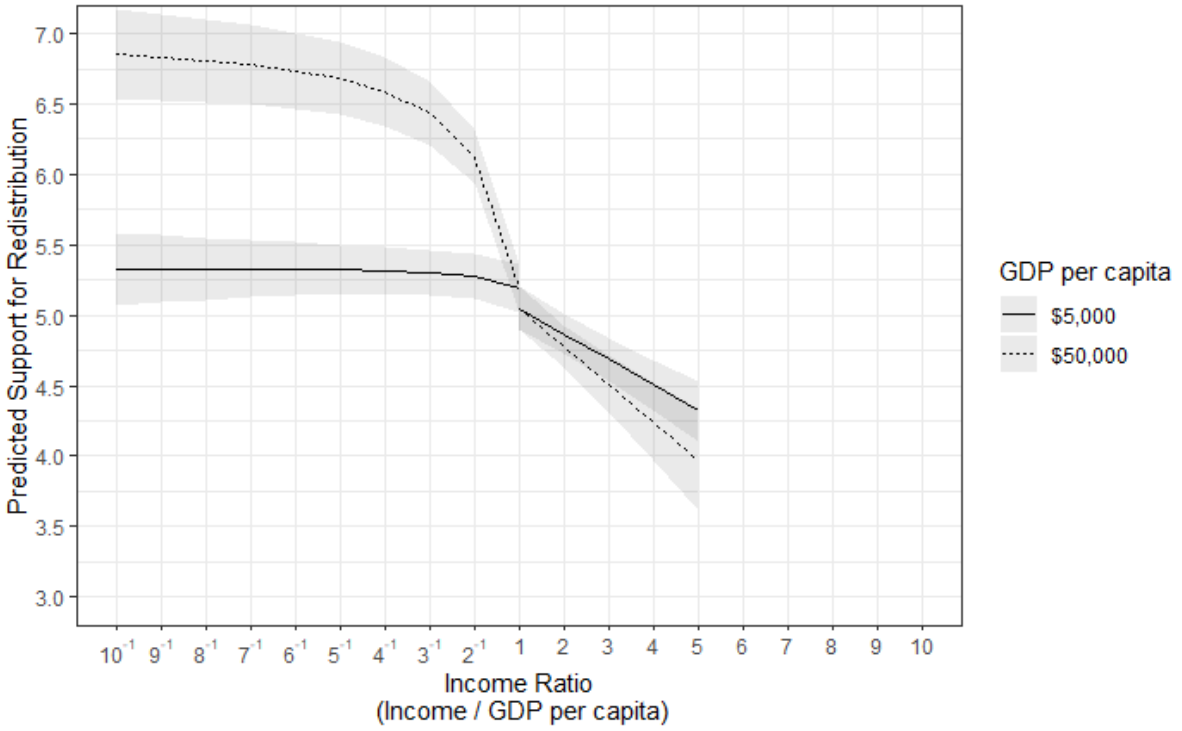


Figure 4.5 Predicted support for redistribution based on income ratio by mean income with 95% confidence intervals.

4.7 Conclusion

According to the classic RMR model based on self-interest, people's preferences for redistribution are primarily determined by the absolute utility they get from tax and transfer programs. However, these preferences often do not reflect their self-interest and we do not fully understand why. To address this question, this article complements theories based on self-interest with insights about altruism and prospect theory by distinguishing between absolute and relative utility and between gains and losses from redistribution. Absolute utility is based on how much a person can expect to gain or lose if incomes were equalised, and is best reflected by income distance, the difference between an individual's income and the mean income of their country. Relative utility is perceived in relation to a person's current income position, and is best reflected by income ratio, the ratio scale between an individual's income and their country's mean income. In this article, I first argued that the RMR based on self-interest implies that people's preferences for redistribution are determined by the absolute utility, so income distance would be expected to be the sole main determinant of support. Secondly, I argued that the poor are more sensitive to the absolute utility of redistribution than the rich because due to altruism. Since people share other-regarding preferences and view redistribution as a 'luxury good', those with incomes above the mean are more willing to incur in losses from redistribution. Third, I argued that people are also conditioned by the relative utility of redistribution due to the status quo bias. Since people perceive their net outcome in relation to their current income, their income ratio also determines their preferences. Finally, I argued that the rich are more sensitive to this relative utility due of loss aversion. People tend to weigh their perceived losses more than perceived gains because they place more value on what they

already own rather than what they can gain. As a result, people above the mean income are more likely to take their current income as a benchmark.

The main finding from the results is that support for redistribution among the poor is determined by income distance, while for the rich it depends on income ratio. Income distance has a strong effect on the poor, but not on the rich, consistent with the theory that people are self-interested, but that altruism also plays a meaningful role in shaping the preferences of the rich. Meanwhile, income ratio has a strong effect on the rich, but not for the poor, which supports the notion that people are conditioned by the status quo bias because it shows that the relative utility of redistribution helps explain their preferences. Moreover, the fact that income ratio only affects the rich supports the notion that people are conditioned by loss aversion, since only those who can expect to lose from redistribution take into account their current income level. In sum, the poor are concerned with how much they get from redistribution while the rich are concerned with the share of their income that they have to pay.

The (often implicit) model behind much of public opinion and political economy starts with preferences for redistribution. These preferences affect how individuals behave politically, including their vote, which in turn affects the strategies of political parties and the policies of governments. The findings have two important implications for the literature on public opinion and redistributive policies.

The first question is whether individuals' preferences for redistribution are sensitive to their income position. As the results show, people are in fact quite aware of and sensitive to their position in the income distribution of their country, as well as their country's overall affluence, but it is important to measure it in relation to the mean income, and to differentiate between absolute and relative utility. Most research has found a relationship between income position and preferences for redistribution (Bean & Papadakis 1998; Corneo & Gruner 2000; Fong 2001; Gilens 2005; Finseraas 2009; Alesina & Giuliano 2011; 2013; Rueda 2017; Dimick *et al.* 2018). However, this relationship varies substantially across countries and people hold preferences that often do not serve their own self-interest (Lübker 2007; Dion & Birchfield 2010; Beramendi & Rehm 2016). This inconsistency has led some scholars to claim that people often misperceive their income position (Osberg & Smeeding 2006; Cruces *et al.* 2013; Bublitz 2017; Gimpelsen & Treisman 2018). Nonetheless, this variation is more likely due to the different ways that income position is measured. Most measures (i.e., ordinal scales and income percentile) do not reflect the utility of redistribution in a reliable and consistent way. Mean-centred approaches address this problem because they are based around the mean income, which according to the RMR model is the point at which incomes can expect to be equalised. Furthermore, as this article shows, it is important to distinguish between the absolute and relative utility of redistribution depending on whether people gain or lose from tax and transfer programs. Once this is taken into account, people are remarkably good at perceiving their income position, evidenced by the effect it has on their preferences for redistribution.

The second question relates to whether economic development drives support for redistribution. The findings suggest that the poor are more supportive of redistribution in developed countries because they have more to gain from it, whereas the rich remain unchanged because they care about the share of their income that they pay in taxes. This

implication is relevant to the literature on the emergence of the welfare state. On the one hand, modernisation theory argues that welfare states emerge in response to the social transformations due to economic development (Kerr *et al.* 1960; Wilensky 1975; Barr 2020). According to this theory, policymakers are incentivized to create tax and transfer programs that ameliorate inequality as their country becomes more affluent because the costs of such programs are smaller. On the other hand, power resource theory emphasizes the role of left-wing political mobilization (Esping-Andersen 1990; Huber, Ragin & Stephens 1993; Piven & Cloward 1994; Hicks 1999). Based on this theory, the emergence of the welfare state has primarily depended on the ability of political leaders who support redistributive policies to gain power. Besides individual actors, the potential for political mobilization is conditioned on numerous institutional factors: veto actors, political restrictions, state centralization and, above all, public opinion. The finding of this article offers a bridge between these two theories, as it suggests that economic development itself enhances the mobilization potential for welfare policies. As countries develop, the poor support more redistribution because they have more to gain, while the rich are open to paying more for redistribution if it does not require a larger share of their income.

There are some limitations to the findings based on features of the data and the hypotheses could be further tested using other datasets. The main limitation is the relatively small temporal variance within countries in the dataset. The main strength of the IVS is that it includes about 500,000 respondents from over 100 countries, which reinforces the generalizability of the findings. But despite going back as far as 1980 (1989 for the 'Income Equality' item), each country has been surveyed on average only 3.6 times, which limits the precision of the estimated effects. Future studies could further test the hypotheses by using datasets with more frequent surveys like the European Social Survey or the Global barometer Studies, and panel surveys like the British Election Studies.

The practical implications of these findings are straightforward. Public opinion is less tolerant of income inequality in advanced democracies because the poor have more to gain and the relative costs for the rich are smaller. Take for example, a poor country that becomes more affluent where the income distribution remains unchanged. At first, people below the mean income could not expect to gain much from redistribution because there is not much wealth to begin with. But as the country becomes richer, the absolute distance between people's incomes and the average income will grow. If the rich and poor perceived the utility of redistribution equally and in absolute terms, this would mean that the aggregate support stays the same. However, as the findings show, the rich are not sensitive to the absolute utility, but to the relative utility. Individuals above the mean income are less likely to resist such programs in affluent countries because they are less concerned about how much they have to pay, but rather the share of their income that they have to pay. As a result, assuming that the income distribution does not change, economic development increases overall support for redistribution because the absolute gains of the poor increase, but the relative losses of the rich stay the same. Therefore, advanced democracies, where average incomes are generally high, can expect public opinion to reward efforts to ameliorate income inequality.

There is much debate among scholars and in the media about the electoral strategies that political leaders should follow based on the myriad factors and issues that influence voter behaviour. The contribution of this article to this debate is that the poor are more in favour of it and the rich are less against it than perhaps thought otherwise. Public opinion in advanced democracies is likely to be less tolerant of inequality and more open to redistribution because the poor have more to gain in absolute terms, and the rich have less to lose in relative terms.

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4.9 Appendix Tables

Appendix Table 4.1 Missing data in Paper 2.

Variable	Not asked/ Not available	Does not know/ Does not respond
Support for Redistribution	3.1%	3.1%
Income	1.7%	9.3%
GNI per capita	1.9%	–
Gini	10.3%	–
Age	0.0%	0.3%
Marital Status	0.2%	0.4%
Gender	0.0%	0.1%
Religious Attendance	2.9%	1.8%

Appendix Table 4.2 Means, standard deviations and correlations of variables.

	Variable	*Mean*	*SD*	1	2	3	4	5	6
1	Support for Redistribution	*5.22*	*2.99*	–					
2	Income Distance	*-0.12*	*19.9*	-0.09	–				
3	Income Ratio	*-0.73*	*4.07*	-0.05	0.28	–			
4	Rich	*0.35*	*0.48*	-0.09	0.58	0.27	–		
5	Year (1980 = 0)	*26.19*	*9.03*	0.03	0.00	0.01	0.00	–	
6	Gini	*38.85*	*10.2*	-0.01	0.02	-0.15	-0.06	0.00	–
7	Age	*43.08*	*16.7*	0.05	-0.09	-0.02	-0.10	0.08	-0.20
8	Single	*0.23*	*0.42*	-0.01	-0.01	0.00	0.01	0.02	0.09
9	Married	*0.63*	*0.48*	-0.02	0.10	0.04	0.08	-0.03	-0.02
10	Widowed	*0.07*	*0.26*	0.03	-0.11	-0.05	-0.11	0.01	-0.05
11	Male	*0.48*	*0.50*	-0.03	0.04	0.02	0.03	-0.02	0.03
12	Religious Attendance	*4.31*	*2.56*	-0.03	-0.01	-0.04	-0.04	-0.01	0.30

	Variable	*Mean*	*SD*	7	8	9	10	11
1	Support for Redistribution	*5.22*	*2.99*					
2	Income Distance	*-0.12*	*19.9*					
3	Income Ratio	*-0.73*	*4.07*					
4	Rich	*0.35*	*0.48*					
5	Year (1980 = 0)	*26.19*	*9.03*					
6	Gini	*38.85*	*10.2*					
7	Age	*43.08*	*16.7*	–				
8	Single	*0.23*	*0.42*	-0.48	–			
9	Married	*0.63*	*0.48*	0.18	-0.72	–		
10	Widowed	*0.07*	*0.26*	0.37	-0.15	-0.36	–	
11	Male	*0.48*	*0.50*	-0.01	0.07	0.04	-0.15	–
12	Religious Attendance	*4.31*	*2.56*	-0.01	-0.03	0.04	0.03	-0.03

N = 474,807. Virtually all correlations are statistically significant at the $p < .001$ level.

Appendix Table 4.3. Non-standardised mixed-effects models on the effects of income distance and income ratio on support for redistribution.

	Support for Redistribution					
	Model 0	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Constant	5.164***	4.980***	4.891***	4.622***	4.423***	3.867***
	(0.076)	(0.322)	(0.322)	(0.318)	(0.331)	(0.321)
Year (1980 = 0)		0.013*	0.016**	0.017***	0.018***	0.016**
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Country-Level Effects						
Gini		-0.007	-0.006	-0.0005	0.004	0.019**
		(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Individual-Level Effects						
Age		0.007***	0.004***	0.004***	0.004***	0.004***
		(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Married		-0.107***	-0.050***	-0.045***	-0.040***	-0.040***
		(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Divorced		-0.016	-0.067***	-0.076***	-0.081***	-0.081***
		(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
Widowed		0.155***	0.094***	0.076***	0.069**	0.069**
		(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Male		-0.188***	-0.165***	-0.163***	-0.161***	-0.161***
		(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Religious Attendance		-0.003	-0.005**	-0.004*	-0.004*	-0.004*
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Income Distance			-0.024***	-0.013***	0.037***	-0.039***
			(0.002)	(0.002)	(0.004)	(0.003)
Income Ratio				-0.087***	-0.013	-0.001
				(0.014)	(0.010)	(0.012)
Discontinuous Effects						
Rich (Income > Mean)					-0.135***	-0.120***
					(0.020)	(0.021)
Rich x Income Distance					-0.028***	0.038***
					(0.004)	(0.004)
Rich x Income Ratio						-0.178***
						(0.034)
Random Effects						
Country	X	X	X	X	X	X
Country-Year	X	X	X	X	X	X
Observations						
Respondents	474,807	474,807	474,807	474,807	474,807	474,807
Country-Year	363	363	363	363	363	363
Country	103	103	103	103	103	103
Log Likelihood	-1,180,666	-1,179,874	-1,177,123	-1,176,701	-1,176,346	-1,176,194
Chi-squared	–	1582.4***	5502.6***	844.4***	851.5***	163.0***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more

equal." Random effects include random intercepts and random slopes for Income Distance, Income Ratio, Rich, and their interactions. For marital status, married includes cohabitation and divorced includes separated. Chi-squared indicates -2 times the change in log-likelihood from the previous model. Significance: ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

This is the third way, our way of reconnecting people to political idealism in an age where political ideology is distrusted.

—Tony Blair

In politics the middle way is none at all.

—John Adams

5 Paper 3 – Activating Self-Interest

The Role of Party Polarisation in Preferences for Redistribution

5.1 Abstract

Although extensive research has analysed the factors that moderate economic self-interest—the relationship between individuals' income position and their preferences for redistribution—there is little cross-national research that analyses the role of political parties. This article argues that political parties play a considerable moderating role in (de-)activating economic self-interest based on the polarization they display in their economic and cultural positions. By combining the World/European Values Survey, the World Income Inequality Database, and the Comparative Manifesto Project datasets, the analyses estimate the moderating effect of party polarization on economic self-interest. The results suggest that economic polarization enhances self-interest for the poor (respondents below the mean income), even when controlling for income inequality, but not for the rich. Moreover, cultural polarization also appears to reinforce self-interest for the poor, rather than supplanting it. The findings have important implications regarding ability for political parties to activate issues among the public.

5.2 Introduction

The declining salience of the economic cleavage in advanced democracies is one of the most noteworthy political trends observed in recent decades (Franklin, 1992; Bartolini, 2000; Kriesi et al., 2006, 2008; Best, 2011; Goldberg, 2020). As a result, much of the research in this area has aimed to identify the explanations for this decline, which has generally taken either a demand-side approach (i.e., voter preferences) or a supply-side approach (i.e., party positions). On the one hand, the demand-side approach implies that the positions of political parties are ultimately determined by the electorate: voters have become less divided in their economic preferences due to rising affluence and the fragmentation of the labour market (Nisbet, 1959; Dahrendorf, 1959; Zweig, 1961; Lipset, 1964; Kitschelt, 1994; Clark & Lipset, 2001) as well as the emergence of new divides based on education, cultural issues and European integration (Kriesi et al. 2006; 2008; Hooghe & Marks, 2018). On the other hand, the supply-side approach implies that political parties have substantial agency to operate independently from public opinion. Supply-side explanations note that political parties, by converging in their economic positions, have constricted the range of options that voters have to choose from (Evans, 1999; Jansen &, Evans 2013; Evans & De Graaf, 2013; Evans & Tilley, 2012; 2017). However, one possibility that has been overlooked in previous studies is that political parties influence voters' preferences: that the convergence of political parties on economic issues could contribute to the declining salience of the economic cleavage by making voters less divided over economic issues. This article aims to fill this gap in the literature by exploring the moderating effect of party polarisation on economic self-interest.

Can political parties (de-)activate economic self-interest among the public? In other words, if parties differentiate themselves more on economic issues, do the economic conditions of voters become more closely associated with their preferences for redistribution? This question lies at the intersect of two important areas of political research, namely the determinants of preferences for redistribution (e.g., Meltzer & Richard, 1981; Alesina & Giuliano, 2009; Rueda, 2018) and the role of political parties in shaping public opinion (e.g., Zaller, 1992; Abramowitz, 2010; Moral & Best, 2022). Economic self-interest is the extent to which people's preferences for redistribution are determined by their income position (Dimick et al., 2018). A large body of research has shed light on how preferences for redistribution are determined by individual-level factors, particularly income position (Dion & Birchfield, 2010; Schmidt-Catran, 2016; Sealey, 2018) and other signifiers of socio-economic status that reflect risk and insurance (Iversen & Soskice, 2001; Rhem, 2009; 2016). Although this relationship is a well-established finding in the literature (Bean & Papadakis, 1998; Corneo & Gruner, 2000; Fong, 2001; Gilens, 2005; Finseraas, 2009; Alesina & Giuliano, 2011; Rueda, 2018; Dimick *et al.*, 2018), economic self-interest varies substantially between and within countries (Lubker, 2008; Dion & Birchfield, 2010).

To explain this, scholars have mostly looked at the moderating effects of macro-economic factors such as levels of development and inequality (Dion & Birchfield, 2010; Schmidt-Catran, 2016; Rueda & Stegmueller, 2017; Andersen et al., 2021). Still, the role of political parties in this area has often been overlooked. The ability of political elites to shape the agenda and public opinion is well-documented in a long and extensive literature (Key,

1961; Sartori, 1969; Zaller, 1992; Geer, 1996; Lachat, 2008; Evans & De Graaf, 2013; Medina, 2015; Moral & Best, 2022), but there has not yet been a cross-national examination of the role that political parties have in moderating economic self-interest. This is particularly pertinent to the declining salience of the economic cleavage in advanced democracies that has been noted by scholars, as it points to the agency that parties have in shaping the political landscape.

This article aims to help fill this gap and investigate the role that political parties have in activating economic self-interest from a comparative perspective. First, I begin by developing expectations on the moderating effect of party polarisation on economic self-interest. Self-interest is the main theoretical driver of individual preferences in the redistribution literature (Romer, 1975; Meltzer & Richard, 1981; Dimick, Rueda & Stegmueller, 2018). Economic self-interest is reflected in the strength of the relationship between individuals' income position and their preferences for redistribution: the poor support more, the rich support less. But this relationship varies substantially across countries (Dion & Birchfield, 2010; Lübker, 2008, Andersen et al., 2021). One possible explanation for this is the role that political parties play in shaping public opinion. A wealth of scholarship has demonstrated that citizens take their political cues from political parties and develop policy preferences that match those of their preferred party (Abramowitz, 2010; Moral, 2017; Saunders & Abramowitz, 2004; Zaller, 1992).

Second, I employ an original and comprehensive dataset that merges cross-national surveys and studies to analyse the moderating effect of party polarisation on the relationship between income position and preferences for redistribution. The dataset used combines the Integrated Values Survey (IVS)–both the World Values Survey and the European Values Survey–with the World Income Inequality Database (WIID) and the Comparative Manifesto Project (CMP). Altogether, the joint dataset includes 293,771 respondents in 271 surveys from 51 countries between 1990 and 2020.

Finally, the moderating effect of party polarisation on economic self-interest is estimated by conducting OLS regression analyses. To control for the problem of reverse causality (i.e., the effect of economic self-interest on party polarisation), the analysis employs mixed-effects models that account for time-invariant country-level factors that condition economic self-interest (e.g., cultural, historical, etc.) and includes income inequality to account for time-varying macro-social shifts that could spill over into public opinion. Moreover, the analyses are replicated using subsamples based on whether respondents are above or below the mean income in their country, since this determines if they can expect to gain or lose from redistribution, which can shape how they view redistributive policies.

The results show clear asymmetries between the rich and poor in how party polarisation affects their economic self-interest. Economic polarisation enhances self-interest for the poor, but not for the rich. Since economic polarisation has generally declined, this suggests that parties have contributed to the declining salience of economic issues among the public, predominantly by moderating left-wing voters. Meanwhile, cultural polarisation also appears to enhance self-interest for the poor, while weakening it for the rich. This suggests that the advent of cultural issues may actually not be supplanting the economic cleavage, but rather

reinforcing it, at least for lower-income voters. These findings hold important implications for the broader topic of elite influence over public opinion, indicating that parties have a meaningful capacity to activate and deactivate issues in public opinion.

The following section conceptualizes economic self-interest and discusses the moderating role of party polarisation. I then describe the research design and dataset used to estimate the moderating effect of party polarization in economic and cultural issues.

5.3 Theory & Hypotheses

5.3.1 Self-interest

Material self-interest serves as the most common basis for understanding individuals' preferences for redistribution. This approach views individuals as primarily motivated by what they get out of redistribution: the more they gain, the more they support it, and the more they lose, the less they support it. The principles behind this idea can be traced back to rational choice theory (Downs, 1957) and social choice theory (Arrow, 1963; Arrow & Debreu, 1974). The most popular version of this approach is the theoretical model proposed by Romer (1975) and developed by Meltzer and Richard (1981), which assumes that voters seek to maximize their income.

The purpose of redistribution is to ameliorate income disparities through tax and transfer programs that have a net cost to the *rich* and a net benefit to the *poor*. In this article, I use the terms rich and poor not to refer to an individual's raw income, but to their income position, which determines how much an individual can expect to gain or lose if incomes are equalized. In this sense, the rich are those with incomes above their country's mean and the poor are those below the mean. Based on pure self-interest, the rich would want a tax rate of zero in order to keep all their income. Conversely, for the poor would want a 100 percent tax rate so that all incomes were equal. Nonetheless, tax and transfer programs can have deadweight costs (e.g., economic stagnation) and distortionary costs (e.g., the progressivity of tax brackets), which is why preferences are generally expected to be proportionally related to income position.

The first hypothesis outlines the presence of economic self-interest: the relationship between individuals' income position and their preferences for redistribution. The stronger this relation is, the more self-interest there is. Indeed, support for redistribution is lower among the rich than the poor, as numerous studies have confirmed (Bean & Papadakis, 1998; Corneo & Gruner, 2000; Fong, 2001; Gilens, 2005; Finseraas, 2009; Alesina & Giuliano, 2011; Cruces, *et al.*, 2013; Rueda, 2018).

H5.1: Income position decreases support for redistribution.

Although this relationship generally holds, its strength varies substantially across countries, and people often hold preferences that do not reflect their narrow individual self-interest. Studies have attributed this variation to culture, inequality and economic development (Lübker, 2007; Dion & Birchfield, 2010; Beramendi & Rehm, 2016; Andersen et al., 2021). Most of these explanations focus on historical and macro-economic factors for which political agents

have little control over, especially if they are not in government. But political leaders do have agency over their parties' positions, which may shape public opinion and, by extension, people's self-interest.

5.3.2 Party Convergence on the Economy

Party polarisation is determined by various factors, which can broadly be grouped by level of analysis. At the macro-level, party polarisation is determined by the polarisation of the electorate. This follows the demand-side logic of electoral politics: parties are responsive to changes in public opinion, so if the public becomes more polarised, then parties will follow in turn (e.g., Budge et al., 2012). Many studies have provided evidence for party responsiveness to changes in voter preferences (Adams et al., 2004, 2006; McDonald and Budge, 2005; Ezrow and Xezonakis, 2011; Ezrow et al., 2014), although this effect does not appear to extend to party polarisation (Best & Moral, 2022). At the meso-level, party polarisation is often attributed to institutional factors, such as the proportionality of the electoral system (Calvo & Hellwig, 2011; Cox, 1990; Dow, 2011; Downs, 1957), whether parties are in government or in opposition status (Bawn & Somer-Topcu, 2012), and coalition expectations (Curini & Hino, 2012). At the micro-level, party polarisation can be influenced by the strategic decisions of political leaders, who exert contingent agency (Meguid, 2005; Enyedi, 2011).[27] Overall, party polarisation is determined by a confluence of factors that are likely to be highly interactive.

Ideological convergence among parties—especially on economic issues between mainstream parties—has been noted by political researchers (Oskarson, 2005; Elff, 2009; Evans & Tilley, 2012; Grant & Tilley, 2021). The decline in economic polarisation is a result of growing consensus around the role of government in the economy between parties on the left and the right. On the one hand, left-wing parties have moderated their positions. One reason for this is Wagner's Law: as countries develop economically, government spending tends to increase (Oxley, 1994; Islam, 2001; Akitoby et al., 2006; Afonso & Alves, 2017). Increased government spending can have a ceiling effect on the economic positions of left-wing parties, since there is less room to expand state-intervention. Another reason for this decline is the composition of the electorate. As countries develop, middle-class educated professionals make up a larger segment of the electorate. This has induced many center-left parties to broaden their appeal away from working class voters in favour of the more affluent middle class (Nisbet, 1959; Dahrendorf, 1959; Lipset, 1964; Kitschelt, 1994; Nieuwbeerta et al., 2000; Clark & Lipset, 2001; Evans & Tilley 2017).

On the other hand, right-wing parties have also moderated their economic positions because higher-income constituencies, who form the traditional right-wing voting bloc, have a "mixed loyalty" toward government spending (Gonthier, 2019, p. 152). As the state grows in size and scope, they start to view government spending more favourably because they increasingly see themselves as recipients and consumers of social policies (Papadakis, 1993), and "they consume and also often are employed in the public sector" (Gonthier, 2019, p.150).

[27] Enyedi gives a compelling account of how Viktor Orban transformed Fidesz, in Hungary, from a liberal Europeanist party to a right-wing populist Eurosceptic one.

Once state functions expand, higher earners want to maintain high-quality services in order to prevent social policies from being confined to the poor and becoming "poor services" (Rothstein, 2010). Higher earners also tend to favour forward-looking public investments (e.g., in education, health and infrastructures) that benefit the whole of society as much as their own interests (Mau, 2015).

5.3.3 Party Polarisation and Public Opinion

While political parties are typically viewed as reflecting citizens' policy preferences (e.g., Lawson, 1980; Dalton & Wattenberg, 2002), they can also play an active role in shaping public opinion. Much of the now-classic scholarship on public opinion highlights the ability of political leaders to activate (or de-activate) issues to make them more (or less) salient among voters (Key, 1961; Sartori, 1969; Zaller, 1992; Geer, 1996). Early on, Key (1961) noted the ability of political leaders to activate public opinion on latent issues. Sartori was one of the first to explicitly point out that political actors have substantial agency in shaping political divides: "As long as we take for granted that cleavages are reflected in, not produced by, the political system itself, we necessarily neglect to ask to what extent conflicts and cleavages may either be channelled, deflected and repressed or, vice versa, activated and reinforced, precisely by the operations and operators of the political system" (1969, p. 209).

Regarding the economic cleavage, the declining party polarisation has been used to explain lower rates of class voting (Evans, 1999; Evans & Tilley, 2012; Evans & De Graaf, 2013) and lower turnout among the working class (Evans & Tilley, 2017). This research demonstrates that when parties converge in their economic positions, people are less likely to vote based on their economic status because the differences in the options they are presented with are not clear enough. This article extends this argument, suggesting that this effect spills over to public opinion. Not only can parties reduce the salience of a cleavage by diluting the options presented to voters, but they can also affect public opinion itself. Previous research has demonstrated the influence that party polarisation can have on public opinion (Abramowitz, 2010; Druckman, Peterson, & Slothuus, 2013; Hetherington, 2001; Iyengar, Sood, & Lelkes, 2012; Layman & Carsey, 2002; Hillygus & Jackman, 2003; Jensen & Thomsen, 2013; Medina, 2015). This mechanism can also help explain the declining salience of economic attitudes.

There are several reasons why party polarisation can be expected to activate issues among public opinion. First, political parties can enhance or diminish the salience of an issue by providing voters with information and cues on what to think and what to think about. If parties differentiate themselves more (less) around an issue, citizens are likely to adopt more (less) extreme views on them, thus enhancing (diminishing) their salience. Voters tend to take cues from their preferred party on issues because gathering information about politics and policies is costly (Zaller, 1992; Ray, 2003; Steenbergen et al., 2007). Furthermore, Lenz (2012) suggests that voters tend to adopt the policy preferences of their preferred candidates even for non-policy reasons. In the United States, rising levels of public polarisation have been attributed to increased party polarisation, especially for informed citizens (Layman & Carsey, 2002a; 20002b; 2006; Layman et al., 2006). Studies of the United Kingdom have found modest convergence among the public, but people who perceived convergence among parties followed

suit (Adams et al., 2011; 2012). In a recent study of 19 advanced democracies, Moral and Best (2022) find that citizens, especially informed and engaged, follow political parties as they become more or less polarised (and that this effect does not occur the other way around).

Second, party polarisation can enhance the ideological consistency of citizens. Studies on voting behaviour show that when parties stake out clear and distinct positions, citizens are more likely to cast ballots on ideological terms (Dalton, 2008; Fazekas and Meder, 2013; Freire, 2008; Lachat, 2008; Pardos-Prado & Dinas, 2010). For example, a recent study by Riera and Pastor (2020) found that populist parties that join coalition governments as junior partners tend to lose more votes when there is low intra-cabinet conflict, suggesting that populist voters become disillusioned with their party if it loses its populist ethos once in government. This is consistent with the notion that parties can sharpen ideological differences among the public by acting out their beliefs. Moreover, some studies have noted that public opinion tends to be more polarised when people's views on similar issues are more consistent (Baldassarri & Gelman, 2008; Abramowitz & Saunders, 2008; Jensen & Thomsen, 2013). Consequently, if parties can enhance the ideological consistency of voters in certain areas by displaying clearer differences, this can increase their salience among the public. For example, Jensen and Thomsen (2013) find that attitudes on immigration are more associated with ideology in Denmark than in Sweden because Swedish parties, unlike Danish ones, refrained from taking opposing sides on immigration.

Third, party polarisation can lead to sorting—similar groups adopting more similar attitudes—which in turn enhances the relationship between social divisions and attitudinal ones. When parties display clearer ideological differences on a certain issue, citizens can perceive these differences more easily (Garner and Palmer, 2011; Knutsen and Kumlin, 2005; Lachat, 2008; Levendusky, 2009; Thornton, 2013). This allows voters to make more informed—and likely policy-driven—decisions (Zingher and Flynn, 2018) and strengthens their partisan attachments (Hetherington, 2001; Bafumi and Shapiro, 2009). Moreover, parties can probably cue citizens more effectively when they are more polarised, since polarisation "changes the clarity of the cues elites send to voters" (Levendusky, 2010, p. 114). As Lachat (2008, p. 688) states: "polarisation allows voters to make more sophisticated decisions at a lower cognitive cost."

The main proposition of this article is that these arguments on party polarisation extend to people's preferences for redistribution. When political parties differentiate their economic positions more, it enhances the awareness of citizens about economic issues and cues them to take more salient positions for themselves. Therefore, when political parties are highly polarised around economic issues, the effect of income position on preferences for redistribution is expected to be stronger.

H5.2: The effect of income position on support for redistribution is stronger when party polarisation on economic issues is high.

Mirroring the declining trend of economic salience, scholars have observed that parties have become increasingly divided over cultural issues, especially in Western democracies (Kitschelt, 1994; Kriesi, 2008; Oesch & Rennwald, 2018; Inglehart & Norris, 2019). One of

the earliest examinations cultural positions using survey data was conducted by Inglehart (1977; 1990), who found that people in advanced industrial societies were increasingly aligned along issues that cut across economic positions, such as same-sex marriage, abortion, drug policy and immigration. The rise of this cultural divide has been attributed to the diversification of the labour market (Kitschelt 1994), globalization (Kriesi *et al.* 2008), intergenerational shifts (Inglehart & Norris 2019), and rising education (Allardt 1968; Knutsen 2004; Stubager 2009; 2010).

The advent of a cultural divide may also influence people's economic attitudes, but the nature of this impact is not obvious. On the one hand, growing cultural polarisation could supplant the economic cleavage. Political issues must compete to be part of the agenda, so the advent of new issues can supplant older ones (Katz & Mair 1995; Meguid 2005; 2008; Bornschier 2007). On the other hand, it is also possible that the cultural and economic cleavages actually reinforce one another. In other words, higher polarisation over cultural issues may spillover to the economic realm. For example, Marks and Wilson (2000) have argued that the new divides over European integration have been assimilated into pre-existing economic divides. In fact, some studies that looked at the relation between social class and economic attitudes did not find evidence of convergence in individuals' positions (Kriesi *et al.* 2008, p. 266; Evans & De Graaf 2013, p. 396). In line with this, Houtman et al. (2009) have argeud that "class is not dead, but has been buried alive under the increasing weight of cultural politics".

Still, the question of whether cultural shifts spillover to changes on economic attitudes overall is largely absent in the literature. As De Graaf and Evans (1996, p. 614) point out, cultural issues "often have been conceptualized as, to a large degree, an orthogonal dimension of core political values that have no necessary implications for the political centrality of long-standing disputes over economic redistribution". The third hypothesis posits these two possibilities: that cultural polarisation may hinder economic self-interest because it supplants the economic cleavage, or that it may actually strengthen economic self-interest because it reinforces the economic cleavage.

H5.3A: The effect of income position on support for redistribution is weaker when party polarisation on cultural issues is high.

H5.3B: The effect of income position on support for redistribution is stronger when party polarisation on cultural issues is high.

5.4 Data and Methods

5.4.1 Sample

To test the hypotheses, this study uses the Integrated Values Survey (IVS; the combination of the World Values Survey and the European Values Survey), a pooled cross-sectional time-series dataset of cross-national surveys of weighted random representative samples of about 1,500 respondents starting from 1981. This dataset includes attitudinal and socio-demographic data that allows for a comparative analysis on the relationship between people's economic attitudes and their income position. The final sample without missing data consists of 293,771 respondents in 252 surveys from 51 countries.

5.4.2 Support for Redistribution

The dependent variable in the analysis is individual-level support for redistribution, measured by the reverse of the 'Income Equality' question from the IVS survey (Item E035). The item uses a ten-point scale whereby 1 indicates support for *less redistribution* and 10 indicates support for *more redistribution*. The item is worded as follows:[28]

> *How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal.*

This question has been used as the outcome variable in numerous studies (Ansell & Samuels, 2010; Pepinsky & Welborne, 2011; Hayward & Kemmelmeier, 2011; Iglesias, López & Sántos, 2013), as have other questions representing specific economic issues like business ownership (Bjornskov & Paldam, 2012) and individual responsibility to provide (Sealey, 2018; Andersen et al., 2021). Moreover, ten-point scale survey questions such as this have been found to be more useful than five-point scales because they have higher convergent and discriminant validity while maintaining similar means (Coelho & Esteves, 2007).

5.4.3 Income Distance

Income position is the position that an individual holds in an income distribution. The measurements used in the literature have been quite varied, but can be broadly classified into three main groups: ordinal measures (e.g., Fong 2001; Gilens 2005; Rehm 2009; Alesina & Giuliano 2011; Loveless & Whitefield 2011), rank measures (e.g., Bean & Papadakis 1998; Cruces *et al.* 2013; Beramendi & Rehm 2016; Schmidt-Catran 2016; Andersen *et al.* 2021), and mean-centred measures (e.g., Corneo & Gruner 2000; Dion & Birchfield 2010; Dimick *et al.* 2015; 2018; Rueda 2018). Ordinal measures are based on grouping individuals by their raw income into ordinal scales (e.g., $0-9,999, $10,000-19,999, etc.). Rank measures are based on individuals' rank within the income distribution, which are typically grouped into tiles (e.g., deciles, quintiles, quartiles, etc.). Mean-centred measures are based on the distance between an individual's income and the mean income of their country.

Income distance is the difference between a person's income and the mean. It is based on respondents' household income and their country's mean income, which is equivalent to GDP per capita. For example, a person with an income of $20,000 in a country where the mean income is $40,000 would have an income distance of -$20,000, while a person with an income of $50,000 would be +$10,000. Moreover, income distance can be transformed to conform to a certain scale, as Dion & Birchfield (2010) do based on the standard deviation of incomes for each country-year. These independent variables require operationalizing respondents' household income and country-year GDP per capita. This is done by combining the IVS survey data with the WIID, which collects yearly country data on the income distribution of countries

[28] The direction of the question is reversed for clarity so that higher values represent more support for redistribution.

as well as GDP per capita in 2017 PPP (purchasing power parity) and Gini estimates (see Gradín, 2021) from different sources.

The operationalization of household income for IVS respondents consists of two steps. First, the income percentile respondents is estimated using the 'Scale of Incomes' question of the IVS (Item X047), which has country-specific household income scales labelled by national currency adapted to ten categories (10 per cent lowest to 10 per cent highest income category) and is worded as follows:

> *Here is a scale of incomes and we would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come into, after taxes and other deductions: (1) First step, (10) Tenth step.*

Despite the item's limitations in terms of measuring raw income, it has internal validity when used as a distributional measure of income position within surveys (Donnelly & Pop-Eleches, 2018). Each respondent is assigned a percentile value (1–100) based on their rank with respect to the rest of the respondents from the same country-year survey, similar to previous research (Fairbrother, 2013). This maximises the variance of respondents' income percentile without biasing the variable.

Second, respondents' income percentile values are matched with the WIID dataset. The WIID uses the Shorrocks-Wan approach (Shorrocks & Wan, 2008) to produce synthetic distributions at the percentile level that offer comparable estimates of the net household income for each percentile group by country and year (see Gradín, 2021, Appendix A). Therefore, matching IVS survey data with the WIID dataset by income percentile provides a reliable and comparable estimate for how much money each respondents makes.

Once individual household income is operationalized, the income distance can be obtained based on the mean income of their corresponding country and year. Income distance is calculated as individuals' income minus the mean income, as shown in Eq. (1).

$$\text{Income Distance} = \text{Income} - \text{Mean Income} \tag{1}$$

5.4.4 Party Polarisation

Party polarisation is obtained using the Comparative Manifesto Project (CMP) dataset (Volkens et al., 2021). The CMP is one of the most widely-used datasets that measure party positions, consisting of hand-coded estimations for 54 policy areas of party manifestos on 51 countries.[29] Party positions on a wide array of issues are measured by human coders carrying out content analysis of 'quasi-sentences' based on a common pre-established classification

[29] The analysis includes the following countries: Albania, Armenia, Australia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, North Macedonia, Mexico, Moldova, Montenegro, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom and the United States.

scheme. For each party in each election, the CMP offers the frequency of rhetoric on specific political issues, reflecting the extent to which parties are dedicated to that position.

Assessments of the CMP suggest that it has high validity as a measure of party positions. Evans and De Graaf (2013) offer a comprehensive assessment of the CMP, outlining is main advantages, which can be summarised as (1) objectivity (measures are based on party manifestos); (2) accuracy (estimates measure preferences rather than party behaviour); (3) comparability (measures are based on the same classification scheme across countries and time); and (4) validity (Budge, et al., 1987; 2001; Budge & Pennings, 2007; Volkens, 2009). More narrow assessment of the economic items from the CMP also suggest high validity as a dimension (Horn et al., 2017). This has also been the case with items on immigration, for which Carvalho and Ruedin (2020) find high consistency compared to expert surveys. Some scholars have critiqued that the CMP data is better at determining the salience of issues than party positions on the issues (Benoit & Laver, 2006). This is not too concerning for the purpose of this article, since it is focused on the salience of issues rather than the position of specific parties. For this, the CMP is uniquely suited, as "the main information" obtained from their data is "the relative emphasis parties give to the different messages they wish to transmit to electors" (Klingemann et al. 2006, p. 116).

The data from the CMP is used to estimate economic/cultural polarisation among political parties as a proxy for the extent to which they display contrasting positions to the electorate. Following the theoretical mechanism explained previously, when parties display more polarised economic positions, this will activate economic issues among the public, thus enhancing their self-interest regarding redistributive preferences. The calculation of party polarisation consists of two steps. First, the positions of parties are measured based on various items relating to economic and cultural issues.[30] Economic items include items on the following policy areas: free market, market regulation, economic planning, controlled economy, economic orthodoxy, equality and welfare state expansion. Cultural items include the following: traditional morality, multiculturalism, underprivileged minority groups, freedom and human rights, law and order, prioritizing economic growth, environmental protection, and technology and infrastructure. Other studies have constructed similar scales for parties' economic positions with the CMP database (e.g., Pontusson & Rueda, 2010; Tavits & Potter, 2015; Loxbo et al., 2019; Polacko, 2022). Second, polarisation measure is calculated using the index proposed by Dalton (2008) to the economic and cultural positions of each party in a respective election year, as shown in Eq. 3: v_i represents the vote share of party i, and γ_i represents a party's position across an ideological spectrum (i.e., economic and cultural).[31] Dalton's polarisation index is commonly used to measure party system polarisation (Han, 2015;

[30] The items are summed up (or subtracted, depending on its orientation), and, in order to scale them from 0 to 10, the sum is divided by 20 and added 5, given that the items are scaled from 0 to 100. The formula used to calculate the economic position of political parties is as follows:

$$EP = 5 + (\text{per401} + \text{per414} - \text{per403} - \text{per404} - \text{per412} - \text{per503} - \text{per504})/20$$

Figures A5.1–A5.6 displays the distributions and scatterplots of parties' economic and cultural positions, and aggregate levels of economic and cultural polarization.

[31] In order to make the distribution of party polarization more normal, the Dalton polarization index is square rooted again.

Fenzl, 2018; Gunderson, 2019; Polacko, 2022), and one of its main advantages is that it weighs parties by vote share, so it avoids bias from small parties with extreme positions.

$$P = \sqrt[4]{\sum v_i * \left(\frac{\gamma_i - \bar{\gamma}}{5}\right)^2} \quad (4)$$

5.4.5 Controls

Various socio-demographic measures are used as controls in the analyses due to the possible endogeneity they might create between income and preferences for redistribution: *religiosity*, *gender* and *age*. A previous study of WVS data showed that support for redistribution is associated with older and female respondents (Alesina & Giuliano, 2011). Moreover, religiosity has been linked to less support for redistribution in numerous studies (Guiso, Sapienza, & Zingales, 2003; Brammer, Williams, & Zinkin, 2007; Renneboog & Spaenjers, 2012). The IVS includes questions for these variables. Gender (Item X001) is coded as a categorical variable: Male and Female. Age (Item X003) is coded as a continuous variable. Religious attendance (Item F028) is coded as the reverse of the 8-point scale from the IVS (more indicating higher religiosity).

The analysis also controls for income inequality to address the possibility of endogeneity. In other words, party positions can cause changes in inequality, which can in turn affect levels of self-interest. In theory, if people are self-interested, redistributive preferences should be determined by income distance, independently of inequality, because that is what determines the net utility of income equalisation. Yet inequality does increase support for redistribution (Kenworthy & Pontusson, 2005; Dion & Birchfield 2010; Mérola & Helgason 2016; Schmidt-Catran 2016; Sealey 2018; Rueda 2018; Rueda & Stegmueller 2019, pp. 109-114), implying that inequality enhances self-interest among the poor and altruism among the rich. On this latter point, many scholars have noted that the rich view redistribution as a 'luxury good' they are more open to paying for as they become more affluent (Durr 1993; Stevenson 2001; Rapoport & Vidal 2007; Rueda 2018; Mérola & Helgason 2016). This view is summarised by Rapoport and Vidal (2007, p. 1231), who write that "once individuals have satisfied their own physiological constraint in the course of economic development, they devote resources to shaping their altruistic preferences, increasing their social degree of altruism above its natural level". Consistent with this, studies have found that inequality increases support for redistribution among the rich (Dimick et al., 2018; Rueda & Stegmueller, 2019). Income inequality is measured using the Gini coefficient, which is also obtained from the WIID dataset.

5.5 Analysis

The main analysis centres on a series of ordinary least squares regression models with mixed-effects predicting individuals' support for redistribution. The models assess the independent effects of each component while controlling for confounding variables. Since the data has a

multilevel structure (individual respondents are nested in country-year surveys nested in countries), the analyses use mixed-effects models containing both fixed and random effects to address potential complications (clustering, nonconstant variance, underestimation of standard errors, etc.). This type of model has been proposed for studies of pooled cross-sectional time-series datasets (Bell, Fairbrother, & Jones, 2019) and has been employed in similar studies (Fairbrother, 2013; 2016; Rueda, 2018; Schmidt-Catran, 2016; Sealey, 2018).

The models include random effects for country. This implies that the effects of country are drawn from a common normal distribution with estimated variance. The random effects include random intercepts and random slopes for the effects of the explanatory variable (i.e., income distance). Random intercepts capture systemic differences in attitudes between countries and country-years. A country's region and the majority religion influence public views on social policies (Dion & Birchfield, 2010; Andersen et al., 2021). Cultural attitudes towards fairness and equality also play an important role. People are less likely to support redistribution when they believe that income disparities are meritocratically deserved (Trump, 2018; Mijs, 2021). This is explained by system justification, the "process by which existing social arrangements are legitimized, even at the expense of personal and group interest" (Jost & Banaji 1994, p. 2). People develop beliefs that justify the system they encounter because it serves a psychologically palliative function. Second, random slopes capture systemic differences in the relation between attitudes and income distance. Historical background can also be a potential source of endogeneity between public opinion and social policy. For example, countries with communist legacies have been associated with economic stagnation (Benjamin & Kautsky, 1968; Crafts & Toniolo, 2010; Harrison, 2012) and weaker economic-based political cleavages (Gijsberts & Nieuwbeerta, 2000; Rohrschneider & Whitefield, 2009; Saarts, 2016). Including random effects for country and country-year accounts for potential sources of endogeneity such as these. In essence, the models attempt to explain variance in over-time patterns in economic self-interest within countries based on party polarisation.

5.6 Results

I begin by presenting descriptive evidence for the relationship between individual income position and their redistributive preferences. As expected, the correlations in *Table 5.1* show that income distance has a negative correlation with support for redistribution (-0.11***), meaning that the higher respondents' incomes are vis-à-vis the mean, the less supportive they are of equalizing incomes. However, the correlation coefficient is not very high, suggesting that this relationship could be non-linear and/or be conditioned by other factors. *Figure 5.1* shows a generalized additive model for support for redistribution based on income distance using ranges between the 1st to the 99th percentiles. The graph shows that the poor are more sensitive to income distance than the rich. As the income distance drops from zero to -$40,000, support increases 1.1 points (5.1 to 6.2). In contrast, as the income distance rises to +$80,000, support oscillates between 5.1 and 4.8.

Table 5.1. Means, standard deviations and correlations of variables.

Variable	*Mean*	*SD*	*1*	*2*	*3*	*4*

1	Support for Redistribution	5.40	2.93				
2	Income Distance ($10,000)	-0.03	2.14	-0.11***			
3	Economic Party Polarization	0.25	0.07	0.00	-0.01***		
4	Cultural Party Polarization	0.26	0.08	0.03***	-0.01***	0.39***	
5	Gini Index	35.24	9.33	0.00	0.03***	-0.38***	-0.35***
6	Year (1980 = 0)	23.31	10.27	0.04***	0.01***	0.01***	0.18***
7	Male	0.47	0.50	-0.03***	0.06***	0.00*	0.01***
8	Age	45.24	17.21	0.04***	-0.12***	0.09***	0.09***
9	Religious Attendance	3.94	2.45	-0.01***	-0.01***	-0.18***	-0.13***

	Variable	***Mean***	***SD***	***5***	***6***	***7***	***8***
1	Support for Redistribution	5.4	2.93				
2	Income Distance ($10,000)	-0.03	2.14				
3	Economic Party Polarization	0.2	0.07				
4	Cultural Party Polarization	0.3	0.08				
5	Gini Index	35.2	9.33				
6	Year (1980 = 0)	23	10.27	0.07***			
7	Male	0.5	0.50	0.01***	-0.02***		
8	Age	45.2	17.21	-0.13***	0.14***	-0.02***	
9	Religious Attendance	3.9	2.45	0.22***	-0.03***	-0.08***	0.07***

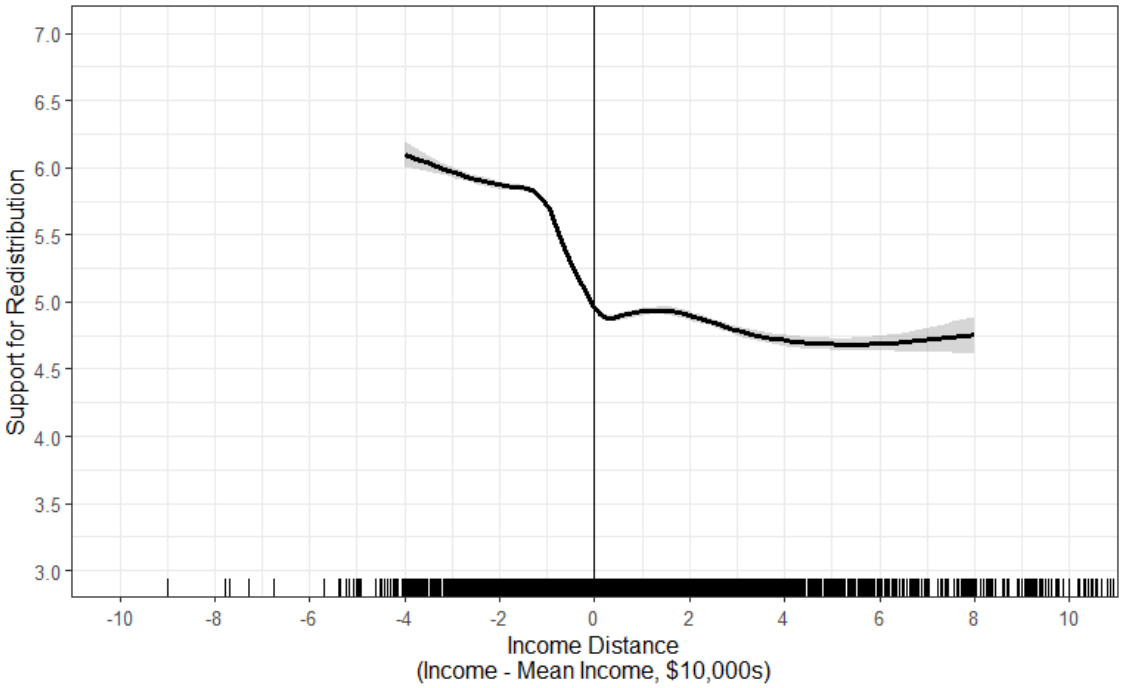


Figure 5.1. General additive model of support for redistribution in the IVS based on income distance.

Figures 5.2 & 5.3 display pooled OLS time trends of party polarisation on economic and cultural issues. These provide preliminary evidence of the declining salience of economic issues due to party convergence and the rising salience of cultural ones. Although the data availability varies by year between countries, the trend shows that parties have generally become less polarised on economic issues and more polarised over culture in recent decades.[32] Most cases with long-term data available have seen considerable decline in economic polarisation such as Australia, Ireland, Norway, Sweden and the United Kingdom.[33] Still, some other countries have experienced smaller declines and even an uptick in economic polarisation, like Switzerland and Japan.[34] The country-level trends in polarisation hint towards a floor effect, given that many of the countries that start off with some of the lowest levels of polarisation experienced the highest rates of increase observed, like Cyprus and Moldova. Meanwhile, cultural polarisation has generally increased in most countries, most notably in Australia, Belgium, Denmark, Switzerland, Mexico, the Netherlands, Sweden, New Zealand, Turkey and the United States.

[32] Figures A5.7–A5.10 show party polarization trends for each country separately.
[33] In Sweden, economic convergence is mainly driven by the centre-right People's Party (later the Moderate Party). In the UK, this is driven more by the Labour Party, although the Conservative Party also displayed a moderation on economic matters after Thatcher. In Australia, this is driven more by the centre-right Liberal Party. In Ireland, all the mainstream parties displayed notable moderation: Fine Gael, Fianna Fail and the Labour Party. In Norway, convergence has been driven more from the right by the Conservative Party and the Progress Party.
[34] In Switzerland, the growing economic polarization is mainly driven by the leftward shift of the Social Democrats and rightward shift of the Swiss People's Party. In Japan, the rightward shift of the Liberal Democratic Party has been a primary driver in increasing polarization.

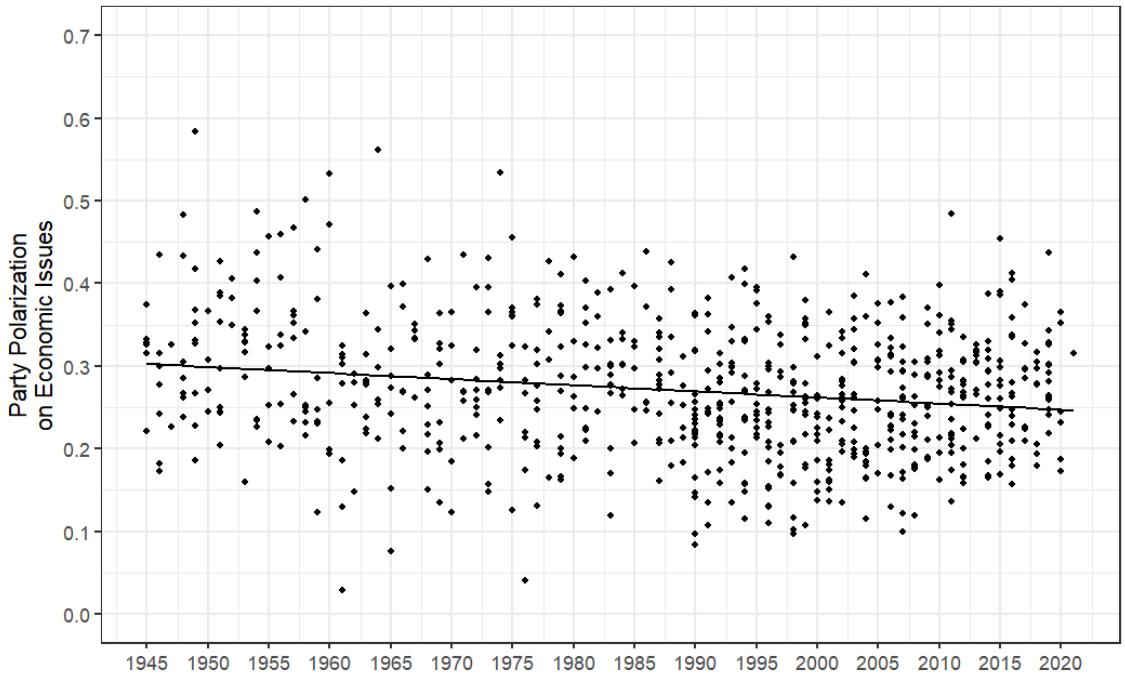


Figure 5.2. Pooled OLS trend line of economic polarization from CMP.

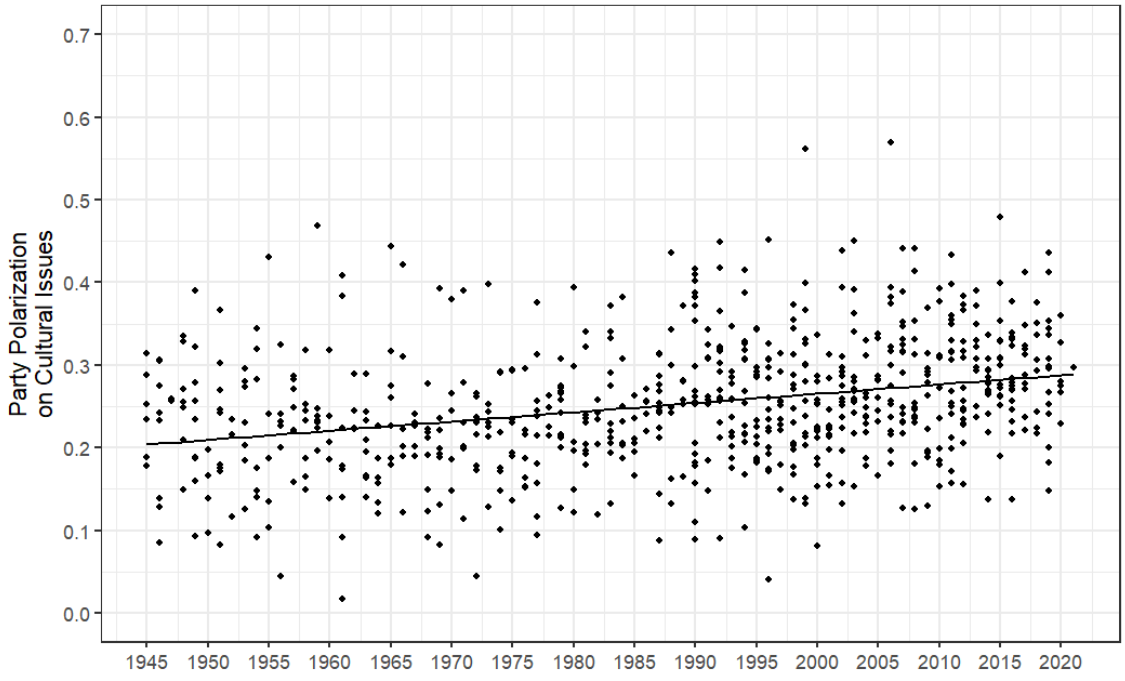


Figure 5.3. Pooled OLS trend line of cultural polarization from CMP.

This section reports the results from the mixed-effects models predicting individual-level support for redistribution. *Tables 5.2-5.4* show the standardized coefficients for the sample at-large, the poor (income > mean) and the rich (income < mean), respectively.[35]

[35] Appendix Tables A5.1–A5.3 show the unstandardized coefficients. Appendix Tables A5.4–A5.9 show results for subsamples of Post-Communist and Western countries to examine the potential impact of historical legacy.

Model 1 includes income distance, Model 2 adds the interaction with Gini, Model 3 adds the interaction with economic polarisation, and Model 4 adds the interaction with cultural polarisation.

Table 5.2. Standardized coefficients of mixed-effects models predicting support for redistribution. Sample at-large.

	Sample: All			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.401***	5.386***	5.389***	5.398***
	(0.090)	(0.090)	(0.089)	(0.091)
Year (1980 = 0)	0.265***	0.266***	0.283***	0.308***
	(0.013)	(0.013)	(0.013)	(0.013)
Male	-0.212***	-0.211***	-0.211***	-0.211***
	(0.010)	(0.010)	(0.010)	(0.010)
Age	0.185***	0.185***	0.184***	0.184***
	(0.011)	(0.011)	(0.011)	(0.011)
Religious Attendance	-0.032**	-0.035**	-0.036**	-0.039***
	(0.012)	(0.012)	(0.012)	(0.012)
Income Distance	-0.835***	-0.837***	-0.837***	-0.840***
	(0.077)	(0.097)	(0.097)	(0.089)
Gini		-0.317***	-0.314***	-0.291***
		(0.039)	(0.039)	(0.039)
Economic Polarization			-0.138***	-0.104***
			(0.018)	(0.018)
Cultural Polarization				-0.210***
				(0.016)
Gini x Income Distance		0.756***	0.750***	0.697***
		(0.100)	(0.100)	(0.099)
Economic Polarization x Income Distance			0.022	-0.022
			(0.030)	(0.032)
Cultural Polarization x Income Distance				0.164***
				(0.035)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	51	51	51	51
Surveys	252	252	252	252
Respondents	293,771	293,771	293,771	293,771
Log-Likelihood	-735,916	-735,860	-735,835	-735,739
Chi-Squared	3770.1***	115.6***	54.3***	197.5***

The interaction of income distance and economic polarization for the poor (the main result) is in the expected negative direction in both cases, meaning that it makes the poor more self-interested. Although the effect is more significant for Western countries, this may be due to the different sample size and the number of surveys per country.

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1 the baseline model only includes controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table 5.3. Standardized coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes below the mean.

	Sample: Poor (Income < Mean)			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.684***	5.681***	5.688***	5.691***
	(0.104)	(0.104)	(0.104)	(0.107)
Year (1980 = 0)	0.147***	0.128***	0.142***	0.154***
	(0.018)	(0.018)	(0.018)	(0.018)
Male	-0.182***	-0.182***	-0.182***	-0.182***
	(0.014)	(0.014)	(0.014)	(0.014)
Age	0.185***	0.187***	0.187***	0.188***
	(0.014)	(0.014)	(0.014)	(0.014)
Religious Attendance	-0.045**	-0.049**	-0.048**	-0.049***
	(0.015)	(0.015)	(0.015)	(0.015)
Income Distance	-0.395***	-0.483***	-0.469***	-0.436***
	(0.093)	(0.125)	(0.127)	(0.123)
Gini		-0.135*	-0.140*	-0.118
		(0.062)	(0.062)	(0.062)
Economic Polarization			-0.265***	-0.232***
			(0.024)	(0.024)
Cultural Polarization				-0.247***
				(0.021)
Gini x Income Distance		-1.195***	-1.199***	-1.223***
		(0.152)	(0.153)	(0.152)
Economic Polarization x Income Distance			-0.347***	-0.285***
			(0.041)	(0.043)
Cultural Polarization x Income Distance				-0.300***
				(0.045)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	51	51	51	51
Surveys	252	252	252	252
Respondents	182,232	182,232	182,232	182,232
Log-Likelihood	-460,353	-460,303	-460,223	-460,125
Chi-Squared	828.6***	104.9***	167.5***	202.2***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as

incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1 the baseline model only includes controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table 5.4. Standardized coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes above the mean.

	Sample: Rich (Income > Mean)			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	4.942***	4.935***	4.935***	4.939***
	(0.091)	(0.091)	(0.091)	(0.093)
Year (1980 = 0)	0.442***	0.446***	0.449***	0.457***
	(0.021)	(0.021)	(0.021)	(0.021)
Male	-0.233***	-0.232***	-0.232***	-0.233***
	(0.016)	(0.016)	(0.016)	(0.016)
Age	0.096***	0.096***	0.096***	0.097***
	(0.017)	(0.017)	(0.017)	(0.017)
Religious Attendance	-0.010	-0.011	-0.012	-0.015
	(0.018)	(0.018)	(0.018)	(0.018)
Income Distance	-0.573***	-0.581***	-0.581***	-0.599***
	(0.078)	(0.090)	(0.089)	(0.089)
Gini		-0.105	-0.105	-0.094
		(0.060)	(0.060)	(0.060)
Economic Polarization			-0.030	-0.004
			(0.027)	(0.028)
Cultural Polarization				-0.163***
				(0.024)
Gini x Income Distance		0.733***	0.738***	0.756***
		(0.126)	(0.125)	(0.125)
Economic Polarization x Income Distance			0.045	0.006
			(0.045)	(0.047)
Cultural Polarization x Income Distance				0.195***
				(0.055)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	51	51	51	51
Surveys	252	252	252	252
Respondents	111,539	111,539	111,539	111,539
Log-Likelihood	-274,395	-274,378	-274,381	-274,355
Chi-Squared	752.7***	39.2***	3.0	57.4***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the

change in log-likelihood from the previous model (For Model 1 the baseline model only includes controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

The basic principle of self-interest, outlined in Hypothesis 1, is confirmed by Model 1. Income distance has a significant negative effect on support for redistribution for the sample at-large ($\beta = -0.835$, $p < 0.001$). An +$10,000 increase in income compared to the mean is associated with an estimated 0.20-point drop in support for redistribution. As shown in Model 1 in Tables 3 & 4, income distance has a significant negative effect for both the poor ($\beta = -0.395$, $p < 0.001$) and the rich ($\beta = -0.573$, $p < 0.001$). The non-standardized coefficients show that the poor actually display more self-interest in their preferences than the rich, with the marginal effect of income distance being -0.22 and -0.12, respectively.

Meanwhile, Model 2 indicates that inequality has an asymmetric moderating effect on self-interest, having a significant negative interaction for the poor ($\beta = -1.195$, $p < 0.001$) and a significant positive interaction for the rich ($\beta = 0.733$, $p < 0.001$). This suggests that inequality enhances the economic self-interest of the poor while making the rich more altruistic.

The moderating effect of economic polarisation displays a similar asymmetry. Model 3 shows that economic polarisation has a significant negative interacted effect for the poor ($\beta = -0.347$, $p < 0.001$), but not for the sample at-large ($\beta = 0.022$, $p > 0.05$) or for the rich ($\beta = 0.045$, $p > 0.05$). To illustrate these effects, the marginal effect of income distance is estimated by setting economic polarisation to chosen values while holding all other variables to the mean. *Figure 4* presents the marginal effect of $10,000 in income distance for the poor and the rich.[36] For the poor, economic polarisation enhances the estimated marginal effect of income distance, dropping from -0.10 (non-significant) to -0.46. Meanwhile, for the rich, economic polarisation does not moderate the marginal effect, which remains at -0.12.

[36] The confidence interval is smaller for the rich than for the poor because there is more variance in income distance for the latter, since 99% of observations range from -$40,000 to +$80,000.

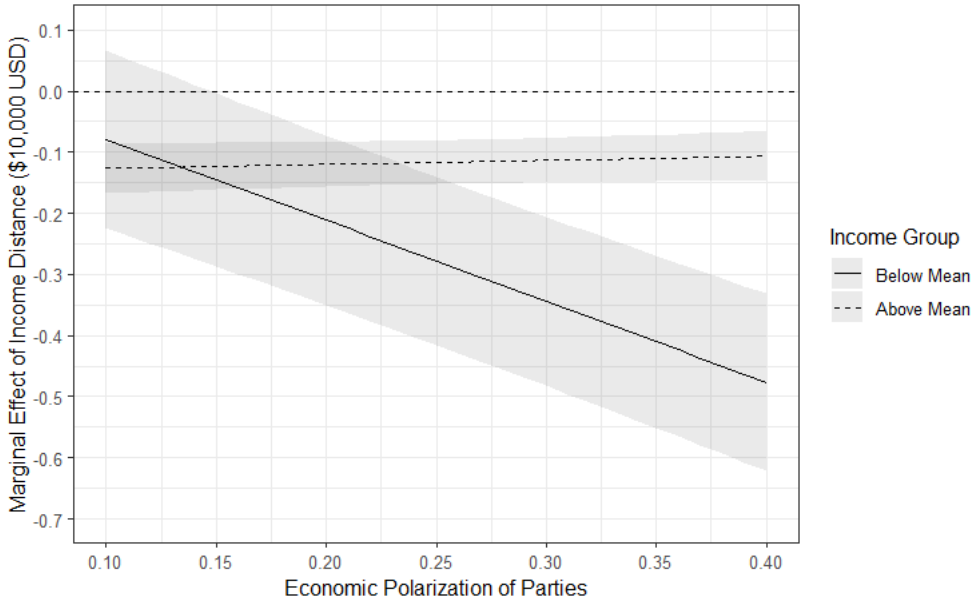


Figure 5.4. Estimated marginal effect of income distance based on economic polarization (Model 3).

The moderating effect of cultural polarisation, included in Model 4, is shown to be significantly positive for the sample at-large ($\beta = 0.164$, $p < 0.001$) and the rich ($\beta = 0.195$, $p < 0.001$), but significantly negative for the poor ($\beta = -0.300$, $p < 0.001$). This indicates that cultural polarisation enhances self-interest for the poor, but weakens it for the rich. Again, Figure 5 presents the marginal effect of income distance depending on cultural polarisation. For the poor, cultural polarisation enhances that marginal effect from -0.14 to -0.37, while for the rich, cultural polarisation weakens the marginal effect from -0.16 to -0.09.

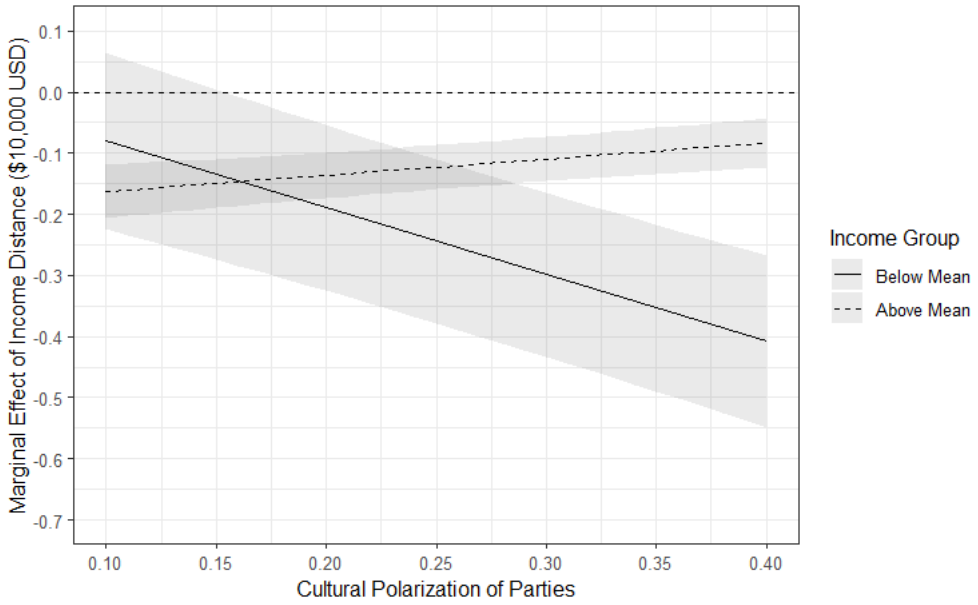


Figure 5.5. Estimated marginal effect of income distance based on cultural polarization (Model 4).

To summarise the findings, the models in *Tables 2-4* provide support for the main hypothesis suggesting that economic polarisation among parties moderates self-interest, but this moderating effect varies depending on whether respondents are below or above the mean

income, and thus whether they can expect to gain or lose from redistribution. Economic polarisation appears to enhance self-interest for the poor but not for the rich. Meanwhile, cultural polarisation also enhances self-interest for the poor, and in fact weakens it for the rich.

5.7 Discussion

This article seeks to investigate the role that political parties have in activating (or de-activating) economic issues among the public. Previous research on preferences for redistribution has mainly focused on macro-economic factors such as development or inequality as moderators of support for redistribution. This, however, overlooks the active role that parties have in setting the agenda. An extensive literature has examined how political parties shape public opinion, particularly how it affects voting behaviour and aggregate attitudinal polarisation. This article contributes to these literatures by examining the role that political parties have in activating people's economic self-interest. The findings are consistent with previous research that has underscored the influence that political leaders have over public opinion.

The results replicate the common relationship between income position and support for redistribution, which reflects economic self-interest, and examine the moderating effect of party polarisation. When political parties are more polarised over economic issues, respondents below the mean income display more economic self-interest. Economic polarisation is associated with more self-interest for the poor, but not for the rich. This suggests that there is an asymmetry in the role that political leaders have over economic attitudes: they have more capacity to activate or de-activate left-wing economic attitudes. Further research may confirm the replicability of this asymmetry and its underlying cause. One possible explanation may be due to the contrasting dynamics that exist between left-wing and right-wing politics: mobilising public opinion around an active policy (redistribution) may be more difficult than for a passive one (not redistributing more). Another possible explanation is that the poor are more susceptible to the signals from political parties because they have less time and resources to be follow closely the details surrounding the income distribution, and levels of redistribution.

The article also explores the role that cultural polarisation plays over economic self-interest, and whether it can supplant the economic cleavage or reinforce it. Here again, there appears to be an asymmetry: cultural polarisation enhances self-interest for the poor and weakens it for the rich. This goes against the common notion that cultural issues serve to demobilize economically left-wing movements. Based on these results, cultural polarisation should not act as a wedge against left-wing politics, but rather appears to help facilitate it.

Although the effect shown in the results are robust, the empirical analyses have a number of limitations that should be noted here. First, although the generalizability of the findings is strengthened by a sample that includes 51 countries varying across cultures and levels of development, the robustness of the results is limited by the frequency of the surveys and the availability of party data. Future research could make use of datasets that survey countries more frequently to obtain more robust results, even if they are more limited in the scope of their sample, like the European Social Survey.

Second, and relatedly, the reliance of observational data limits the ability to develop a full causal identification strategy. To address the problem of reciprocal causality (i.e., economic self-interest driving party polarisation), the models accounted for country-level random effects and the effect of Gini. Still, it is possible that the effects found here do not only reflect the influence of party polarization public opinion, but that they also reflect changes in public opinion that parties respond to. In other words, political parties may anticipate changes in public opinion that go on to influence their positions. Other causal identification strategies estimating lagged effects with larger datasets could account for potential endogeneity between economic self-interest, party polarisation and income inequality.

Third, although the models account for variations in economic self-interest based on country differences and income inequality, there may be more systematic differences indicating that they have a moderating effect. In other words, factors such as culture and inequality may determine the latent potential for parties to activate economic self-interest.

Fourth, the effect of party polarisation does not tell us about the effect that a particular party may have. In other words, the analysis cannot determine whether changes in economic self-interest are driven by parties on the left or right. This presents an interesting avenue for future research to assess whose self-interest gets activated (rich/poor) and why (parties shifting left/right). Additionally, the party (or coalition) in government may play an outsized role in determining redistributive preferences, given that it is more visible to the public and, crucially, controls the levers of power, affecting public policy. For example, people may generally be less supportive of redistribution when there is a left-wing party in government, since they are likely to already be willing to enact redistribution to the extent that they can.

Finally, this article does not delve into the question of economic voting, which is the next relevant step in the causal chain. Assuming that more materially self-interested voters are more likely to vote according to their economic conditions, this would imply that party polarisation drives economic voting. This is an empirical question that future research should address. If so, it would imply that parties can potentially carve out a segment of the electorate by unilaterally mobilizing it based on economic self-interest. This question is especially pertinent to the impact of cultural issues, since they appear to enhance self-interest for the poor, although they might still weaken economic voting by taking away attention from economic issues.

These findings have important implications for the study of polarisation and the salience of economic issues. First, the descriptive evidence presented supports the trend of declining salience of economic issues. Many countries have experienced a decline in economic party polarisation, especially when viewing long-term trends. Still, there are some exceptions that have seen a resurgence, like in Switzerland and Japan. Thus, proclamations that class politics is dead may be premature. Secondly, while political parties are typically viewed as being responsive to public opinion, this article finds evidence that parties play an active agent role in shaping public opinion, showing that party polarisation can strengthen economic self-interest among lower-income earners. Although party polarisation is an aggregate concept, a party that is sizeable enough can unilaterally change it to a large extent by shifting their position.

These findings are consistent with previous studies that have found that the economic cleavage has declined in salience, In line with previous literature on the declining salience of the economic cleavage, and they these findings contribute an explanation based on the often-overlooked role that political parties have in shaping public opinion. The results suggest that political parties have the ability to activate economic self-interest among the poor. This means that party convergence has contributed to the decline of the economic cleavage in advanced democracies, but it also implies that they have the agency to reverse this decline.

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5.9 Appendix

Items of the CMP used to construct the measure of parties' economic positions:

- Free Market Economy (per401): Favourable mentions of the free market and free market capitalism as an economic model. May include favourable references to:
    - Laissez-faire economy;
    - Superiority of individual enterprise over state and control systems;
    - Private property rights;
    - Personal enterprise and initiative;
    - Need for unhampered individual enterprises.
- Market Regulation (per403): Support for policies designed to create a fair and open economic market. May include:
    - Calls for increased consumer protection;
    - Increasing economic competition by preventing monopolies and other actions disrupting the functioning of the market;
    - Defence of small businesses against disruptive powers of big businesses;
    - Social market economy.
- Economic Planning (per404): Favourable mentions of long-standing economic planning by the government. May be:
    - Policy plans, strategies, policy patterns etc.;
    - Of a consultative or indicative nature.
    - Controlled Economy (per412):
    - Support for direct government control of economy. May include, for
    - instance:
    - Control over prices;
    - Introduction of minimum wages.
- Economic Orthodoxy (per414): Need for economically healthy government policy making. May include calls for:
    - Reduction of budget deficits;
    - Retrenchment in crisis;
    - Thrift and savings in the face of economic hardship;
    - Support for traditional economic institutions such as stock market and banking system;
    - Support for strong currency.
- Equality: Positive (per503): Concept of social justice and the need for fair treatment of all people. This may include:
    - Special protection for underprivileged social groups;
    - Removal of class barriers;
    - Need for fair distribution of resources;
    - The end of discrimination (e.g. racial or sexual discrimination).
- Welfare State Expansion (per504): Favourable mentions of need to introduce, maintain or expand any public social service or social security scheme. This includes, for example, government funding of:
    - Health care

  - Child care
  - Elder care and pensions
  - Social housing

Items of the CMP used to construct the measure of parties' cultural positions:

- Traditional Morality: Positive (per603): Favourable mentions of traditional and/or religious moral values. May include:
  - Prohibition, censorship and suppression of immorality and unseemly behaviour;
  - Maintenance and stability of the traditional family as a value;
  - Support for the role of religious institutions in state and society.
- Traditional Morality: Negative (per604): Opposition to traditional and/or religious moral values. May include:
  - Support for divorce, abortion etc.;
  - General support for modern family composition;
  - Calls for the separation of church and state.
- Multiculturalism: Positive (per607): Favourable mentions of cultural diversity and cultural plurality within domestic societies. May include the preservation of autonomy of religious, linguistic heritages within the country including special educational provisions.
- Multiculturalism: Negative (per608): The enforcement or encouragement of cultural integration. Appeals for cultural homogeneity in society.
- Underprivileged Minority Groups (per705): Very general favourable references to underprivileged minorities who are defined neither in economic nor in demographic terms (e.g. the handicapped, homosexuals, immigrants, indigenous).
- Freedom and Human Rights (per201): Favourable mentions of importance of personal freedom and civil rights in the manifesto and other countries. May include mentions of:
  - The right to the freedom of speech, press, assembly etc.;
  - Freedom from state coercion in the political and economic spheres;
  - Freedom from bureaucratic control;
  - The idea of individualism.
- Law and Order: Positive (per605): Favourable mentions of strict law enforcement, and tougher actions against domestic crime. Only refers to the enforcement of the status quo of the manifesto country's law code. May include:
  - Increasing support and resources for the police;
  - Tougher attitudes in courts;
  - Importance of internal security.
- Economic Growth: Positive (per410): The paradigm of economic growth. Includes:
  - General need to encourage or facilitate greater production;
  - Need for the government to take measures to aid economic growth.
- Anti-Growth Economy: Positive (per416): Favourable mentions of anti-growth politics. Rejection of the idea that all growth is good growth. Opposition to growth

that causes environmental or societal harm. Call for sustainable economic development.

- Environmental Protection (per501): General policies in favour of protecting the environment, fighting climate change, and other "green" policies. For instance:
    - General preservation of natural resources;
    - Preservation of countryside, forests, etc.;
    - Protection of national parks;
    - Animal rights.
- Technology and Infrastructure (per411): Positive: Importance of modernisation of industry and updated methods of transport and communication. May include:
    - Importance of science and technological developments in industry;
    - Need for training and research within the economy (This does not imply education in general (see category 506);
    - Calls for public spending on infrastructure such as roads and bridges;
    - Support for public spending on technological infrastructure (e.g.: broadband internet, etc.).

5.10 Appendix Tables

Table A5.1. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Sample at-large.

	Sample: All			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	4.975***	5.549***	5.766***	6.003***
	(0.095)	(0.117)	(0.120)	(0.122)
Year (1980 = 0)	0.013***	0.013***	0.014***	0.015***
	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.212***	-0.211***	-0.211***	-0.211***
	(0.010)	(0.010)	(0.010)	(0.010)
Age	0.005***	0.005***	0.005***	0.005***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Religious Attendance	-0.007**	-0.007**	-0.007**	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)
Income Distance	-0.196***	-0.530***	-0.537***	-0.561***
	(0.018)	(0.049)	(0.050)	(0.049)
Gini		-1.664***	-1.649***	-1.528***
		(0.209)	(0.209)	(0.209)
Economic Polarization			-0.959***	-0.723***
			(0.124)	(0.125)
Cultural Polarization				-1.375***
				(0.103)
Gini x Income Distance		0.948***	0.941***	0.875***
		(0.126)	(0.126)	(0.124)
Economic Polarization x Income Distance			0.036	-0.035
			(0.049)	(0.051)
Cultural Polarization x Income Distance				0.252***
				(0.053)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	51	51	51	51
Surveys	252	252	252	252
Respondents	293,771	293,771	293,771	293,771
Log-Likelihood	-735,925	-735,868	-735,840	-735,742
Chi-Squared	3770.1***	115.6***	54.3***	197.5***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.2. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes below the mean.

	Sample: Poor (Income < Mean)			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.155***	6.704***	7.523***	8.119***
	(0.096)	(0.179)	(0.190)	(0.195)
Year (1980 = 0)	0.007***	0.006***	0.007***	0.008***
	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.182***	-0.182***	-0.182***	-0.182***
	(0.014)	(0.014)	(0.014)	(0.014)
Age	0.005***	0.005***	0.005***	0.005***
	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Religious Attendance	-0.009**	-0.010**	-0.010**	-0.010***
	(0.003)	(0.003)	(0.003)	(0.003)
Income Distance	-0.218***	0.959***	1.298***	1.562***
	(0.051)	(0.166)	(0.170)	(0.171)
Gini		-4.450***	-4.485***	-4.443***
		(0.417)	(0.418)	(0.415)
Economic Polarization			-3.271***	-2.783***
			(0.254)	(0.258)
Cultural Polarization				-2.811***
				(0.212)
Gini x Income Distance		-3.447***	-3.457***	-3.525***
		(0.440)	(0.441)	(0.438)
Economic Polarization x Income Distance			-1.325***	-1.089***
			(0.158)	(0.165)
Cultural Polarization x Income Distance				-1.092***
				(0.165)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	51	51	51	51
Surveys	252	252	252	252
Respondents	182,232	182,232	182,232	182,232
Log-Likelihood	-460,362	-460,309	-460,226	-460,125
Chi-Squared	828.6***	104.9***	167.5***	202.2***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.3. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes above the mean.

	Sample: Rich (Income > Mean)			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	4.642***	5.344***	5.428***	5.745***
	(0.101)	(0.162)	(0.172)	(0.179)
Year (1980 = 0)	0.021***	0.021***	0.021***	0.022***
	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.233***	-0.232***	-0.232***	-0.233***
	(0.016)	(0.016)	(0.016)	(0.016)
Age	0.003***	0.003***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Religious Attendance	-0.002	-0.002	-0.002	-0.003
	(0.004)	(0.004)	(0.004)	(0.004)
Income Distance	-0.118***	-0.415***	-0.433***	-0.499***
	(0.016)	(0.054)	(0.057)	(0.059)
Gini		-2.046***	-2.061***	-2.034***
		(0.378)	(0.378)	(0.378)
Economic Polarization			-0.325	-0.044
			(0.229)	(0.232)
Cultural Polarization				-1.527***
				(0.195)
Gini x Income Distance		0.851***	0.857***	0.878***
		(0.146)	(0.146)	(0.145)
Economic Polarization x Income Distance			0.066	0.009
			(0.065)	(0.068)
Cultural Polarization x Income Distance				0.265***
				(0.075)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	51	51	51	51
Surveys	252	252	252	252
Respondents	111,539	111,539	111,539	111,539
Log-Likelihood	-274,405	-274,385	-274,387	-274,358
Chi-Squared	752.7***	39.2***	3.0	57.4***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.4. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of Post-Communist countries.

	Sample: All & Post-Communist			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.236***	5.268***	5.285***	5.297***
	(0.153)	(0.137)	(0.139)	(0.143)
Year (1980 = 0)	0.329***	0.294***	0.311***	0.238***
	(0.019)	(0.019)	(0.019)	(0.020)
Male	-0.128***	-0.131***	-0.131***	-0.131***
	(0.017)	(0.017)	(0.017)	(0.017)
Age	0.350***	0.358***	0.355***	0.354***
	(0.018)	(0.018)	(0.018)	(0.018)
Religious Attendance	0.196***	0.186***	0.185***	0.181***
	(0.019)	(0.019)	(0.019)	(0.019)
Income Distance	-0.833**	-0.853**	-0.861**	-0.863**
	(0.264)	(0.268)	(0.273)	(0.273)
Gini		-0.536***	-0.539***	-0.532***
		(0.033)	(0.033)	(0.033)
Economic Polarization			-0.329***	-0.319***
			(0.022)	(0.022)
Cultural Polarization				-0.281***
				(0.021)
Gini x Income Distance		0.223***	0.200**	0.184**
		(0.066)	(0.066)	(0.067)
Economic Polarization x Income Distance			0.132**	0.130**
			(0.045)	(0.045)
Cultural Polarization x Income Distance				0.053
				(0.048)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	22	22	22	22
Surveys	104	104	104	104
Respondents	122,057	122,057	122,057	122,057
Log-Likelihood	-308,409	-308,275	-308,168	-308,084
Chi-Squared	1105.3***	274.9***	222***	172.9***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Post-Communist countries: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Georgia, Hungary, Latvia, Lithuania, North Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine. Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.5. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes below the mean in Post-Communist countries.

	Sample: Poor & Post-Communist			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.500***	5.518***	5.547***	5.562***
	(0.172)	(0.159)	(0.165)	(0.167)
Year (1980 = 0)	0.280***	0.222***	0.241***	0.135***
	(0.027)	(0.027)	(0.027)	(0.028)
Male	-0.135***	-0.135***	-0.135***	-0.135***
	(0.022)	(0.022)	(0.022)	(0.022)
Age	0.346***	0.350***	0.344***	0.340***
	(0.023)	(0.023)	(0.023)	(0.023)
Religious Attendance	0.167***	0.155***	0.153***	0.146***
	(0.024)	(0.024)	(0.024)	(0.024)
Income Distance	-0.198	-0.191	-0.188	-0.183
	(0.125)	(0.153)	(0.171)	(0.169)
Gini		-0.555***	-0.538***	-0.565***
		(0.046)	(0.046)	(0.046)
Economic Polarization			-0.509***	-0.495***
			(0.030)	(0.030)
Cultural Polarization				-0.318***
				(0.028)
Gini x Income Distance		-0.513***	-0.654***	-0.647***
		(0.105)	(0.106)	(0.108)
Economic Polarization x Income Distance			-0.118	-0.105
			(0.061)	(0.061)
Cultural Polarization x Income Distance				-0.279***
				(0.065)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	22	22	22	22
Surveys	104	104	104	104
Respondents	75,437	75,437	75,437	75,437
Log-Likelihood	-191,789	-191,694	-191,552	-191,478
Chi-Squared	430.8***	197.8***	293.3***	156.2***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Post-Communist countries: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Georgia, Hungary, Latvia, Lithuania, North Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine. Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.6. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes above the mean in Post-Communist countries.

	Sample: Rich & Post-Communist			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	4.791***	4.818***	4.824***	4.832***
	(0.149)	(0.134)	(0.133)	(0.138)
Year (1980 = 0)	0.471***	0.451***	0.460***	0.382***
	(0.030)	(0.031)	(0.031)	(0.032)
Male	-0.098***	-0.100***	-0.100***	-0.100***
	(0.026)	(0.026)	(0.026)	(0.026)
Age	0.226***	0.231***	0.230***	0.229***
	(0.027)	(0.027)	(0.027)	(0.027)
Religious Attendance	0.230***	0.226***	0.226***	0.220***
	(0.029)	(0.029)	(0.029)	(0.029)
Income Distance	-0.413***	-0.408***	-0.412***	-0.423***
	(0.109)	(0.110)	(0.112)	(0.114)
Gini		-0.375***	-0.379***	-0.392***
		(0.052)	(0.052)	(0.052)
Economic Polarization			-0.133***	-0.117***
			(0.035)	(0.035)
Cultural Polarization				-0.235***
				(0.034)
Gini x Income Distance		0.095	0.121	0.090
		(0.088)	(0.088)	(0.089)
Economic Polarization x Income Distance			0.003	-0.018
			(0.072)	(0.072)
Cultural Polarization x Income Distance				0.359***
				(0.079)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	22	22	22	22
Surveys	104	104	104	104
Respondents	46,620	46,620	46,620	46,620
Log-Likelihood	-116,102	-116,079	-116,076	-116,041
Chi-Squared	219.6***	52.2***	13.7***	76.9***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Post-Communist countries: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Georgia, Hungary, Latvia, Lithuania, North Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine. Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.7. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents in Western countries.

	Sample: All & Western			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.548***	5.647***	5.647***	5.647***
	(0.101)	(0.127)	(0.126)	(0.127)
Year (1980 = 0)	0.191***	0.154***	0.147***	0.174***
	(0.017)	(0.017)	(0.018)	(0.020)
Male	-0.251***	-0.252***	-0.252***	-0.252***
	(0.013)	(0.013)	(0.013)	(0.013)
Age	0.077***	0.076***	0.076***	0.075***
	(0.014)	(0.014)	(0.014)	(0.014)
Religious Attendance	-0.165***	-0.163***	-0.163***	-0.163***
	(0.015)	(0.015)	(0.015)	(0.015)
Income Distance	-0.754***	-0.682***	-0.683***	-0.714***
	(0.051)	(0.088)	(0.087)	(0.078)
Gini		1.044***	1.043***	1.029***
		(0.079)	(0.079)	(0.079)
Economic Polarization			0.045	0.058*
			(0.024)	(0.025)
Cultural Polarization				-0.073**
				(0.024)
Gini x Income Distance		0.968***	0.961***	0.883***
		(0.138)	(0.137)	(0.131)
Economic Polarization x Income Distance			0.004	-0.070
			(0.041)	(0.044)
Cultural Polarization x Income Distance				0.237***
				(0.045)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	29	29	29	29
Surveys	148	148	148	148
Respondents	171,714	171,714	171,714	171,714
Log-Likelihood	-426,936	-426,841	-426,845	-426,831
Chi-Squared	2679.9***	191.6***	2.8	30.9***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.8. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes below the mean in Western countries.

	Sample: Poor & Western			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.804***	5.912***	5.912***	5.913***
	(0.110)	(0.126)	(0.125)	(0.128)
Year (1980 = 0)	0.046*	0.020	0.011	0.060*
	(0.023)	(0.023)	(0.024)	(0.026)
Male	-0.198***	-0.200***	-0.200***	-0.200***
	(0.017)	(0.017)	(0.017)	(0.017)
Age	0.080***	0.084***	0.085***	0.087***
	(0.019)	(0.019)	(0.019)	(0.019)
Religious Attendance	-0.169***	-0.168***	-0.167***	-0.164***
	(0.019)	(0.019)	(0.019)	(0.019)
Income Distance	-0.374***	-0.396***	-0.388***	-0.372***
	(0.062)	(0.064)	(0.065)	(0.066)
Gini		0.950***	0.953***	0.954***
		(0.108)	(0.108)	(0.108)
Economic Polarization			0.020	0.039
			(0.032)	(0.033)
Cultural Polarization				-0.133***
				(0.032)
Gini x Income Distance		-0.200	-0.226	-0.259
		(0.150)	(0.153)	(0.154)
Economic Polarization x Income Distance			-0.162**	-0.087
			(0.054)	(0.059)
Cultural Polarization x Income Distance				-0.211***
				(0.060)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	29	29	29	29
Surveys	148	148	148	148
Respondents	106,795	106,795	106,795	106,795
Log-Likelihood	-268,294	-268,257	-268,257	-268,246
Chi-Squared	401.1***	78.4***	6.5***	27.6***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.9. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Subsample of respondents with incomes below the mean in Western countries.

	Sample: Rich & Western			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Fixed Effects				
Constant	5.094***	5.150***	5.151***	5.150***
	(0.100)	(0.129)	(0.128)	(0.128)
Year (1980 = 0)	0.388***	0.348***	0.334***	0.331***
	(0.027)	(0.028)	(0.028)	(0.031)
Male	-0.314***	-0.315***	-0.316***	-0.316***
	(0.021)	(0.021)	(0.021)	(0.021)
Age	0.013	0.014	0.013	0.013
	(0.022)	(0.022)	(0.022)	(0.022)
Religious Attendance	-0.153***	-0.153***	-0.152***	-0.152***
	(0.023)	(0.023)	(0.023)	(0.023)
Income Distance	-0.583***	-0.569***	-0.568***	-0.574***
	(0.067)	(0.077)	(0.077)	(0.076)
Gini		0.888***	0.889***	0.889***
		(0.117)	(0.117)	(0.117)
Economic Polarization			0.074*	0.072
			(0.037)	(0.037)
Cultural Polarization				0.009
				(0.037)
Gini x Income Distance		0.742***	0.742***	0.740***
		(0.139)	(0.141)	(0.140)
Economic Polarization x Income Distance			0.030	0.014
			(0.059)	(0.063)
Cultural Polarization x Income Distance				0.055
				(0.071)
Random Effects				
Country	X	X	X	X
Country x Income Distance	X	X	X	X
Observations				
Countries	29	29	29	29
Surveys	148	148	148	148
Respondents	64,919	64,919	64,919	64,919
Log-Likelihood	-157,997	-157,965	-157,968	-157,971
Chi-Squared	552.8***	66***	0.4	3.6

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

Table A5.10. Non-standardised coefficients of mixed-effects models predicting support for redistribution. Inequality measured as share of income of top 5 percentile (Top 5%) and ratio of income share of bottom 80 and top 20 percent of earners (80/20 ratio).

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Fixed Effects						
Constant	4.879***	5.272***	5.989***	5.683***	4.523***	4.910***
	(0.107)	(0.101)	(0.138)	(0.115)	(0.139)	(0.115)
Year (1980 = 0)	0.014***	0.014***	0.008***	0.008***	0.022***	0.022***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Male	-0.203***	-0.204***	-0.173***	-0.173***	-0.232***	-0.232***
	(0.011)	(0.011)	(0.014)	(0.014)	(0.017)	(0.017)
Age	0.005***	0.005***	0.005***	0.005***	0.003***	0.003***
	(0.0003)	(0.0003)	(0.0004)	(0.0004)	(0.001)	(0.001)
Religious Attendance	-0.008***	-0.009***	-0.009**	-0.009**	-0.007	-0.008*
	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)
Income Distance	-0.317***	-0.255***	0.760***	0.061	-0.194***	-0.152***
	(0.030)	(0.026)	(0.118)	(0.076)	(0.032)	(0.022)
Top 5%	0.004		-0.052***		0.007	
	(0.003)		(0.006)		(0.005)	
Top 5% x Income Distance	0.007***		-0.060***		0.004**	
	(0.001)		(0.006)		(0.002)	
80/20 Ratio		-0.052***		-0.094***		-0.046***
		(0.005)		(0.009)		(0.009)
80/20 Ratio x Income Distance		0.010***		-0.052***		0.006*
		(0.003)		(0.009)		(0.003)
Random Effects						
Country	X	X	X	X	X	X
Country x Income Distance	X	X	X	X	X	X
Observations						
Countries	51	51	51	51	51	51
Surveys	238	238	238	238	238	238
Respondents	276,957	276,957	172,256	172,256	104,701	104,701
Log-Likelihood	-691,600	-691,562	-433,825	-433,821	-256,903	-256,898
Chi-Squared	7.2***	83.1***	77.3***	84.3***	5	6.8***

Notes: Support for redistribution is 'Income Equality' question in the IVS (Item E035): "How would you place your views on this scale? (1) We need larger income differences as incentives. (10) Incomes should be made more equal." Chi-squared indicates -2 times the change in log-likelihood from the previous model (For Model 1, this is a baseline model with only controls). Significance: ***p < 0.001; **p < 0.01; *p < 0.05.

5.11 Appendix Figures

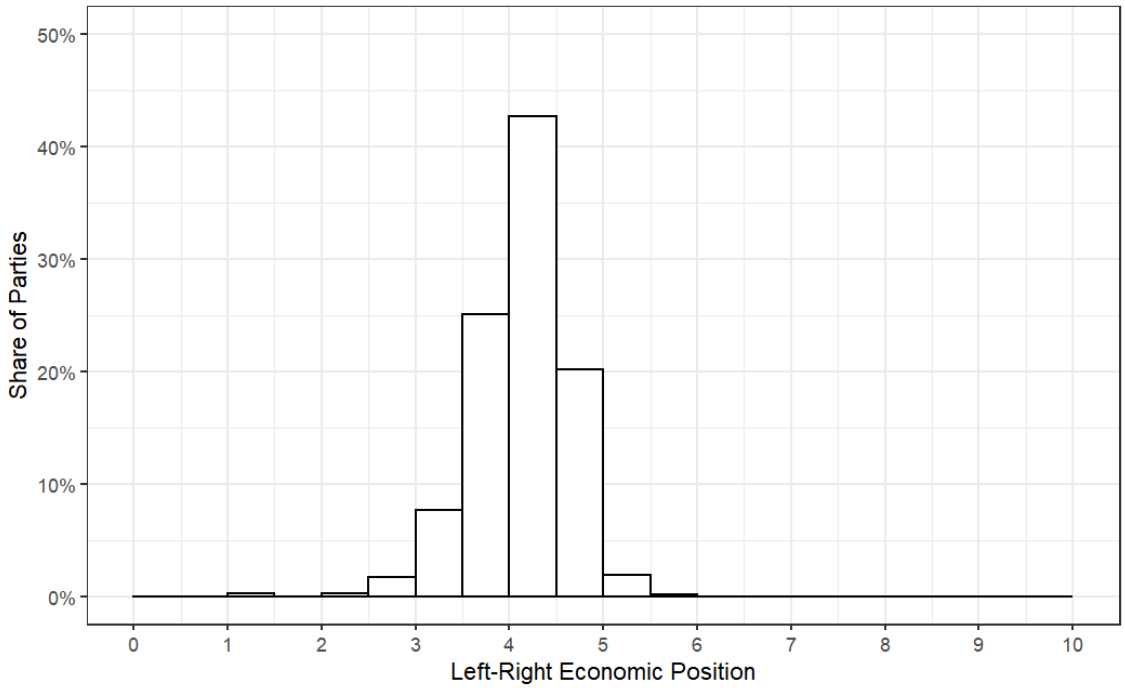


Figure A5.1. Distribution of left-right economic positions of political parties in CMP.

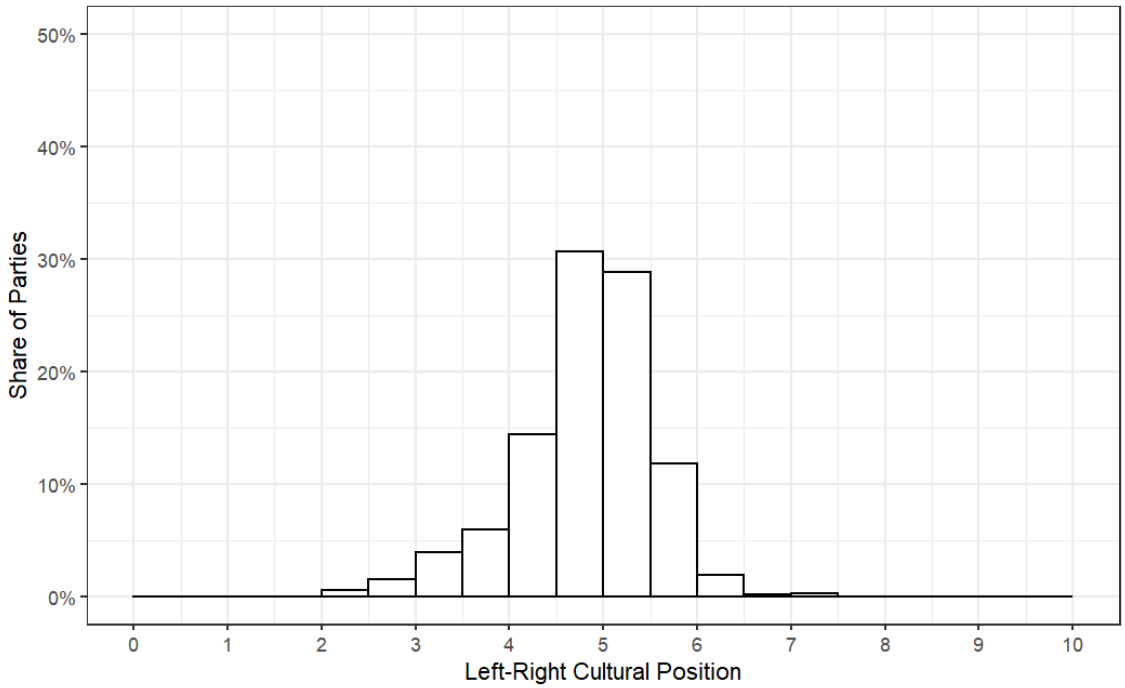


Figure A5.2. Distribution of left-right cultural positions of political parties in CMP.

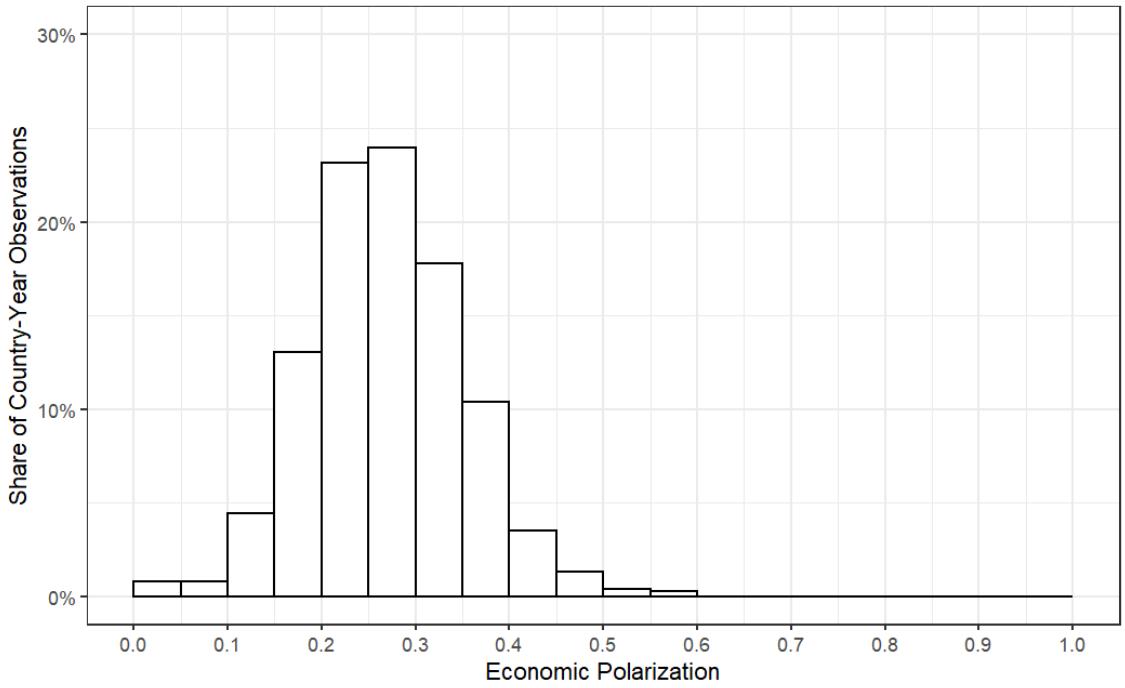


Figure A5.3. Distribution of economic polarization of political parties in CMP.

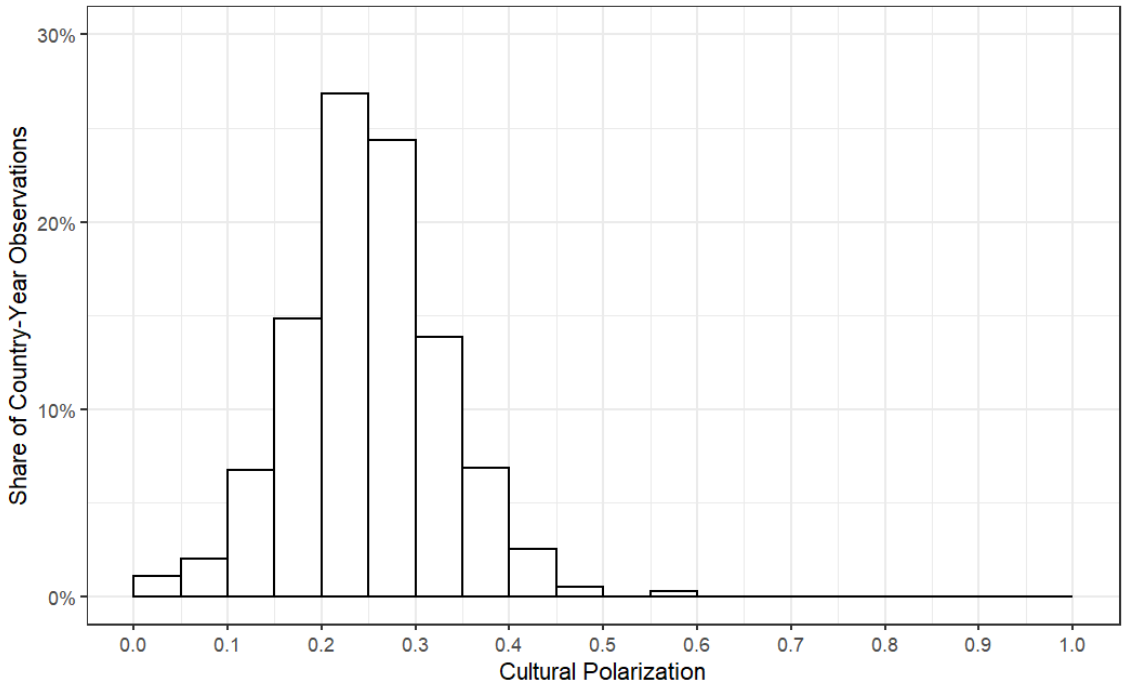


Figure A5.4. Distribution of cultural polarization of political parties in CMP.

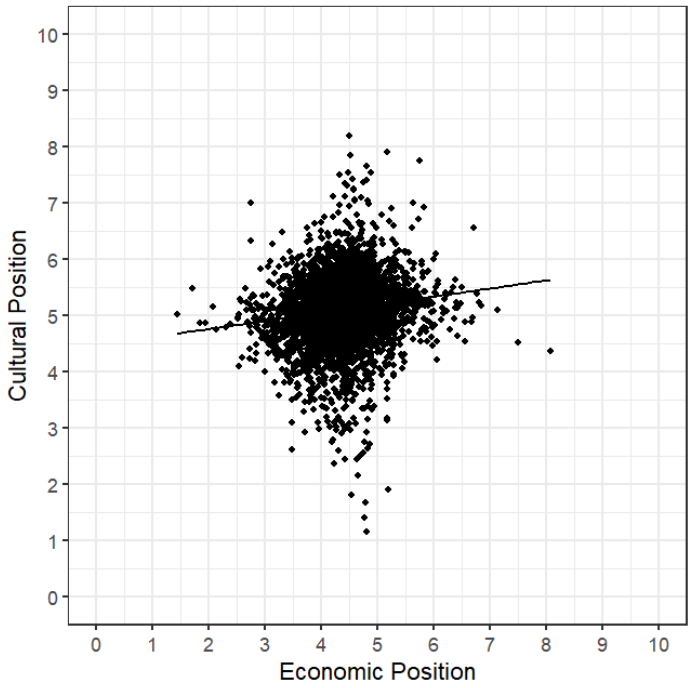


Figure A5.5. Scatterplot of economic and cultural positions of political parties in CMP.

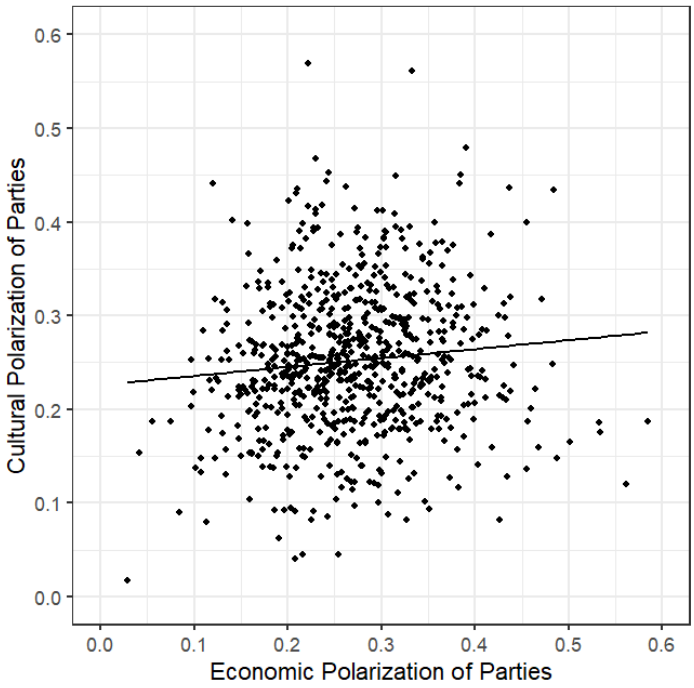


Figure A5.6. Scatterplot of economic and cultural polarization in CMP.

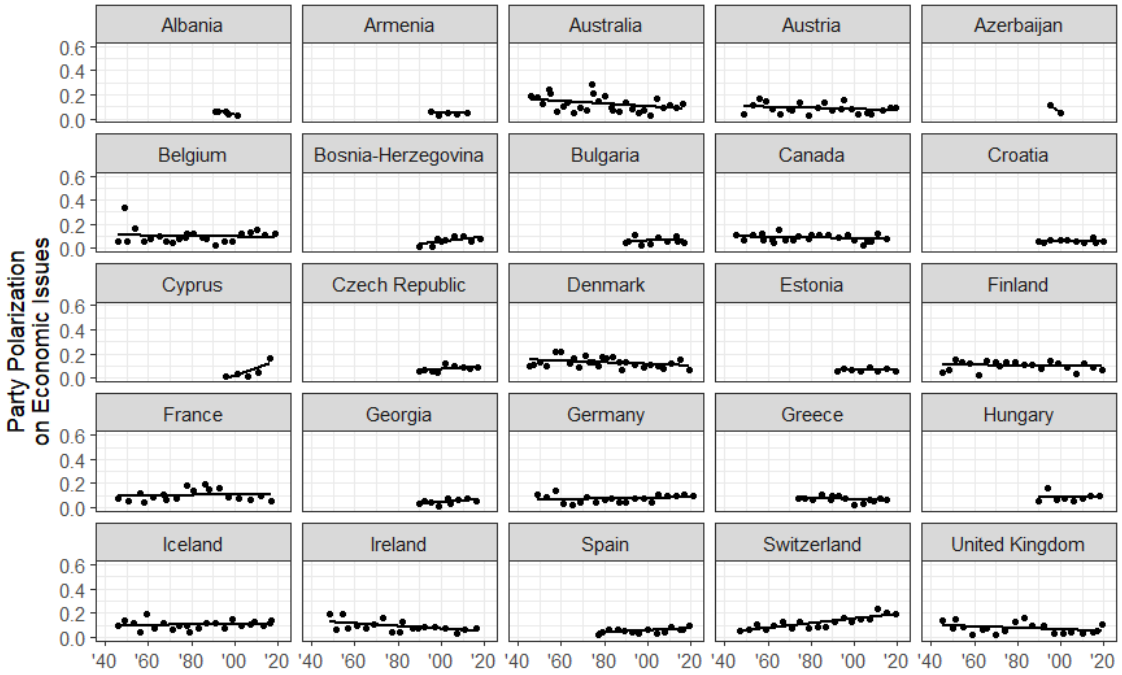


Figure A5.7. Time trends of economic polarization by country in the CMP (continued).

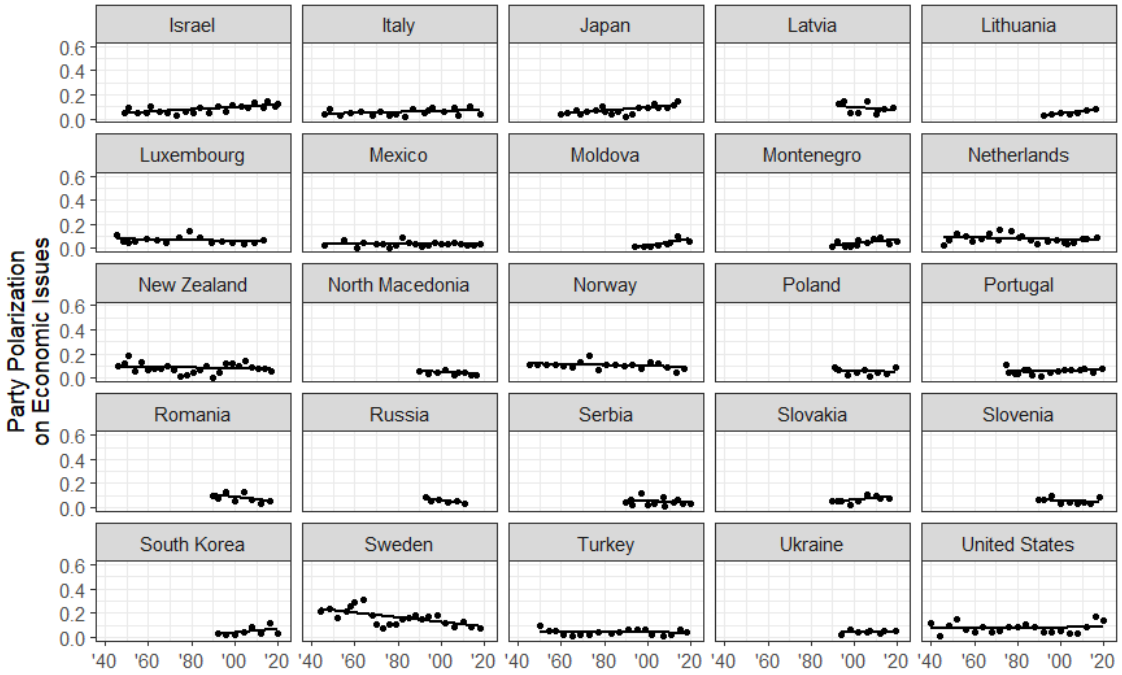


Figure A5.8. Time trends of economic polarization by country in the CMP (continued).

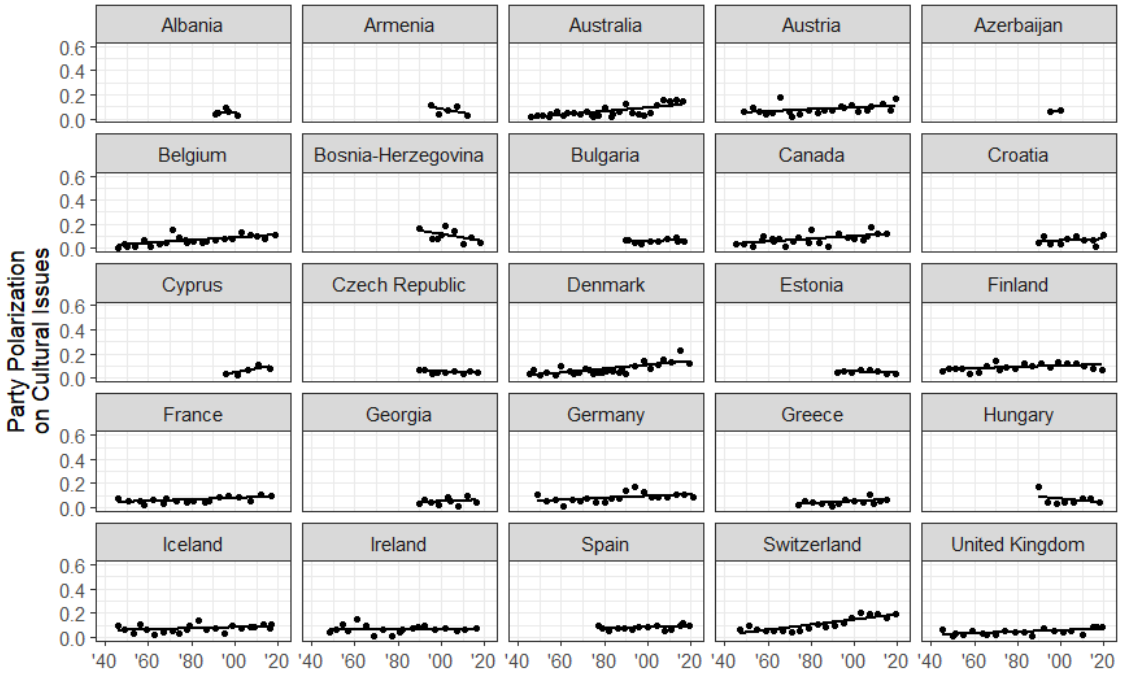


Figure A5.9. Time trends of cultural polarization by country in the CMP (continued).

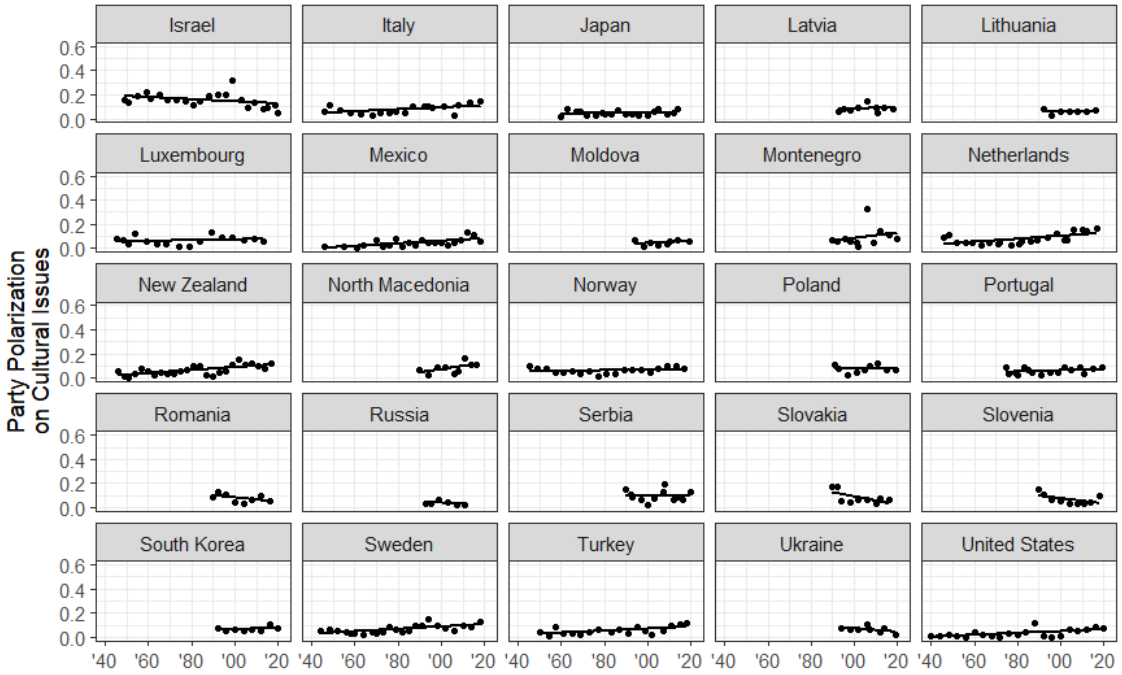


Figure A5.10. Time trends of cultural polarization by country in the CMP (continued).

Jones and his men suddenly found themselves being butted and kicked from all sides. The situation was quite out of their control. They had never seen animals behave like this before, and this sudden uprising of creatures whom they were used to thrashing and maltreating just as they chose, frightened them almost out of their wits.

…

The other farmers sympathised in principle, but they did not at first give him much help. At heart, each of them was secretly wondering whether he could not somehow turn Jones's misfortune to his own advantage.

—George Orwell, *Animal Farm*

6 Conclusion and Implications

6.1 Summary of Findings

6.1.1 Good Samaritan or Rich Samaritan

The first paper is focused on the interactive effects of income inequality and economic development on support for redistribution and its relationship with income position. The first finding is that public demand for redistribution increases with inequality and development, but more so for the latter. The descriptive relation illustrated in *Figure 3.3* shows that support is higher in richer countries, while the relation with inequality is less clear. The results for the longitudinal effects show that increases in inequality and development enhance support: a 1-point change in Gini increases it by 0.043, and a 1-point change in log GNI per capita increases it by 2.603. The standardised coefficient of GNI is over three times larger than that of Gini, suggesting that redistributive preferences are influenced far more by the level of economic development in a country than by the equality of its income distribution.

The second finding is that people are less tolerant of income disparities in rich countries. In line with the first hypothesis, the longitudinal effects of Gini and GNI are highly conditional on each other. As GNI increases from $9,000 to $22,000 (±1 SD of change in GNI per capita from the mean), the estimated effect of Gini almost doubles from 0.03 to 0.06.

Moving on to the relation between income and preferences, the results confirm the basic principle of self-interest, showing that people with a lower position in the income distribution are, predictably, more supportive of redistribution. A 1-point rise in income percentile lowers support by an estimated 0.009 points. In other words, support is 0.692 points higher for a person in the bottom 10% compared to a person in the top 10%. The third finding concerns the conditions under which the relation between income position and preferences is stronger. As hypothesised, people are more divided over redistribution in countries where both development and inequality are lower. When Gini and GNI are lower, the estimated effect of income percentile is -0.014 points. In contrast, the estimated effect varies between -0.006 and -0.010 points in cases where Gini and GNI are higher. In sum, people are more divided over redistribution in countries that are equal and poor.

A final observation drawn from the results is that people's preferences are more sensitive to national factors, especially economic development, than individual factors. As mentioned before, the estimated difference in support between the top and bottom deciles is

0.692 points. Compared to this, as shown in *Figure 3.7*, a change in Gini of 10 points and a change in log GNI per capita of 0.4 points (from $9,000 to $22,000) increases support by an estimated 1.209 points. This suggests that people are in fact aware of and sensitive to the national conditions when it comes to assessing their preferences for redistribution.

The main implication from the findings is that public opinion is less tolerant of income disparities in rich countries. There are several aspects of economic development that can contribute to this effect. First of all, as countries become richer, the poor support more redistribution because they have more to gain from it. Second, the rich become more open to redistribution because the relative costs are lower. Finally, increased state-capacity may make people more open to redistribution because they believe it can be implemented more effectively and efficiently. This has straightforward practical implications for political leaders in advanced democracies experiencing rising inequality: the public is likely to reward political efforts to reduce income disparities. Conversely, political leaders in developing countries may not need to be overly concerned with mitigating inequality, as the public appears to be sensitive to the limitations that they face in terms of resources and state-capacity.

Not only does public demand for redistribution grow with income inequality and economic development, but it becomes a valence issue as public opinion becomes less divided over redistribution. This implies that governments can push for more progressive tax and transfer programs without alienating large segments of the electorate or contributing to polarisation. This can present an opportunity for both left-wing and right-wing parties. Left-wing parties can deliver materially to their base of support without necessarily losing more affluent voters. Right-wing parties, on the other hand, could attract more lower-income voters without alienating their more affluent base. Meanwhile, in countries that are more equal and less developed, political leaders should expect public opinion to be more divided between those who want to cut back on redistributive policies, and those who want to keep them.

6.1.2 Absolute Gains, Relative Losses

People perceive the gains from redistribution in absolute terms, and losses from it in relative terms. This means that, as countries become more affluent, the poor demand more redistribution because they have more to gain from it, and the rich are more willing to pay because the relative costs are smaller.

The second article examines whether people perceive the utility from redistribution (i.e., the expected net outcome from income equalisation) in absolute or in relative terms, and whether the gains and losses are perceived equally. Income distance (income minus mean) captures absolute utility, while income ratio (income-to-mean ratio) captures relative utility. Moreover, people can expect to gain (lose) from redistribution if their income falls below (above) the mean. The analysis predicts support for redistribution based on the effects of income distance and income ratio with the mean income serving as a discontinuity between the poor and the rich.

The main finding is that people perceive gains in absolute terms and losses in relative terms. For every $10,000 a person's income falls below the mean, their support for redistribution increases by an estimated 0.39 points. In contrast, for people above the mean income, absolute losses do not hold a significant effect. Instead, their support drops as a

function of their income ratio: a one-fold increase in their income relative to the mean decreases support by an estimated 0.18 points. Meanwhile, for people below the mean, income ratio has no significant effect. This means that people's support for redistribution grows based on how much they gain, but their opposition to it grows based on the share of their income they lose.

These results carry two more relevant findings for the literature. First, people are indeed aware of and sensitive to their income position when forming their redistributive preferences. Some studies, especially of public opinion in America, have suggested that people do not hold preferences that reflect their true self-interest either because they are unaware of their position on the income distribution (Osberg & Smeeding 2006; Cruces, Perez-Truglia & Tetaz 2013; Gimpelsen & Treisman 2018; Bublitz 2017) or because of the prospect of upward mobility (Feldman & Zaller 1992; Lipset 1997; Manza & Brooks 2021). This has been used to explain why public opinion has not responded to rising income inequality with growing demand for redistribution. But the results of the cross-national analysis here are evidence that people's preferences generally do reflect their self-interest. In fact, the poor reflect their self-interest more reliably than the rich since they are more sensitive to absolute utility.

Second, the results suggest that people in developed countries are less tolerant of inequality. As a country develops economically, if the income distribution stays the same, then the poor will have more to gain from redistribution and the rich will have more to lose from it. If people perceived gains and losses equally and in absolute terms, this would mean that average support for redistribution would remain the same. But since the poor are sensitive to the absolute gains, and the rich are sensitive to the relative losses, the poor will demand more redistribution while the rich will be willing to pay more because it involves a relatively smaller share of their income.

The finding that people perceive gains in absolute terms and losses in relative terms has important implications regarding political communication. Most government policies, especially fiscal ones, involve transferring grants or benefits to one set of people at the cost of incurring taxes or cuts on others. Managing and balancing these transfers is one of the quintessential aspects of politics. Politicians need to decide what resources to take control of, and how to allocate them so that they can satisfy their constituents in order to stay in power. For this purpose, they aim to maximise the gains and minimize the costs perceived by their constituents.

Based on the findings, political actors can maximise the utility for their constituents by framing benefits in absolute terms and costs in relative terms. For example, this would suggest that – pound for pound – a universal basic income would be more popular than a negative income tax, since the former involves transfers for a fixed amount, while the latter involves transfers that are calculated in relation to a person's income. Similarly, costs that are framed as income-dependent are likely to be perceived more lightly than ones that are fixed. For example, this would suggest that – pound for pound – people are more against paying road tolls than an income tax. This helps explain why benefits are so often framed in absolute terms, such as unemployment benefits, disability benefits and baby bonuses, while costs are framed as a

proportion, such an income tax or a sales tax. Another example of this were the stimulus checks delivered in the United States during the Covid-19 pandemic.[37]

6.1.3 Activating Self-Interest

The third paper hypothesises that political parties have de-activated economic self-interest among the public by converging in their economic positions and becoming more divided over cultural ones, thus reducing the salience of the economic cleavage. To test this hypothesis, the study examines the moderating role of party polarisation on economic self-interest. The study uses data from the Comparative Manifesto Project (CMP) to calculate party polarisation on economic issues for any given country-year to explain the effect of income position on redistributive preferences in the IVS.

Before delving into the main findings, one important observation from the data is that parties have generally converged in their economic positions and polarised in their cultural positions since the it the dataset beginning of the CMP dataset in 1945, as shown in Figures 5.2 & 5.3. Some of the best examples of this are Australia, Denmark and Sweden (see Figures A5.7 & A5.8). This is consistent with the notion that parties have driven the declining salience of economic issues and the advent of cultural ones. Nevertheless, the possibility of endogeneity cannot be discounted since lower salience among the public over economic issues could also drive these trends. For this reason, the models include random slopes for income position by country, so that systematic differences in economic self-interest across countries do not bias the estimated effects.

The main finding from the results is that party polarisation (both in economic and cultural terms) intensifies economic self-interest among respondents with incomes below the mean. This suggests that there is an asymmetry in the role that political leaders have over economic attitudes: they have more capacity to activate or de-activate left-wing economic attitudes. Moreover, it also shows that cultural polarisation should not act as a wedge against left-wing politics, but rather appears to help facilitate it. To put it differently, party convergence on the economic issues reduces their salience among the poor, but polarisation over cultural issues helps reinforce it.

Theories on economic inequality often have structural explanations that leave little room for contingency or the agency of political actors. Pareto believed that inequality was generally static across places and times, while Kuznets believed that inequality increases during the early stages of economic development before eventually dropping. For Piketty, inequality is an inevitable consequence of a capitalist economic system, while for Milanovic, inequality fluctuates in waves that are primarily determined by the labour supply. However, political actors also exert agency over the distribution of resources.

The main implication of the third paper is that political leaders, through their party strategies, have the ability to activate, de-activate, or re-activate income inequality as a political issue. On the one hand, this can be promising for the prospect of having inequality gain a more prominent role in the agenda. Even a marginal left-wing party could enhance the salience of the economic cleavage by focusing their platform on redistribution. On the other hand, this also

[37] Eligible individuals received $1,200 in April 2020 (CARES Act), $600 in December 2020-January 2021 (Consolidated Appropriations Act, 2021), and $1,400 in March 2021 (American Rescue Plan).

means that political leaders have the capacity to supress redistribution from the agenda by converging in their economic positions and drawing attention to other issues. Previous research has theorised and shown evidence that established parties can engage in cartelization (Katz & Mair 1995; Bornschier 2007) and dismissive strategies (Meguid 2005; 2008) to make certain issues less salient. Given how consequential public opinion is to redistribution, the future of inequality will be contingent on the agency of political actors.

6.2 Avenues for Future Research

6.2.1 Affluence or State-Capacity?

The first and second papers provide evidence that economic development enhances altruism in redistributive preferences. But, as mentioned in the literature review, economic development involves a multifaceted array of social transformations, including rising affluence and increasing state-capacity. As countries develop economically, average incomes rise and people become more affluent, which makes them more altruistic. But economic development also entails greater state-capacity, which can in turn enhance public trust in the state, thus making people more supportive of redistribution. State-capacity is the ability of a state to collect taxes, enforce rule of law and provide public goods in an effective and efficient way. As Besley and Persson (2010, p. 1) note, "a striking feature of economic development is an apparent symbiotic evolution of strong states and strong market economies".

What is it, then, that makes people more altruistic in developed countries: affluence or state-capacity? This empirical question is an avenue for future research. The simplest way to disaggregate the role of affluence and state-capacity would be to specify individual income and GNI per capita to predict redistributive preferences. The problem here is that such as model would obviate the role of self-interest, which is best proxied by income distance (income minus GNI per capita).[38] But a model that included income, mean income and income distance would be rank deficient.

There are three possible solutions to this. The first would be to specify a model that included separate variables for affluence and state-capacity. After all, economic development and state-capacity are closely related but not the same. Hanson and Sigman (2013) have created a remarkable state-capacity index using a wide array of sources that is based on three dimensions: administration (e.g., bureaucratic quality), extraction (e.g., taxation) and coercion (e.g., military spending). Including a more focused state-capacity index, as opposed to GNI per capita, can help distinguish changes in altruism that are driven by affluence and by state-capacity. Nevertheless, this approach can be limited by data availability, which could be addressed using multiple imputation. Plus, state-capacity and GNI per capita are still likely to be highly correlated, so it might lead to collinearity.

The second solution would be to operationalise income and GNI per capita logarithmically. This approach is very common in political and economic research due to the diminishing returns of money: as people (or countries) become richer, the impact of each new gains becomes smaller. Modelling the logarithmic effects of income and GNI per capita would avoid rank deficiency with income distance, which is measured in absolute terms, and even

[38] Moreover, a model that accounted for prospective utility and loss aversion would need to specify income ratio and apply a discontinuity around the mean income, as done in the second paper.

income ratio, which is measured in relation to individual income. The main issue of this solution is that it assumes that people perceive the utility from redistribution differently from affluence and economic development. It would assume that the transfers from redistribution are perceived in absolute or relative terms, but affluence and economic development is perceived logarithmically. This may be the case, but the utility of redistribution could also be modelled logarithmically, which would again lead to rank deficiency.

The third solution would be to use a mediation model to account for the underlying mechanism for why state-capacity enhances altruism, namely that it increases political trust. As mentioned in the literature review, economic development is theorised to make people more supportive of redistribution partly because the increased state-capacity makes them more confidence in the government (Esping-Andersen 1990; Steinmo & Watts 1995; Fukuyama 1995; Inglehart 2018). Many cross-national surveys (including the IVS and ESS) have items that reflect respondents' confidence in the government and political trust more broadly. By comparing the effects of income and political trust, this can tell us to what extent altruism is driven by affluence or by state-capacity. The only potential issue with this approach is that it relies on the connection between state-capacity and political trust, but political trust may be independent from people's awareness and acknowledgement of their country's state-capacity. For example, in a developed country with a capable state, public trust in government may be eroded due to the effects of social media or political scandals. To the extent that this is the case, political trust may not fully mediate the effect of state-capacity. Still, if trust is the main mechanism by which state-capacity is supposed to affect redistributive preferences, then focusing on it this mediation is the optimal approach to disaggregate the effects of affluence and state-capacity, even if this first step does not always occur.

In sum, finding out why richer countries are less tolerant of inequality is a crucial next step for the literature on redistributive preferences. On the one hand, affluence can make people more altruistic because they have more to give. On the other hand, increased state-capacity can enhance people's confidence that the government can enact redistributive policies efficiently and effectively. Estimating the explanatory power of these two effects will help us understand better when the public wants their government to address inequality. Over the last decades, advanced democracies have experienced unprecedented levels of growth accompanied by declining in political trust. Since these two factors have been on diverging trends, it is more important to examine their distinct effects on public opinion. Here, I have proposed three approaches to disaggregate these effects: (a) specifying a measure of state-capacity more focused than economic development; (b) measuring income and economic development in logarithmic terms; and (c) estimating the effect of state-capacity mediated by political trust. Each approach has advantages and disadvantages, as outlined here, so exploring them in tandem would be a useful start for future research into this question, especially to see if they offer consistent results.

6.2.2 Income Inequality or Social Spending?

While this thesis examines the effect of inequality on redistributive preferences, a related factor that is not explored here is the level of redistribution that already exists. According to Wlezien's thermostatic model, public attitudes towards government policies are formed in relation to the current output of policies. In this case, if a country already has high levels of social spending,

then the government may be in the process of reducing inequality and this can mitigate how much more redistribution people want. Put differently, redistributive preferences can be determined by levels of redistribution rather than levels of inequality. As mentioned in the literature review, Schmidt-Catran (2016, p. 126) alludes to this: "Respondents might understand the item as if it was asking whether the government should take more measures than it currently does. If this is true, one has to control for the sum of redistributive policy measures to identify an unbiased between-country effect."

Nevertheless, changes in levels of redistribution are likely to eventually drive changes in levels of inequality. Regarding Wlezien's thermostatic model, we can also consider inequality to be the output policy: the public demands more efforts to reduce inequality until it is abated. Do people, then, respond to changes in redistribution, or changes in inequality? This is an empirical question that future research should address. In his study of the ESS dataset, Schmidt-Catran (2016) conducts a robustness check that controls for social spending, which does not yield a significant effect, suggesting that people respond to actual levels of inequality rather than redistribution. Still, this avenue of research can be examined more systematically by combining cross-national surveys (e.g., ESS, ISSP, IVS, etc.) with more datasets on government spending and social spending more concretely (e.g., the IMF, the World Bank, OECD, etc.). The interrelated effects of redistribution, inequality and public opinion could be modelled using time-series mediation models that account for lags and spillover effects.

6.2.3 Culture or Economics?

Another avenue for future research is the extent to which the advent of cultural issues can supplant and supress economic self-interest. This thesis examines the determinants of redistributive preferences revolving around economic factors at the macro- (inequality), micro- (income position) and meso-levels (political polarisation over economics). The underlying premise here is that economic attitudes are primarily affected by economic factors. But as many scholars have argued (Katz & Mair 1995; Meguid 2005; 2008; Bornschier 2007), political issues compete to be part of the agenda, so the advent of new issues can supplant older ones. Cultural issues have increasingly divided Western publics and party systems due to the diversification of the labour market (Kitschelt 1994), globalization (Kriesi *et al.* 2008), intergenerational shifts (Inglehart & Norris 2019), and rising education (Allardt 1968; Knutsen 2004; Stubager 2009; 2010).

This body of research has shown that cultural issues have become more salient – at the expense of economic issues – but there is disagreement about how it has affected economic attitudes. Some scholars have attributed this to the declining salience of the economic cleavage (Kitschelt 1994; Kriesi *et al.* 2008; Inglehart & Norris 2019). However, the emergence of cultural divides does not necessarily mean that economic divides have closed. For example, Marks and Wilson (2000) have argued that the new divides over European integration have been assimilated into pre-existing economic divides. In fact, some studies that look at the relation between social class and economic attitudes have not found evidence of convergence (Kriesi *et al.* 2008, p. 266; Evans and De Graaf 2013, p. 396), and some scholars have gone as far as to claim that "class is not dead, but has been buried alive under the increasing weight of cultural politics" (Achterberg, Houtman and Derks 2008). Still, previous studies have been limited in their sample and scope; the samples have been limited to European countries,

diminishing the comparability and generalisability of the conclusions; and the studies have centred on the effect of time rather than economic development, which is a more precise reflection of societal change. Furthermore, the question of whether cultural shifts spill over to changes in economic attitudes overall is largely absent in the literature. As De Graaf and Evans (1996, p. 614) point out, cultural issues "often have been conceptualized as, to a large degree, an orthogonal dimension of core political values that have no necessary implications for the political centrality of long-standing disputes over economic redistribution".

Two underlying questions emerge from the literature on cultural and economic cleavages. Do cultural attitudes spill over into economic attitudes? And do cultural attitudes make people less economically self-interested? The first question involves whether people who hold more culturally right (left) attitudes become more economically right (left). Previous research suggests this may be the case: immigration, a potent cultural issue, reduces support for redistribution (Eger 2010; Dahlberg *et al.* 2012; Alesina *et al.* 2018; 2021; Rueda 2018; Rueda & Stegmueller 2019). This question has implications that are particularly relevant to overall levels of support for redistribution. Public opinion shifting right on culture might lead to less support for redistribution, for example. Moreover, the spillover effect of culture may be asymmetric (e.g., cultural and economic attitudes are related on the right, but not on the left).

The second question involves whether the poor want less redistribution when they are more culturally right, and the rich want more redistribution when they are culturally left. This would require cultural attitudes to have a spillover effect that goes against people's economic self-interest. If so, then the cultural divide would have a de-polarising effect on the economic divide as long as cultural and economic attitudes are inversely correlated. Again, there is good reason to believe this is the case: education is the best predictor of cultural attitudes (Kriesi *et al.* 2008; Oesch & Rennwald 2018), and it is highly correlated with higher income (Iversen & Soskice 2001), which is the best predictor of economic attitudes. In fact, studies have found a negative relation between education and support for redistribution (Alesina *et al.* 2001; Luttmer 2001; Sealey 2018). If cultural attitudes spillover to economic attitudes and they are inversely correlated, this would imply that the advent of the cultural cleavage is contributing to the decline of the economic cleavage.

The driving force of political actors is also relevant to the cultural-economic comparison. This thesis shows that cultural party polarisation enhances economic self-interest among the poor, which suggests that the cultural cleavage actually helps reinforce the economic cleavage.

6.2.4 Aggregate Effect of Parties

The third paper finds that political parties can influence economic self-interest among the public through their level of polarisation. The clearest next step for this line of research is to analyse the influence of parties on overall support for redistribution. Can parties make the public more or less tolerant of income disparities? The findings from the third paper would suggest this is the case. If party polarisation can make people below the mean income more self-interested, and there are more people below the mean than above it, this should, on average, lead to more support for redistribution.

The role of parties could also condition the effects of macro-economic shifts, which are the focus of the first paper. Do parties moderate the effect that inequality and development have on redistributive preferences? If so, it would mean that public support for redistribution as a response to rising inequality in rich countries is conditional on political parties activating voters around the issue. Additionally, political parties may also have a moderating effect on the relation between income percentile and redistributive attitudes. The first paper finds that countries tend to be more divided over redistribution when they are poorer and more equal. Political leaders may have the capacity to avoid this tendency by converging in their economic positions. In other words, parties may act as a buffer when public opinion is too tolerant of inequality or too divided over it.

This line of research would require operationalising the economic position of the party system as a whole, which would present its own questions. One way to do this would be to calculate the average of party positions using datasets like the CMP or the Chapel Hill Expert Survey and weighing it by vote share or seats in parliament. Another approach could be to look at the position of the party that heads the government. For cases with coalition governments, these two approaches could be combined by getting the weighted average of the parties in the coalition. However, measuring party position may have its own drawbacks, since what politicians say they will do does not always conform with what they actually do when in government for all sorts of reasons. Instead, it may be more suitable to simply look at what the government actually does and measure changes in redistributive policy. This approach would be more in line with Wlezien's thermostatic model, which suggests that existing policies influence people's baseline preferences. In this case, less redistribution (and hence, more inequality) ultimately makes people more tolerant of inequality. Distinguishing between the effects of party position and government policy can provide insights into whether political actors can prime voters more effectively through their words or their actions.

6.3 Methodological Takeaways

6.3.1 Combining Cross-national Surveys

The most important methodological takeaway from this thesis is the need to merge cross-national survey data, the main ones being the World Values Survey, the European Values Study, the European Social Survey, the Global Barometer Surveys, and the International Social Survey Programme. This thesis uses an integration of the WVS and EVS, called the Integrated Values Survey, because it is the largest dataset that covers the broadest range of countries over the longest span of time, consisting of 425 surveys in 115 countries across every world region between 1988 and 2020. This helps maximise the reliability and generalizability of the findings. For comparison, the ESS, which is more commonly used in this literature, consists of 269 surveys of 40 countries in Europe between 2002 and 2020.

This is not to say that the IVS should always be the preferred choice of sample. Each dataset has advantages and disadvantages based on numerous factors: span and frequency of survey waves, question wording, income scales, representativeness and weights of survey samples, etc. For example, the ESS clearly offers a more consistent and reliable measure of income than the IVS, as mentioned in the papers. In order to operationalise the income of IVS respondents in a reliable way, I calculate their rank position and then use the WIID dataset to estimate their income based on their country, year and income percentile. On the other hand,

the ESS is limited to European countries and only spans 20 years, and the ESS and ISSP use Likert scales in their items on redistribution, which yield lopsided responses (see Figures A2.1 & A2.2).

Future research could maximise the reliability and generalizability of findings by expanding the set of comparable cross-national surveys that can be analysed. All the aforementioned datasets include similar questions regarding income equality, which provides an opportunity to yield more conclusive findings about public opinion on redistribution as well as other issues.

6.3.2 Measuring Polarisation in Public Opinion

Future research could focus more on the polarisation of redistributive preferences at the aggregate level. The concept of polarisation is alluded to in this thesis, especially in the first paper. The strength of the relationship between income percentile and redistributive preferences is used as a proxy for public division over redistribution: the stronger this relationship is, the more polarised people are. Thus, the moderation of this effect is taken as weakening or strengthening public division.

Another way to estimate public division is to use a measure that captures aggregate levels of polarisation. There are various ways of measuring polarisation (for reviews see Rodriguez 2004; Bauer 2019), including the Esteban-Ray index, the Dalton index (used in the third paper to measure party polarisation), and the standard deviation. The standard deviation of a variable is the most common measure of polarisation, which has been used in previous research (Abramowitz 2008; Pardos-Prado & Dinas 2010; Moral & Best 2022).

The downside of analysing aggregate measures of polarisation for public opinion is that it restricts the number of observations to the country-level. As mentioned in the literature review, individual-level analyses of public opinion can be more insightful by providing more robust findings regarding the underlying theoretical mechanisms. In Paper 1, I find that inequality and development weaken the effect of income percentile on support for redistribution, implying that public opinion becomes less polarised. Still, this implication is empirically verifiable, and analysing aggregate levels of polarisation is the most straightforward way of confirming it.

6.3.3 Panel Series on Inequality and Redistribution

Panel series modelling and simultaneous equation modelling can be useful tools for future research into the determinants of public policy and public opinion, such as redistribution and redistributive preferences. This will certainly be the case if multiple cross-national survey datasets are combined, as suggested earlier in this section, because it would offer more time variance per unit of observation. As Beramendi and Anderson (2008) explain, economic inequality, public opinion and political parties have interrelated effects, which can lead to feedback loops: inequality drives support for redistribution, which incentivizes parties to enact redistribution, which lowers inequality, which lowers support for redistribution, and so on. To this cycle, we can also add economic development – with its controversial relationship with inequality – and public division over redistribution.

A set of interrelated factors such as this can be described as endogenous regressors, meaning that they act as both dependent and independent variables on each other. These types of relationships can be analysed using simultaneous equation modelling, which can be conducted using two- and three-stage estimation methods (Theil 1953; Basmann 1957; Zellner & Theil 1962; Pesaran 2015, pp. 441-5). Similarly, Best and Moral (2022) use error-correction models with seemingly unrelated regressions to estimate the effect of party polarisation on public polarisation and vice versa.

6.4 Conclusion

This thesis was motivated by the rising levels of income distribution observed in recent decades that has been particularly acute in advanced democracies. While there is a multitude of economic factors that influence how incomes are distributed in society, politics can also play a major role. In fact, the political dynamics behind income inequality appear to be the opaquest of black boxes in this area. Will governments ramp up redistribution in response to rising inequality, and why have they not done so yet? To answer this question, it is crucial to focus on public opinion, which ultimately guides (or at least constrains) governments, especially democratic ones. This thesis has aimed to review the theories and previous findings about redistributive preferences and fill out gaps in the literature regarding when people want redistribution and when they are more divided over it.

The review of the literature highlighted the need to examine more closely the effect of economic development, the underlying mechanisms of how individuals perceive the utility of redistribution, and the influence that political parties can exert in a top-down fashion. The RMR model based on self-interest is the intuitive starting point that is shared in most of the literature. The well-known median voter hypothesis derived from it proposes that inequality increases the median voter's distance from the mean income, who, as a result, wants more redistribution, thereby incentivizing the government to enact it. However, a strict interpretation of the RMR model leads to problematic implications. Assuming that self-interest makes redistributive preferences monotonically proportional to the expected returns from income equalization, then average support for redistribution should be static across contexts and time, and impervious to changes in inequality or development. Furthermore, it implies that inequality and development make people more polarised over redistribution, when studies suggest that inequality makes them less so (Schmidt-Catran 2016; Dimick *et al.* 2018), and the evidence for development is mixed (Dion & Birchfield 2010; Andersen *et al.* 2021; Mérola & Helgason 2016; Rueda 2018).

Scholars have offered complementary theories on redistributive preferences based on altruism and prospective utility, which provide nuance to the effect of self-interest and explain previous findings. Briefly, altruism proposes that people dislike inequality and prospective utility proposes that people value the utility of money in relation to their current income. These theories suggest that people in rich countries would be less tolerant of inequality and less divided over it because income differences become larger, thereby enhancing altruism, and people become richer, thereby reducing the relative costs. Moreover, the literature on agenda-setting suggests that causal relation between public opinion and political actors can also be the other way around, with politicians influencing voters' attitudes.

Building on these theories, the thesis addresses three main questions regarding redistributive preferences, which are broadly organised at the macro-, micro-, and meso-levels.

First, how does economic development condition the effects of income inequality on public opinion? Second, do people perceive the utility of redistribution in absolute or relative terms, and do they perceive gains and losses differently? Third, does party polarisation moderate people's economic self-interest? The results are largely consistent with the theories. Support for redistribution increases when both inequality and development are higher, and the effect of income percentile is weaker when both inequality and development are lower. People below the mean income support more redistribution based on their absolute distance from the mean, while those above it support less redistribution based on their relative distance. Party polarisation, meanwhile, can strengthen the effect of absolute distance for the poor.

This thesis focuses on redistributive preferences because public opinion, especially in a democracy, is supposed to influence government policy, which in turn can reduce inequality through redistribution. But what if this assumption is not the case? This leads to the speculative question of what if governments are unwilling or even incapable of reducing income inequality through redistributive policies. As mentioned before, the ability of governments to enact redistribution has been hampered by globalization and new technologies. If this is ultimately the case, there are three scenarios for the future of inequality: *acclimation, confrontation* and *internationalisation*.

Acclimation is the scenario where public opinion becomes accustomed to higher levels of redistribution. Despite public demand for redistribution, governments will be incapable of reducing income disparities, so higher inequality will simply become the new norm. Eventually, public opinion will become used to higher inequality and will base their preferences in relation to a higher benchmark. In the long-term, inequality levels will ebb and flow according to the underlying economic forces driving the Kuznets wave: demographics, the labour supply, and technological advancements.

Confrontation is the scenario where rising inequality will eventually reach to a fever point that triggers a political outburst. If governments prove to be incapable of addressing inequality and yet there is no acclimation, this will put increasing pressure on the political system, eroding its perceived legitimacy and exacerbating social unrest. This scenario follows the argument put forward by Piketty (2014) that the massive political events (the World Wars and socialist movements) drove inequality down during the 20th Century. Similar destabilizing political shocks in the future could also reduce inequality, even if they are not directly triggered by it.

Internationalisation is the scenario where that global governance eventually overcomes the logistical obstacles and collective action problems preventing redistribution at an international level. This would involve increasing international cooperation, such as countering tax havens, implementing a Tobin tax and strengthening international financial policing. Such policies, though, would face substantial political challenges. Besides the obvious cession of national sovereignty required, how international redistribution would end up allocating resources is the more glaring question. Should the goal be to reduce inequality within countries, or between countries as well? Institutions dedicated to global governance will probably tend towards reducing disparities globally because, after all, they are accountable to the international community as a whole. This would likely become a source of tension between richer countries that want to use global governance to reduce inequality within their own nation, and poorer countries that want to use it to reduce inequality between nations.

Assuming that governments still have the ability to lessen income disparities, the empirical evidence from this thesis points to a cautiously optimistic conclusion. People in richer countries appear to be less tolerant of income inequality, even among higher earners, and will uniformly demand more redistribution in the face of rising inequality. Moreover, political actors will have the ability to activate public opinion around the issue of inequality. Future research will ascertain whether the response to rising inequality will be offset by other factors like cultural divisions, low political trust or the ability of governments to enact redistribution nowadays. Hopefully, as societies grow, they will also become fairer.

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