UNEQUAL DEMOCRACIES

Working paper n°27

October, 2021

Income inequality and the descriptive representation of income

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European Research Council
Established by the European Commission

UNIVERSITÉ DE GENÈVE

ABSTRACT:

Politicians worldwide are positively selected in terms of income. But does the distribution of income affect the degree of overrepresentation? Mounting evidence suggests a link between economic inequality and an upper-income bias in various forms of political representation, such as policy responsiveness and turnout. This paper provides the first study of the association between income inequality and descriptive political representation by income. I explore how politicians' income levels relate to income inequality using Swedish register data covering the universe of municipal politicians from 1982–2014. A common hypothesis posits that income inequality concentrates political power to top-income earners and therefore demobilizes citizens with low incomes from political engagement. I find no support for this hypothesis. Rather, higher income inequality is associated with better descriptive representation by income. Left parties mainly drive this, as they appear to mobilize low-income segments of the population with higher income inequality.

ACKNOWLEDGEMENTS:

The author is grateful to Michal Smrek, seminar participants at the Department of Government, Uppsala University, and participants at the Unequal Democracies Seminar, University of Geneva, for providing useful comments that have helped improve this paper.

Societal elites have historically run politics. Even though democratic advancements have abated some of this inequality in political power, politicians worldwide are still disproportionally selected from the richer segments of society (Aberbach, Putnam, and Rockman 1981; Blondel & Müller-Rommel 2007; Carnes & Lupu 2015). This 'cash ceiling' (Carnes 2020) appears to exist in various democracies ranging from economically unequal USA to relatively equal Sweden (Dal Bó et al. 2017; Thompson et al. 2019).

Several scholars (e.g. Phillips 1995) have argued the importance of descriptive representation for asserting political equality, equal consideration of all societal interests and for improving the political efficacy of marginalized groups. Equal representation can be said to have an intrinsic democratic value (Allen 2018). If we consider politics a tool for representing all interests and improving society, then a broader understanding of the socioeconomic conditions of citizens will likely improve this process. Mounting evidence also suggests that personal traits of politicians -- such as class, gender and race -- can introduce biases that affect political outcomes (e.g. Chattopadhyay and Duflo 2004; Carnes 2012; Carnes & Lupu 2015; Heath 2015, 2018). This may in turn lead to a reinforcement of the original inequality in representation (Butler 2014).

Following the global surge of economic inequality in recent years, scholarly interest in the equality of political representation within democracies has been renewed (Bartels 2008). A steadily growing body of studies shows that biased policy responsiveness in favor of the rich[1] exists in numerous countries (e.g. Gilens 2005, Schakel 2019, Persson & Gilljam 2017, Elsässer et al. 2017).

This near-ubiquitous upper-income bias in policy responsiveness intensifies in more economically unequal societies (Rosset et al. 2013, Ellis 2013, Rigby & Wright 2013; Lupu & Warner 2021). A plausible explanation for the link between the two types of inequality can be found in Cole's (2018) study of more than 100 countries over three decades, which shows

[1] What this bias means is essentially that enacted policy aligns with the preferences of the rich more often than it does with the preferences of the poor.

that income inequality affects the distribution of political power in favor of the rich (see also Houle 2018). In general, the findings in this literature run counter to standard political economy model predictions that income inequality has mobilizing effects among the disadvantaged (Meltzer & Richards 1981). The results instead align with the relative power hypothesis described by Schattschneider (1960), which posits lower political participation and worse representation of the poor when income inequality grows. Nevertheless, this literature is still rather scant and only focuses on certain types of political representation (Solt 2008; Anderson & Beramendi 2008; Solt & Ritter 2019).

This paper contributes to both literatures on the upper-income bias in political office and the effects of income inequality on representation in several ways. Above all, it provides what is, to the best of my knowledge, the first empirical test of the association between income inequality and descriptive representation by income. Such a relationship carries direct implications for the possibility of a feedback loop between political and economic inequality. If income inequality shapes which income segments get into office – and the socioeconomic background of politicians affects policy outcomes – then the conjunction of these two mechanisms provide fertile ground for self-reinforcing inequalities.

The empirical parts of this article focuses on the Swedish case. Given the country's history of a strong social democratic welfare state, Sweden is interesting to study both in terms of income inequality and in terms of political representation. Sweden also offers access to unique data, which has inspired a "new line of research" (Gulzar 2021, p.11) on political selection. Following this novel approach, I utilize register data that covers the universe of elected and nominated municipal politicians across ten Swedish election periods from 1982 to 2014. This includes the period when Sweden reached its apex in terms of income equality but also the ensuing period that when Sweden experienced the largest increase in income inequality among OECD countries (Hermansen et al. 2018). I use this detailed dataset to analyze the relationship between income inequality and the descriptive representation of income among politicians.

This paper proceeds as follows: I first discuss the theoretical framework, outline my hypotheses and discuss the Swedish case in more detail. Next, I introduce the data and empirical methods used to test my hypotheses. After presenting and interpreting my results,

I conclude by discussing the implications of my findings for the broader debate about the political consequences of income inequality.

Theoretical framework

Standard political selection frameworks (e.g. Norris and Lovenduski 1995) model political recruitment in terms of supply-side, such as the resources and motivations of potential candidates, and demand-side factors, i.e. party or voter preferences for specific politicians. Income inequality can arguably influence both these factors and thereby affect political selection in different ways. The literature presents competing hypothesis on what association we can expect between income inequality and the descriptive representation by income.

There are several plausible pathways connecting income inequality to a lower political representation of low-income earners. Income inequality has been found to lower a plethora of variables that are in turn conducive to political participation, including democratic support, trust in political institutions, generalized trust and prosocial behavior (Krieckhaus et al. 2014; Goubin 2020; Uslaner & Brown 2005; Gallego 2016).

Relative power theory presents the most prominent argument in this literature. Put briefly, it posits that when income inequality is high, the rich capture the political process and the poor abstain from participating (Schattschneider 1960; Goodin & Dryzek 1980; Solt 2008). This is because political influence is determined by relative power and the rich, with more resources at their disposal, can enjoy more political clout when income inequality is high. They can therefore affect the issues placed on the political agenda and promote policies that are mainly of interest to the rich. This lowers the political efficacy of the poor, who are less influential and perceive the political process as stacked against them. Political disillusionment and a withdrawal from political engagement follows. Resulting from this, all else equal, relative power theory posits that the poor participate less in politics when inequality is high. The mechanism seems feasible given that income inequality correlates with external political efficacy (Norris 2015), which in turn carries much explanatory weight for political ambitions such as becoming a candidate (Fox & Lawless 2011).

Studies of income inequality and representation have mainly analyzed effects on electoral participation with few exceptions.[2] Yet, the relative power theory should receive larger support when studying more time-consuming types of political participation. This is an argument put forward by Ritter and Solt (2019), who find support for the relative power hypothesis in US data on campaign participation. This further strengthens the relevance of studying inequality's effect on political selection, given that becoming a politician is among the more demanding political efforts possible.

In my view, relative power hypothesis links income inequality to individual motivations for becoming a politician by biasing the supply of candidates against those with a low income. According to the hypothesis, income inequality can do so in two ways: either by the rich gaining more control over politics, including political office, or by discouraging the poor from seeking political office. At the aggregate level, these two mechanisms will produce the same results: the average politician is more affluent than the average citizen is, when inequality is high. Against this background, I formulate a first hypothesis concerning the relationship between income inequality and the descriptive representation:

H1: There is a positive correlation between income inequality and the income gap between politicians and citizens.

A second hypothesis makes the opposite prediction on the effect of inequality and it relates back to the seminal Meltzer-Richard model. Although this hypothesis is mainly considered a supply-side factor in the literature, I believe it should also be connected to the demand-side. In terms of supply-side, conflict theory stipulates that growing inequality will increase the size of the electorate that profits from redistribution (Meltzer & Richards 1981; Oliver 2001). This will lead to a larger conflict over the resources available in society and political mobilization ensues among those who have more to gain from redistribution. Based on this, we can expect more low-income candidates when inequality is high.

Nonetheless, such a mobilizing force is unlikely to bear fruit without a political outlet, and this is where the demand-side factors likely have a role to play (Polacko et al. 2020). There are several studies of the dynamics between income inequality, mass preference formation and

[2] Results are mixed, although there is an overweight of studies that find a negative effect of inequality on participation (for an overview, see Polacko 2020).

party positions (i.e. McCarty et al. 2016). While little suggests that right-wing party strategies alter towards low-income mobilization, mobilization around economic issues in the face of rising income inequality is all the more feasible on the Left side of politics (Pontusson and Rueda 2010). After all, striving for increased equality has long been a central ideological tenet of left-wing parties and, historically, the political mobilization of low-income segments of the electorate has been a key ingredient to their success (Jusko 2017).[3]

Tavits and Potter (2014) argue that only left-wing parties will benefit from politicizing economic issues when income inequality is high. This is because larger economic inequality will increase the mass of voters with left-leaning views on economic policy. Left-wing parties seeking to maximize their electoral support will therefore do their utmost to increase the salience of the economic dimension in political conflict. In contrast, right-wing parties will seek to stress values-based issues in order to gain votes. The authors find support for this argument in party manifesto data (but see Barth et al. 2015).

Income inequality may affect the economic policy positions of the Right as well. Garand (2010) shows that right wing voters' opposition to redistribution grows under high income inequality and that redistribution demands intensify among left-wing voters. In order to accommodate these preferences, Left parties assume positions on economic policy that are further to the left, and Right parties reposition themselves to the right. The author finds support for this argument using US data on state-level inequality and legislator behavior.

Parties seeking to shift policy positions in order to mobilize certain groups in a convincing manner will likely adapt their selection strategies.[4] However, the new policy position may also affect who engages in a political party. It is empirically difficult to distinguish between supply- and demand-side explanations – that is – if parties act to mobilize or to accommodate an already mobilized electoral segment. In any case, the expected aggregate effect of inequality

[3] What happens with the political engagement among poor segments of the population is central to understanding what effect inequality has on politics. Pontusson and Rueda (2008) find that the effect of inequality on party positions is conditioned by low-income mobilization. At the same time, Polacko et al (2020) argue that polarization will mitigate the negative effect of inequality on participation. This is because, in a more polarized political system, inequality is expected to mobilize conflict over economic resources and increase overall political participation.

[4] For a similar argument concerning mobilization and ethnic representation, see for instance Celis et al. (2013), Sobolewska (2013) and van der Zwan et al (2019).

would be a change in the political selection in terms of the socioeconomic backgrounds of candidates.

Against this background, I argue that it is mainly among Left parties that we should expect a mobilization around economic issues when inequality rises – and therefore an increase of Left politicians with low incomes. If anything, we would expect the opposite among Right parties, with fewer politicians from a low-income background. This leads to the following hypothesis:

H2: Higher income inequality ameliorates the descriptive representation of lower income segments among Left politicians.

The hypotheses outlined in this section are not necessarily mutually exclusive. It is possible that overall supply of low-income candidates is lowered by higher inequality and that representation worsens, at the same time as party selection patterns are altered. A potential left-wing mobilization under high inequality may dampen (or even reverse) the negative effect of income inequality on low-income representation described in H1.

Voter preferences are also part of the dynamics connecting income inequality to political selection. This can occur through two mechanisms. First, voters may indirectly affect candidate composition of party lists by affecting party strategies under various income inequality levels. Following the discussion above, party selectors may strategically promote certain candidates in order to generate a greater appeal to certain electoral segments. This mechanism connecting voter preferences to descriptive representation is thus included in the logic of hypothesis H2.

The second mechanism of voter preferences on representation is independent of any changes to party selection strategies due to changing inequality. It is enabled by the fact that inequality is related to the party preferences of voters[5], which in turn determine the amount of seats awarded to different parties. Because parties differ with respect to the types of candidates they have on their lists, if inequality affects voter preferences, it will also affect the overall descriptive representation. For instance, more seats awarded to the Left (Moderate) party

[5] Both direct and indirect relationships between voter preferences and inequality are plausible. For instance, redistribution may be more demanded in more unequal municipalities. A type of sorting mechanism is also feasible, where rich voters may drive both Right-party popularity and inequality levels within a municipality. Moreover, different political parties are likely to have diverse effects on the distribution of income within a municipality.

will improve (worsen) overall income representation of elected politicians, even if the respective party's ballots remain identical. Neither of the hypotheses cover this mechanism and it must be therefore be controlled for in the analysis. Before introducing the data and method used in my empirical analysis, let me describe the case in which I test the hypotheses.

Institutional framework: the Swedish case

The empirical part of this paper consists of a single-case study of the association between income inequality and political selection within Sweden. This calls for a brief introduction and discussion of the case. Aside from a short overview of previous findings on the socioeconomic backgrounds of Swedish politicians, I believe it is worth thinking about how the case is situated in relation to the theoretical framework, i.e. whether the empirical results of the study can be generalized. It is also in order to introduce the political institutional setting in Sweden more closely.

Previous studies have found that there is a positive selection on individual socioeconomic factors among Swedish politicians (Dal Bó et al. 2017; 2020; Lindgren et al. 2016; 2019). This is despite the fact that in terms of parental social background, politicians do mimic the rest of the population's distribution (Dal Bó et al. 2017). In other words, social mobility generally seems to grant widespread opportunities of pursuing a political career in Sweden. Although individual traits matter for the prospects of being elected, childhood socioeconomic conditions do not seem to put definitive constraints on who can become a politician. Nonetheless, the degree of positive selection by income varies across municipalities, parties and party-list positions. The data on Swedish politicians can therefore help us understand when such selection is more or less intense and whether the distribution of resources within a political context matters.

I believe that the mechanisms connected to both hypotheses outlined in the previous section are feasible in the Swedish context. H1 requires political influence to be biased in favor of upper-income voters in order to operate. Persson (2020) finds that policy responsiveness in Sweden is to some degree stratified by income level. The political preferences of high-income voters are accommodated more often than the preferences of low-income voters. In line with

this, expert coders assess that – although it is still comparatively equal – political power has become slightly more unevenly distributed in Sweden over the past decades (V-Dem 2018). This provides some ground for the mechanisms of relative power theory. Still, Sweden is not an easy case for testing the relative power hypothesis with respect to political selection. In contrast, given the strong historic narrative of equality in Sweden, which is often connected to the strong labor movement in the country, the potential for Left parties to mobilize low-income voters around the topic of inequality should be comparatively high. The Swedish case should therefore be considered beneficial for the second hypothesis concerning left-wing mobilization to find support.

Continuing with the institutional setting. A general upside of conducting this study on Swedish data is that it allows for a large-N study that offers meaningful variation in inequality and representation, whilst holding the institutional, political and cultural context more or less constant. Sweden has a relatively decentralized political system with 290 municipal assemblies at the lowest political level. Each municipality has an elected council with between 21 and 101 seats, and these councils constitute a crucial function in the Swedish welfare system. The municipalities carry independent income taxation rights – with an average rate of roughly 21 percent – and wield roughly half of the total national public expenditure (Statskontoret 2018).

Most municipal politicians in Sweden are leisure-time politicians and, importantly, derive their main income from other sources. The political system in Swedish municipalities resembles the national level largely, with mainly eight parties that compete for power, although there are also local parties that have gained political representation. Municipal elections were held every third year up until 1994, when the term of office was extended to four years. Turnout is generally high in these elections, in part because Sweden has same-day elections to the national, regional and municipal assemblies. Municipal council seats are distributed proportionally and parties provide ballots with their candidates based on the selection and ranking of local party branches[6] (Sweden introduced preference voting in 1998 but has had little effect on political selection, see Folke et al. 2016).

[6] These two latter facts also make the mechanisms of H2 more feasible. First, proportional elections entail more parties, and in Sweden more left parties, which increase the probability of politicizing income inequality.

Data

The empirical analysis in this article makes use of population-wide administrative register data that contains numerous socioeconomic variables. This register has been coupled with digitized ballots on the universe of elected (and non-elected) political candidates in all Swedish municipal elections from 1982 to 2014.[7]

The variable used to construct the key variables in this analysis is individual income. In my main analyses, I use disposable income[8] as the basis of all income-related variables. Disposable income captures the actual level of resources that are available to individuals and is also observable for peers. Both these aspects make it suitable to use in order to test my hypotheses. Still, a possible concern with studying disposable income is the potentially endogenous relationship between income inequality, political selection and economic outcomes. Via taxes and redistribution, elected politicians have more influence on disposable income than they have on market income. Nonetheless, because income inequality is both a slow-changing concept and to a large degree determined by national-level politics, the endogeneity issue should be rather small.[9]

I restrict the data to individuals aged between 25 and 60 years in order to avoid a risk of bias from students and retirees. This risk is because students have relatively low incomes compared of their age group but are more prone to engage politically. For individuals around the retirement age, the fact that individuals who stay in the labor force are more likely to be politically active and to have a larger income also risks to induce bias. I also remove politicians that are elected to regional and national assemblies from the dataset and I remove individuals whose disposable income is zero or below for a given year.[10]

Second, the rather decentralized selection process means that local conditions likely have a larger impact on the selection strategies compared to a more centralized process.

[7] Data availability forces me to use the 2012 administrative data for all political candidates in 2014.

[8] The exact definition is total yearly household disposable income (divided by two for individuals with a partner). Due to data restrictions, adjustments concerning the number of children are not possible for the entire time series. However, for the years where both variables are available, analyses using the respective income variable essentially provide the same results.

[9] Using a lagged inequality variable provides results that are substantively the same.

[10] These are data anomalies that do not reflect actual income; very few (if any) Swedes have a zero disposable income.

The remaining panel covers ten election-years with a pooled sample of 41 million observations, among these 390 000 municipal political candidates and 105 000 elected politicians. The number of unique individuals in the dataset is 7.8 million and the number of unique elected politicians is 49 675. For the relatively few observations (4735 in total) politician-observations with a main income derived from their political career, I impute income levels from their pre-political career. This rich panel dataset is used to estimate the municipal variables for a total of 2860 municipal observations that are used in the main analysis.

Measuring representation

The main outcome variable in my analyses compares the income position of elected politicians to that of the population that they represent in the municipal assembly.[11] I begin by dividing all individuals into disposable income percentiles by municipality, and also by year, age-cohort (five-year intervals) and gender.[12] I do so in order to adjust for both growing wages over the time series and demographic effects on both income and political engagement.[13] In essence, the income percentile assigned to individuals thus reflects a relative standing compared to others of the same gender and age-cohort within a municipality, for each year in the dataset.

[11] This also adjusts for the fact that income is not evenly distributed across municipalities: neglecting to do this adjustment would bias the results. This is because the top income earners at the national level do not reside in certain municipalities. These municipalities are therefore more equal and, at the same time, neither their politicians nor their population would be located in the top national income percentiles. The income levels of the highest earner in a small, rural municipality do not amount to that of the highest earners in a larger city on the national level. Yet, their election probability in the respective municipality may be rather similar.

[12] A possible concern with these adjustments is that - in smaller municipalities - it could create a situation where small changes in absolute income lead to large changes in percentile. I have therefore rerun all analyses based on income vigintiles (splitting the distribution into twenty equally sized parts) instead of percentiles and the results do not change.

[13] The proportion of women elected to municipal assemblies has grown over time, but their income levels are lower than for men. Older people are more likely to have high incomes and to participate in politics. Failing to account for these trends may introduce a bias to the results.

I then define the degree of descriptive representation by income as the distance between the average income percentile for politicians and that of the remaining population[14]:

$$Income\ distance_{im} = Mean\ percentile\ politician_{im} - Mean\ percentile\ population_{im}$$

This measurement is calculated for each election-year *i* in each municipality *m* for all elected politicians. I also calculate separate measures for both elected Left-wing politicians and elected Right-wing politicians.[15] To reduce the risk of confusion, note that higher values on the outcome variable implies larger income distance and that this implies worse representation. I use the terms descriptive representation, (political) representation by income and the likes interchangeably hereon after.

Explaining representation

The main independent variable of interest in my analyses is income inequality. I calculate the top decile's share of total disposable income for each municipality without any sample restrictions. This measurement is a suitable operationalization of the elite-capture element of the hypotheses outlined in the theoretical section. I also run analyses with the Gini coefficient and a percentile-ratio variable measuring bottom-end inequality (p10/p50). This provides some insight to how the structure of income inequality affects the results.

As was mentioned in the theoretical section, the share of votes awarded to different parties can also affect the composition of elected assemblies, even when holding party lists fixed. I therefore gather the vote shares of all represented parties in all municipality-elections from official sources and include these as a control variable. As with the outcome variables, I group vote shares by party bloc. Figures A3 to A5 in the Appendix show the relationship between party bloc vote shares and inequality levels or income representation. Left parties draw larger support in low-inequality municipalities and there is a positive correlation between their

[14] Given that I divide the population in percentiles by municipality – thus creating a near-uniform distribution – it may seem superfluous to subtract the average population percentile. However, I do so to maintain accuracy – if the non-politician population for some reason has an average percentile that deviates from the median.
[15] The Social Democrats, the Left Party and the Greens are defined as Left-wing, and the Moderates, the Center Party, the Christian Democrats and the Liberal party are defined as Right-wing. I pool these parties in order to limit a potentially large outlier influence in small parties and small municipal assemblies.

overrepresentation of high income and vote share. Right parties, on the other hand, are more popular in less equal municipalities and, as a bloc, improve their descriptive representation slightly when their vote share increases.

I include a few other municipality-level control variables in the analysis. Larger municipalities are likely to have higher inequality levels but also a more intense political competition within and between parties than is the case in smaller municipalities. This can favor or attract candidates with more resources. Given the large positive skew in municipality size[16], I include the natural logarithm of the variable. Furthermore, the ethnic composition of a municipality may also confound the relationship between inequality and representation. In general, foreign-born individuals in Sweden have lower incomes and are politically underrepresented (Dancygier et al. 2020). I therefore include a variable measuring the share of foreign-born within each municipality in order to account for this potential confounder. Finally, I include average education as a control variable. The fact that education is conducive to political participation and linked to the stratification of income in municipalities motivates this (Lindgren et al. 2019).

I calculate these variables for each municipality and ten election-years from 1982 to 2014. The resulting data has a panel structure with 2860 municipality-years as units of analysis.

Descriptive statistics and trends

Table 1 below shows descriptive statistics for the main variables used in the analysis. Both the outcome variable and the main independent variable exhibit within- and between-municipal variation. The variation within municipalities over time is slightly larger than that between municipalities for both variables. A few things can be mentioned about the general time trends of these variables. Elected left-party politicians show a tendency towards better income representation over time; the income distance between Left politicians and the population is larger at the beginning of the time series than at the end. The change in Right income representation is U-shaped over time and the variation here is generally larger, both

[16] The municipal population size varies between 2 500 and 830 000 within the dataset and has a positive skew, which stems from a few large municipalities.

between and within municipalities over time. Figure A1 in the Appendix shows how income representation has changed for both party blocs from 1982 to 2014. The average level of municipal inequality increases over time as does the variation in inequality between municipalities. The histogram over top income shares in Figure A2 in the Appendix depicts a positively skewed distribution with some extreme values to the right. Roughly one percent of the municipalities have an income inequality value above 0.3, which is a cut-off point I will use for sensitivity analyses.[17]

Table 1. Descriptive municipality-level statistics

	Obs	Mean	Std dev	min	max
Top decile's income share	2860	0.205	0.033	0.180	0.562
- between municipalities			0.018		
- within municipalities			0.028		
Income distance (all elected)	2860	10.02	6.458	-11.28	31.19
- between municipalities			4.129		
- within municipalities			4.975		
Right-bloc income distance	2860	9.547	10.30	-44.31	47.32
Left-bloc income distance	2860	11.26	7.959	-44.43	34.97
Average education	2860	10.94	0.811	9.457	14.38
Municipal immigrant share	2860	0.090	0.059	0.009	0.461
Municipal size (ln)	2860	9.681	0.887	7.636	13.51
Left vote share	2860	0.491	0.115	0.116	0.834
Right vote share	2860	0.448	0.115	0.095	0.879
Gini (not used in main results)	2860	0.251	0.044	0.181	0.562
P10P50 (not used in main results)	2860	0.571	0.072	0.266	0.705

Table 1 displays pooled values for the main variables used in the analyses in ten election-years from 1982 to 2014. Income distance is defined as the average percentile for elected politicians subtracted by the average percentile for the remaining population within a municipality. The sample used for calculating these variables is restricted to individuals aged 25 to 60. Individual income derived from household disposable income used in all variables. All other municipal variables are calculated on the basis of the entire adult population within each municipality.

Method

My empirical analysis of the relationship between descriptive representation by income and income inequality consists of two parts. The first part graphs the relationship between

[17] This is 1.5 times the inter-quartile range above the top quartile, a frequent definition of an outlier.

political representation by income and income inequality. The second part uses multi-variate OLS with year-fixed effects in an attempt to isolate the relationship between income inequality and income representation. Regrettably, there is not enough within-municipal variation in terms of income inequality to apply municipality-fixed effects. The models are constructed using the following equation:

$$Income\ distance_{mi} = \alpha + \beta_1\, Top\ 10\ share_{mi} + \beta_4\, Vote\ share_{mi} + \delta \mathbf{K}'_{mt} + \epsilon_{mi} \quad (1)$$

All variables are measured for municipality *m* and year *i*. **K** is a vector of the control variables outlined in the previous section. The independent variable of main interest is municipal income inequality and in the main analyses, it is measured as the top 10 percent's share of the total municipal income. The relative power hypothesis (H1) posits a positive β_1, meaning that inequality leads to a larger income distance between elected politicians and the population.

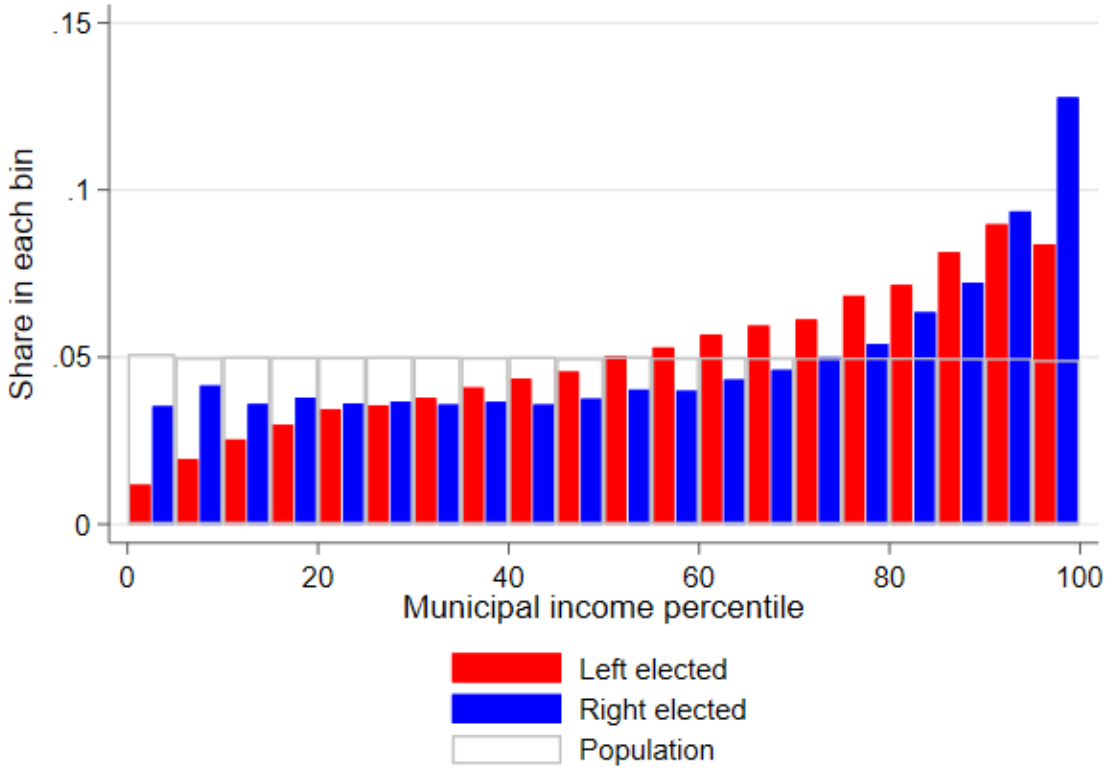
In order to test H2, I study if (and how) the two party blocs contribute to the overall association between income representation and income inequality. I do so by specifying regression models based on equation (1) with income representation measured for respective party bloc separately.

Moreover, in an extended analysis, I examine whether income inequality has heterogeneous effects on representation in different parts of the income distribution. I do so in order to deal with the fact that studying the outcome using average percentiles may conceal interesting patterns at a disaggregated level.

Results

The graph below shows where all elected Right- and Left-politicians place in the municipal income distribution, compared to the population. Recall that the percentiles are calculated by municipality, year, gender and age-cohort.

Figure 1. Elected politicians in the municipal income distribution



Notes. The distribution of all elected municipal politicians from the Right and Left blocs across the municipal income distribution (controlling for age-cohort and gender). Sample is restricted to individuals aged 25 to 60. Individual income derived from household disposable income is used in the analysis. The transparent bins display the population's distribution and the Blue and Left bars within each transparent bin pertain to the same part of the income distribution.

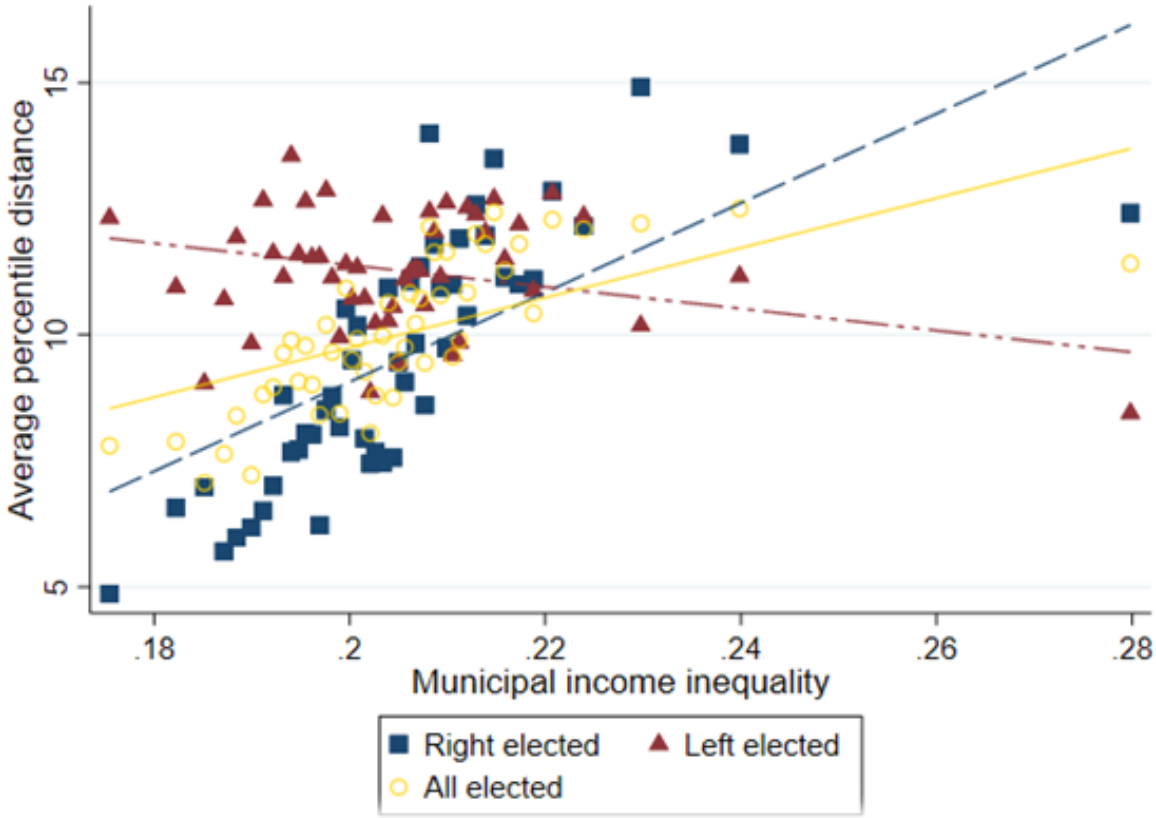
The main takeaway from Figure 1 is that Swedish municipal politicians display a clear positive selection in terms of disposable income. For both party blocs, there is an underrepresentation of low incomes and a corresponding overrepresentation of high incomes. Compared to their political opponents, Right-wing municipal politicians are overrepresented both at the top and at the bottom of the income distribution. It is worth noting that the Left is more popular in less wealthy municipalities and therefore - in absolute terms - politicians in the blue bars at the top are richer than in the corresponding red bars. The Right-wing parties are better represented in the lower parts of the income distribution than the Left parties are, which is perhaps somewhat surprising. Additional analyses suggest that the Right-wing representation in this segment of the distribution can largely be attributed to the Center Party in the 1980s

and the Christian Democrats in the 1990s.[18] Figure A1 in the Appendix shows that – over time – the Right's selection has shifted markedly towards more middle-income politicians, lowering representation at both the absolute top and bottom. The same figure shows that Left representation has increased in the lower half of the distribution and, by definition, decreased among upper incomes, with the exception of a slight increase at the absolute top.

Both Left and Right municipal politicians are on average higher up in the income distribution than the populations that they are representing.[19] Still, as Table 1 showed, the average gap between politicians and population is larger for the Left compared to the Right. Figure 2 below provides a first look at the relationship between income representation and the distribution of income within municipalities.

Figure 2. Income representation and income inequality

(Controlling for year-fixed effects and vote shares)



Notes. Binscatter of relationship between inequality and representation. Year-fixed effects and controls for party vote shares are included. Y-axis shows the distance between average income percentile for elected politicians

[18] Available upon request. The Center party is popular within the low-earning agricultural sector. The reason for the Christian Democrat representation in these segments is unclear to me.

[19] Additional analyses show that politicians from the Sweden Democrats and local parties have a more even representation across the income distribution.

within a municipality and its population. X-axis shows the inequality level (top decile's share of total income) within a municipality. Individual income derived from household disposable income is used in the analysis. Sample is restricted to individuals aged 25 to 60. Percentiles are adjusted for age-cohort and gender. Higher values on the Y-axis indicate worse income representation. Bin size: n=50.

Figure 2 shows the relationship between income inequality and the income percentile distance between elected politicians and the population they represent, when controlling for time trends and party vote shares. The yellow line illustrates a positive relationship between the overall income distance and municipal inequality. In other words, as income inequality grows so does the income distance between elected politicians and the population. On average, a one-standard deviation increase in income inequality is associated with a 1.6 income percentile larger distance between politicians and the population.[20] This provides some initial support to H1, which posits a positive slope for all politicians. When looking at the relationship between inequality and respective party bloc, it becomes clear that right-wing politicians drive the aggregate pattern. The blue line is roughly twice as steep as the yellow line and right-wing politicians become less representative of the population as income inequality grows. The Left bloc, in contrast, starts at high values on the Y-axis but income representation improves somewhat with higher inequality.[21] As Figure A6 in the Appendix shows, this latter relationship is the only one that is sensitive to the exclusion of outlier municipalities.

As I have mentioned earlier, several potential confounders may influence the estimated results. I therefore move on to the regression part of the analysis.

Regression results

Table 2 below shows the regression model with the income distance between the politicians and population within a municipality using all elected politicians as the dependent variable.

[20] This corresponds to one-sixth of a standard deviation in the outcome variable.
[21] Figures A3 and A4 in the Appendix show that Left parties are much more popular in low-inequality municipalities and that the gap between Left politicians and the population tends to grow as the number of Left seats grow. Social Democrat politicians drive this.

Table 2. Regression model of income distance for all elected

	(1)	(2)	(3)	(4)
Top 10 share	49.33**	-7.581	-18.55**	-20.58**
	(22.39)	(8.920)	(7.603)	(8.355)
Controls				
Year FE	YES	YES	YES	YES
Left vote share	YES	YES	YES	YES
Municipality size		YES	YES	YES
Immigrant share			YES	YES
Average education				YES
Obs	2860	2860	2860	2860
Adj. R^2	0.151	0.324	0.357	0.357
Constant	-2.667	-21.83***	-15.99***	-17.04***

*Notes. Outcome variable is defined as the difference in average percentile between all elected politicians and the population within a municipality. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. Control variable estimates can be seen in Table A1 in the Appendix. *** p<0.01, ** p<0.05, + p<0.1*

The first estimate in Table 2 corresponds to the gradient of the yellow line's slope in Figure 2. It indicates a positive relationship between inequality and the income distance between elected politicians and their population, when keeping Left vote share constant and adjusting for time trends. Controlling for municipality size in model (2) renders this positive relationship null. A possible explanation for this change is that larger municipalities tend to be both more unequal and more politically competitive, which may attract or favor candidates that are more resourceful. Model (3) controls for the share of foreign-born individuals in the municipality and the estimated relationship between income inequality and income distance is now significantly negative. That the inequality estimate changes is probably caused by the fact that immigrants are both poorer, on average, and underrepresented among politicians. A larger share of immigrants will therefore be associated with a larger income distance between politicians and the population, but also with higher inequality. When controlling for

this, income inequality relates to a further improvement of the income representation of politicians.

Perhaps somewhat surprisingly, little happens when controlling for average education in model (4). The estimated relationship between inequality and income distance is still negative and significant at a 95 % level. The estimate size suggests that when municipal income inequality grows by one standard deviation, we can expect a 0.67 percentile smaller income distance between elected politicians and the population.[22] This does seem like a rather small estimate, although it is difficult to assess the magnitude without any similar studies that could offer a benchmark. Regardless, when controlling for numerous factors, income inequality is connected to better political representation by income. This goes against the relative power hypothesis described in H1.[23]

As I argued in the theoretical section, there is reason to believe that the two party blocs differ in how their political selection is shaped by income inequality. Bolstered by the patterns displayed in figure 2, it is possible that the two party blocs contribute differently to the overall picture of how inequality affects income representation. Table 3 below estimates the same regression models as Table 2, but the outcome variables is calculated separately for each bloc. Panel A contains regression estimates of the relationship between income inequality and the income distance for Left parties. Panel B contains regression estimates of the same kind for Right parties.

[22] This corresponds to one-fifteenth of a standard deviation in the outcome variable. Additional analyses suggest that changes within the Social Democrats, the Liberal party and the Center party drive these negative estimates, as Table A8 in the Appendix shows. Yet, as I argued in the methodological section, such disaggregated analyses are highly sensitive to within-party outliers and demand cautious interpretation.
[23] Table A2 displays a sensitivity check that removes the 36 outliers from the analyses. The final estimate is still negative, although not significant.

Table 3. Inequality and income distance for respective party bloc

	(1)	(2)	(3)	(4)
Panel A: LEFT PARTIES				
Top 10 share	-21.60	-65.97***	-73.19***	-38.61***
	(17.88)	(12.20)	(12.31)	(11.39)
Panel B: RIGHT PARTIES				
Top 10 share	94.28***	22.63	0.540	-25.88
	(32.81)	(17.15)	(14.23)	(16.00)
Controls (both panels)				
Year FE	YES	YES	YES	YES
Left/Right vote share	YES	YES	YES	YES
Municipality size (ln)		YES	YES	YES
Immigrant share			YES	YES
Average education				YES
Obs	2860	2860	2860	2860
Adj. R^2 (Panel A)	0.087	0.156	0.165	0.191
Adj. R^2 (Panel B)	0.090	0.211	0.247	0.256

*Notes. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. Table A3 in the Appendix shows control variable estimates. *** p<0.01, ** p<0.05, + p<0.1*

Panel A in Table 3 shows a consistently negative relationship between income inequality and Left-party income distance. When income inequality grows, the average income representation of the Left improves. In Model 1, the estimate is negative but imprecise. When controlling for municipality size in Model 2, the size of the estimate triples and its precision improves. Including immigrant share in Model 3 further strengthens the estimated relationship between income inequality and Left income representation. The size of the estimate in Model 3 suggests that when income inequality grows by one standard deviation, the income distance between Left politicians and the population decreases by 2.4 percentiles, which is almost one-third of a standard deviation. Controlling for average education in Model 4 reduces this to 1.3 percentiles. This is the only control variable that behaves differently compared to Table 2.[24] Taken together, the results are in line with hypothesis 2: income

[24] Whereas the inclusion of education as control variable mattered little for inequality's effect on representation in Table 2, this is not the case when it comes to the two party blocs. As Table A4 in the Appendix shows, the income representation of the two party blocs relates to average education in opposite ways: it is positively related to Right income distance, but negatively related to that of the Left. This can help

inequality leads to a mobilization of low-income segments of the population among Left parties.

The results for Panel B suggest that the relationship between income inequality and Right-party income distance varies substantially depending on what control variables are included. Model 1 represents the quite steep and positive gradient of the blue line in Figure 2. This relationship weakens and disappears when controlling for municipality size and immigrant share in Models 2 and 3. Controlling for average education in Model 4 reverses the estimate sign. Taken together, this indicates that there may be a negative association between income inequality and Right income representation: the estimate is non-trivial but remains insignificant.

The sensitivity analyses shown in Table A4 in the Appendix suggest that the estimate of Model 4 in Panel B is quite sensitive to outliers. Excluding municipalities that have very high inequality from the analysis reduces the estimate to one-fifth. As for the estimates in Panel A, the sensitivity analyses provide similar results as the main analysis. Another type of robustness check concerns the structure of inequality. The main independent variable above measures the top 10 percent's share of the total income. This is theoretically motivated, but I also run models with two other inequality measurements, the Gini coefficient and a P10/P50 percentile ratio. Tables A9 to A12 in the Appendix display these results. To summarize the results briefly, the Gini variable produces very similar results to the ones above, but bottom-end inequality seems to be less relevant for the descriptive representation of income.

The analyses above have found that income inequality among the electorate is associated with changes in political selection and an improvement of the overall descriptive representation by income. As income inequality grows – and controlling for a number of relevant variables – the income distance between municipal politicians and the population that they represent decreases. The Left mainly drives this: but if anything, Right politicians display a pattern pointing in the same direction and it is not evident that the two estimates are substantively different.

explain why including education as a control variable has a different effect when the party blocs are pooled in Table 2, compared to when modeling each party bloc separately in Table 3.

The outcome variable in the analyses above focuses on the average income percentile of politicians. This has its benefits, but as an aggregated measurement, it also conceals where in the income distribution that changes occur. As I discussed in the theoretical section, it is possible that inequality affects political participation in different ways across the income spectrum. This warrants an exploration of where in the income distribution the changes in political selection occur. I do this in the next section, where I also discuss how income in absolute terms may affect the empirical patterns.

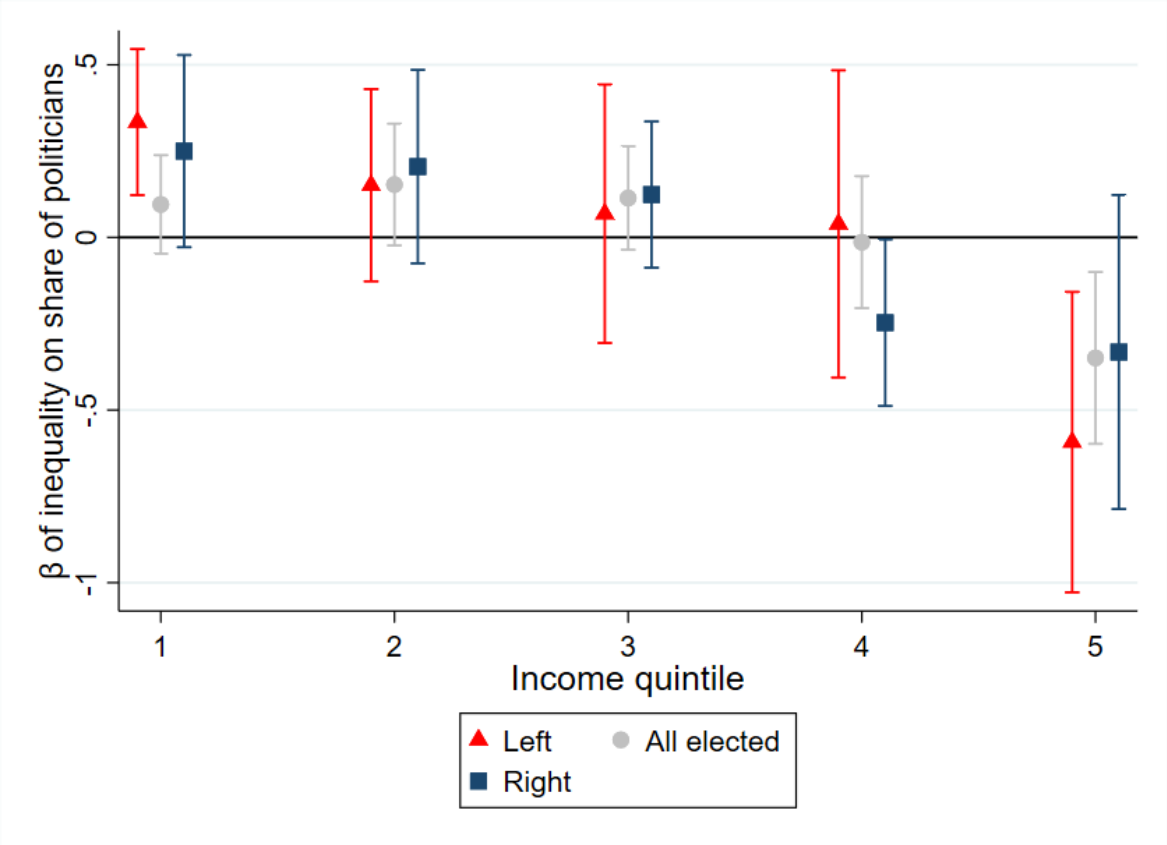
Additional analyses

This section contains two additional analyses: the first concerns the heterogeneity of the results and the second deals with absolute income as a confounding variable.

Figure 3 shows the estimated association of income inequality on the share of politicians located in either of the five income quintiles. The estimates are based on the fully-specified regression models as per equation (1), or, Model 4 in the regression tables above. The figure contains 15 separate regression estimates pertaining to three groups: five estimates for all elected politicians (gray circles), five estimates for Left elected (red triangles) and five estimates for Right elected (blue squares). The non-standardized β coefficients show the estimated linear relationship between income inequality and the share of respective elected group within each of the five income quintiles, when including all control variables.

Figure 3. Inequality and the share of elected in each income quintile

(Regression estimates based on fully-specified models. 95% CI bounds)



Notes. 15 non-standardized regression estimates with 95% confidence intervals from sub-sample analyses. Estimated association between inequality (top 10 income share) and outcome variable measuring the share of (all/Left/Right) elected politicians within each of five municipal income quintiles. All estimates are based on fully-specified regression models that include controls for time trends, party bloc vote share, municipality size (log-transformed), immigrant share of the population and average years of education. Individual income derived from household disposable income is used in the analysis. The five income quintiles are communicating vessels and, per definition, the sum of all coefficients across all quintiles is zero. Regression estimates used to create this figure are shown in table A6 in the Appendix. The number of observations in each regression is 2860.

Figure 3 suggests that the positive association between income inequality and overall income representation probably stems from changes at the top of the income distribution. This is where the estimated coefficients are negative and significant. The value of the gray marker suggests that the share of politicians residing within the richest quintile decreases by an average of 0.01 as income inequality increases by one standard deviation. It is perhaps not a large shift, given that the baseline share within this quintile is 0.32 with a standard deviation

of 0.1.[25] It is the only significant estimate for all elected politicians, but by mathematical necessity (the sum of all five coefficients is per definition zero), we know that it must be corresponded by an increase in the share of politicians in lower quintiles. Based on the remaining gray estimates, our best guess is that this increase occurs in the three lower quintiles, but I cannot assess the precise changes.

The Left bloc seems to drive the decrease in the share of politicians in the top quintile. On average, when income inequality grows by a standard deviation, we can expect the share of Left politicians in the top quintile to decrease by 0.02. This is mainly compensated by an increase in the share in the lowest quintile by 0.01. These estimates can be compared to the baseline share of Left politicians, which is 0.31 in the top quintile and 0.09 in the bottom quintile.[26] Overall, the estimated change in Right representation correlated with an increase in income inequality follows a similar pattern to that of the Left. The trend suggests that income inequality shifts the backgrounds of Right politicians from high to low income, but except for the negative coefficient in quintile 4, all estimates are imprecise.[27]

A valid critique against the overall empirical results above is that income in absolute terms may be driving the results. Municipalities with high inequality may have higher incomes in the lower realms of their respective income distribution. Considering that income in absolute terms is conducive to becoming a politician, my main results may therefore simply be a reflection of this empirical fact. One way of controlling for this would simply be to add a variable measuring the absolute income levels among the poor. Unfortunately, such a method is complicated by the fact that this variable is closely correlated with top income inequality and that there is little municipal inequality variation left in my models. I instead divide the municipalities into two groups, depending on the average income level in the lowest income decile of respective municipality. In Table 4, I rerun my main model specification for the two subgroups to see if the party bloc results change depending on the income level in the poorest segment of respective municipality.

[25] Tables A5 and A6 in the Appendix provide summary statistics or the shares of politicians across municipal income quintiles and the regression model estimates.
[26] A standard deviation of Left share is 0.13 in the top quintile and 0.08 in the bottom quintile.
[27] Sensitivity analyses show that all significant estimates but the Left quintile 5-estimate are sensitive to outliers.

Table 4. Party bloc results and first decile's income level

	(1) Lower income in 1st decile	(2) Higher income in 1st decile
Panel A: LEFT PARTIES		
Top 10 share	-41.55***	-34.99*
	(15.88)	(19.95)
Panel B: RIGHT PARTIES		
Top 10 share	-13.40	-22.28
	(19.13)	(20.02)
Controls (both panels)		
Year FE	YES	YES
Left/Right vote share	YES	YES
Municipality size (ln)	YES	YES
Immigrant share	YES	YES
Average education	YES	YES
Obs	1431	1429
Adj. R^2 (Panel A)	0.145	0.141
Adj. R^2 (Panel B)	0.283	0.134

*Notes. Sample in Column 1 is restricted to municipalities where the average income in the first decile is among the lowest 50%. Sample in Column 2 is restricted to municipalities where the average income in the first decile is among the highest 50%. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

As in previous tables, Panel A (B) shows the results for Left-bloc (Right-bloc) politicians. Column 1 shows the results for the half of the municipalities that have the lowest average income in the first income decile. The sample used for the models in column 2 have higher absolute income levels in the lowest decile. Overall, all coefficients in Table 4 are negative, suggesting that absolute income does not explain my main results. However, Table 4 also depicts differences in the empirical patterns for the two party blocs. For the Left bloc, the estimate is larger and more precise in column 1 than in column 2. If anything, this suggests that Left parties select more politicians with low absolute income when income inequality grows. For the Right bloc, both estimates are insignificant (even at the 90% level) and the estimate size is larger among municipalities with higher income in the first decile. This suggests that absolute income levels may partly drive the empirical connection between higher income inequality and improved descriptive representation among Right-bloc politicians. Right parties in municipalities with higher income inequality may thus have better

descriptive representation of lower income partly because those with lowest incomes are richer in absolute terms than their counterparts in municipalities that are more equal.

Before discussing the broader implications of the findings in this paper, let me briefly sum up the results. The initial regression estimates in both Figure 2 and Table 2 suggest that income inequality reinforces the positive selection by income of municipal politicians. Yet, controlling for municipal size, immigrant share and educational level reverses the estimates. Income inequality is thus associated with an overall improvement of the descriptive representation by income. As the results presented in Table 3 suggest, Left parties mainly drive these results. Furthermore, sub-sample analyses indicate that the changes in Left representation occur at the absolute top and bottom of the income distribution. Overall, my results go against H1 but provide support for H2.

Concluding discussion

This paper has provided the first analysis of the relationship between income inequality and descriptive representation by income. How well political class resembles the population that they represent arguably has both normative and empirical implications regarding the functioning of democracy (Phillips 1995; Carnes 2012). Moreover, the fact that political representation and influence relates to socioeconomic status raises questions of whether growing income inequality in itself constitutes a threat to the democratic ideal of political equality. The results of this paper offer several insights that need a closer discussion.

This article tested two hypotheses. First, the relative power hypothesis suggests that growing income inequality leads to an elite-capture of the political process, which demobilizes the poor from participating and lowers the supply of low-income candidates. Second, a mobilization hypothesis posits that Left-party mobilization under higher income inequality boosts the participation of low-income earners; a hypothesis that can be connected to both supply- and demand-side factors of political recruitment.

The empirical analyses indicate that unequal municipalities have worse descriptive representation by income, but that this relationship is spurious. When controlling for various municipal controls, income inequality in itself does not seem to explain the general upper-

income bias in political representation. On the contrary, the results show that income inequality is associated with a decrease in the income distance between politicians and the population, i.e. better descriptive representation. This relationship is more clearly connected to Left parties, whose descriptive representation is found to improve as income inequality grows. In other words, the article finds no support for hypothesis 1 but all the more for hypothesis 2.

A surprising finding is that Right parties also display some signs of improved descriptive representation when income inequality grows. A potential reason for this is that top-earners may sort into municipalities that are unlikely to make political decisions that threaten their wealth (see Kasara & Suryanyaran 2015). To some extent, this should however be accounted for by the control variables measuring party vote share. If I may speculate a bit, I see two possible supply-side explanations for why the rich would engage less in politics when inequality is high.

First, municipalities with high income inequality probably have more lucrative career opportunities for those at the top of the income distribution compared to municipalities with low income inequality. In other words, the opportunity cost for the wealthiest might be higher when income is less evenly distributed, thus rendering a political career less attractive. I do also find some evidence indicating that the results for the Right bloc may be more about absolute income levels rather than income inequality.

Second, the dynamics connecting political power to income inequality could also create disincentives for upper-income earners to engage in politics. As Anderson and Beramendi (2008) argue – in line with the relative power hypothesis – another mechanism is possible here as well. If high inequality enables the affluent to shape the political agenda and exert enough political influence so that politicians safeguard their political preferences, then conventional forms of political participation can become superfluous. Nonetheless, given the relatively equal distribution of political power associated with the Swedish case, this mechanism is perhaps less likely here.

A couple of drawbacks with the study should be mentioned. The analyses do not allow a strict assessment between supply- and demand-sides explanations for the results in this study. This could perhaps be remedied through qualitative studies of the motivations underlying political

candidacy. Another way of gaining more insight in these mechanisms would be to study the internal dynamics of party selection with respect to strategies in relation to income inequality as well as the demand for candidates from a certain socioeconomic background. Furthermore, the fact that this study is based on Swedish data carries some implications for the generalizability of the results. The hegemonic and dominant position of the Social Democrats in large parts of Sweden is perhaps unrepresentative in comparative terms. Presumably, the poor income representation of the Left in more equal municipalities as well as the ability to improve descriptive representation when income inequality changes can be somewhat idiosyncratic. The low-income mobilization by the Left may face higher hurdles in other countries, for instance, where the labor movement has historically been weak and the welfare state less encompassing.

Although income inequality in itself may not lead to increased political inequality in office, efforts aimed at reducing socioeconomic inequality may still entail better descriptive representation. The socioeconomic gradient in political participation suggests that improved access to higher education as well as increased redistribution are likely to lead to a more even spread in political engagement across the income distribution. In similar vein, improving integration and ameliorating the political representation of immigrants will likely improve overall descriptive representation by income.

Future work should look at the association between income inequality and political selection in other contexts. I found no support for the relative power hypothesis, despite the argument that more demanding political activities make the hypothesis more plausible. Still, as I argued earlier, Sweden constitutes a hard case for the hypothesis. The results presented in this article should perhaps not disqualify the argument as such. Studies of how income inequality relates to other forms of political participation would also help deepen our knowledge of how economic inequality shapes various types of political engagement. It would also be interesting to dig deeper into the conditions under which mobilization or demobilization of various income groups does occur when inequality grows. This relates to the aforementioned supply- and demand-side factors but also to the political and institutional contexts that may affect these factors.

Income inequality has grown rapidly within advanced democracies over the past decades. When it comes to understanding how this development shapes our political systems, much still remains to be uncovered.

References

Aberbach, Joel D., Robert D. Putnam, and Bert A. Rockman. 1981. *Bureaucrats and Politicians in Western Democracies*. Harvard University Press.

Allen, Peter. 2018. *The Political Class: why it Matters who our Politicians are.* Oxford University Press.

Anderson, Christopher. J., and Pablo Beramendi. 2008. "Income, Inequality, and Electoral Participation." In Anderson, Christopher. J., and Pablo Beramendi. (eds.) Democracy, Inequality and Representation: A Comparative Perspective. Oxford: Oxford University Press.

Bartels, Larry. M. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age.* Princeton, NJ: Princeton University Press.

Barth, Erling, Henning Finseraas, and Karl O. Moene. 2015. "Political reinforcement: how rising inequality curbs manifested welfare generosity." *American Journal of Political Science* 59(3): 565-577.

Blondel, Jean, and Ferdinand Müller-Rommel. 2007. "Political elites." in Dalton, Russell J., and Hans-Dieter Klingemann (eds.) *The Oxford Handbook of Political Behavior*. Oxford University Press, USA.

Brady, Henry E., Sidney Verba, and Kay Lehman Schlozman. 1995. "Beyond SES: A resource model of political participation." American Political Science Review, 89(2): 271- 294.

Butler, Daniel M. 2014. *Representing the Advantaged: How Politicians Reinforce Inequality*. Cambridge University Press.

Carnes, Nicholas. 2012. "Does the numerical underrepresentation of the working class in Congress matter?" *Legislative Studies Quarterly*, 37(1), 5-34.

Carnes, Nicholas and Noam Lupu. 2015. "Rethinking the Comparative Perspective on Class and Representation: Evidence from Latin America." *American Journal of Political Science* 59(1): 1-18.

Carnes, Nicholas. 2020. *The Cash Ceiling: Why Only the Rich Run for Office--and What We Can Do about It*. Princeton University Press.

Celis, Karen, Floor Eelbode, and Bram Wauters. 2013. "Visible ethnic minorities in local political parties: A case study of two Belgian cities (Antwerp and Ghent)." *Politics* 33(3): 160-171.

Chattopadhyay, Raghabendra, and Esther Duflo. 2004. "Women as policy makers: Evidence from a randomized policy experiment in India." *Econometrica* 72.5: 1409-1443.

Cole, Wade M. 2018. ''Poor and powerless: Economic and political inequality in cross--national perspective, 1981—2011''. *International Sociology* 33(3): 357—85.

Dal Bó, Ernesto, Frederico Finan, Olle Folke, Torsten Persson, and Johanna Rickne. 2017. "Who becomes a Politician''. *The Quarterly Journal of Economics* 1877-1914.

Dal Bó, Ernesto, Frederico Finan, Olle Folke, Torsten Persson and Johanna Rickne. 2020. "Economic and Social Outsiders but Political Insiders: Sweden's Radical Right." Unpublished manuscript.

Dancygier, Rafaela, Karl-Oskar Lindgren, Pär Nyman, and Kåre Vernby. 2020. "Candidate Supply Is Not a Barrier to Immigrants Representation: A Case–Control Study." *American Journal of Political Science*.

Ellis, Christopher. 2013. ''Social Context and Economic Biases in Representation''. *The Journal of Politics*, 75(3): 773—786.

Elsässer, Lea, Svenja Hense, and Armin Schäfer. 2017. "„Dem Deutschen Volke "? Die ungleiche Responsivität des Bundestags." *Zeitschrift für Politikwissenschaft* 27.2: 161-180.

Folke, Olle, Torsten Persson, and Johanna Rickne. 2016. "The primary effect: Preference votes and political promotions." *American Political Science Review* 110(3).

Fox, Richard L., and Jennifer L. Lawless. 2011. "Gendered perceptions and political candidacies: A central barrier to women's equality in electoral politics." *American Journal of Political Science* 55(1): 59-73.

Gallego, Aina 2016. "Inequality and the erosion of trust among the poor: experimental evidence." *Socio-Economic Review* 14(3): 443-460.

Garand, James C. 2010. "Income inequality, party polarization, and roll-call voting in the US Senate." *The Journal of Politics* 72(4): 1109-1128.

Gilens, Martin. 2005 "Inequality and democratic responsiveness." *Public Opinion Quarterly* 69.5: 778-796.

Goodin, Robert, and John Dryzek. 1980. "Rational Participation: The Politics of Power." *British Journal of Political Science*, 10(3): 273-290.

Goubin, Silke, and Marc Hooghe. 2020. "The Effect of Inequality on the Relation Between Socioeconomic Stratification and Political Trust in Europe." *Social Justice Research*: 1-29.

Gulzar, Saad. 2021. "Who Enters Politics and Why?" *Annual Review of Political Science*, 24.

Heath, Oliver. 2015. "Policy representation, social representation and class voting in Britain." *British Journal of Political Science* 45(1): 173-193.

Hermansen, Mikkel, Christophe André, and Orsetta Causa. 2018. "Income Inequality in the Nordics from an OECD Perspective." Nordic Economic Policy Review, 17:57.

Houle, Christian. 2018. "Does economic inequality breed political inequality?" *Democratization* 25(8): 1500-1518.

Jusko, Karen Long. 2017. *Who speaks for the poor?: electoral geography, party entry, and representation.* Cambridge University Press.

Kasara, Kimuli, and Pavithra Suryanarayan. 2015. "When do the rich vote less than the poor and why? Explaining turnout inequality across the world." *American Journal of Political Science* 59(3): 613-627.

Krieckhaus, Jonathan, Byunghwan Son, Nisha Mukherjee Bellinger, and Jason M. Wells. 2014. "Economic inequality and democratic support." *The Journal of Politics* 76.1: 139-151.

Lindgren, Karl-Oskar, Sven Oskarsson, and Christopher T. Dawes. 2017. "Can Political Inequalities Be Educated Away? Evidence from a Large-Scale Reform." *American Journal of Political Science* 61(1): 222-236.

Lindgren, Karl-Oskar, Sven Oskarsson, and Mikael Persson. 2019. "Access to education and political candidacy: Lessons from school openings in Sweden". Economics of Education Review 69: 138-148.

Lupu, Noam, & Zach Warner. 2021. "Why are the affluent better represented around the world?" *European Journal of Political Research.* doi: 10.1111/1475-6765.12440

McCarty, Nolan, Keith T. Poole, and Howard Rosenthal. 2016. *Polarized America: The dance of ideology and unequal riches*. MIT Press.

Meltzer, Allan H., and Scott F. Richard. 1981. "A Rational Theory of the Size of Government." Journal of Political Economy, 89(5): 914-927.

Norris, Pippa, and Joni Lovenduski. 1995. *Political recruitment: Gender, race and class in the British Parliament*. Cambridge University Press.

Norris, Mikel. 2015. "The Economic Roots of External Efficacy: Assessing the Relationship between External Political Efficacy and Income Inequality." *Canadian Journal of Political Science/Revue canadienne de science politique*: 791-813.

Oliver, Eric J. 1999. "The Effects of Metropolitan Economic Segregation on Local Civic Participation." American Journal of Political Science, 43(1): 186-212. Pareliussen, Jon K.,

Persson, Mikael, and Mikael Gilljam. 2017. "Who Got What They Wanted? The Opinion-Policy Link in Sweden 1956-2014." *Mimeo*. University of Gothenburg.

Persson, Mikael. 2020. "From Opinions to Policies: Examining Links between Citizens, Representatives, and Policy Change." Working paper.

Peters, Yvette, and Sander J. Ensink. 2015. "Differential responsiveness in Europe: The effects of preference difference and electoral participation." West European Politics 38.3: 577-600.

Phillips, A. 1995. *The politics of presence*. Clarendon Press.

Polacko, Matthew, Oliver Heath, Michael S. Lewis-Beck, and Ruth Dassonneville. 2020. "Policy Polarization, Income Inequality and Turnout". Political Studies.

Polacko, Matthew. 2020. "Party Positions, Income Inequality, and Voter Turnout in Canada, 1984-2015." American Behavioral Scientist, 64(9): 1324-1347.

Pontusson, Jonas, and David Rueda. 2008. "Inequality as a source of political polarization: A comparative analysis of twelve OECD countries." In Beramendi, Pablo, and Anderson, Christopher J. (Eds.). *Democracy, Inequality, and Representation*: pp. 312-353. Russel Sage Foundation, New York.

Pontusson, Jonas, and David Rueda. 2010. "The Politics of Inequality: Voter Mobilization and Left Parties in Advanced Industrial States." Comparative Political Studies, 43(6): 675-705.

Rigby, Elizabeth, Wright, Gerald C. 2013. "Political Parties and Representation of the Poor in the American States." *American Journal of Political Science* 57 (3): 552–65.

Rosset, Jan, Nathalie Giger, and Julian Bernauer. 2013. ‘’More money, fewer problems? Cross-level effects of economic deprivation on political representation.’’ *West European Politics* 36(4): 817-835.

Ritter, Michael, and Frederick Solt. 2019. ‘’Economic Inequality and Campaign Participation’’. *Social Science Quarterly*, 100(3).

Schakel, Wouter. 2019. "Unequal policy responsiveness in the Netherlands." *Socio-Economic Review*.

Schattschneider, Elmer E. 1960. The Semi-Sovereign People: A Realist's View of Democracy in America. New York: Holt, Reinhart, and Winston.

Sobolewska, Maria. 2013. "Party strategies and the descriptive representation of ethnic minorities: The 2010 British general election." *West European Politics* 36(3): 615-633.

Solt, Frederick. 2008. "Economic Inequality and Democratic Political Engagement." American Journal of Political Science, 52(1): 48{60.

Statskontoret. 2018. “Den offentliga sektorn i korthet 2018”. Report Dnr.2018/63-5. Accessed on March 1, 2021. Available online (in Swedish) here.

Tavits, Margit, and Joshua D. Potter. 2014. ‘’The Effect of Inequality and Social Identity on Party Strategies’‘. *American Journal of Political Science*, 59(3): 744-758.

Thompson, D. M., Feigenbaum, J. J., Hall, A. B., & Yoder, J. 2019. “Who becomes a member of congress? Evidence from de-anonymized census data” (No. w26156). National Bureau of Economic Research.

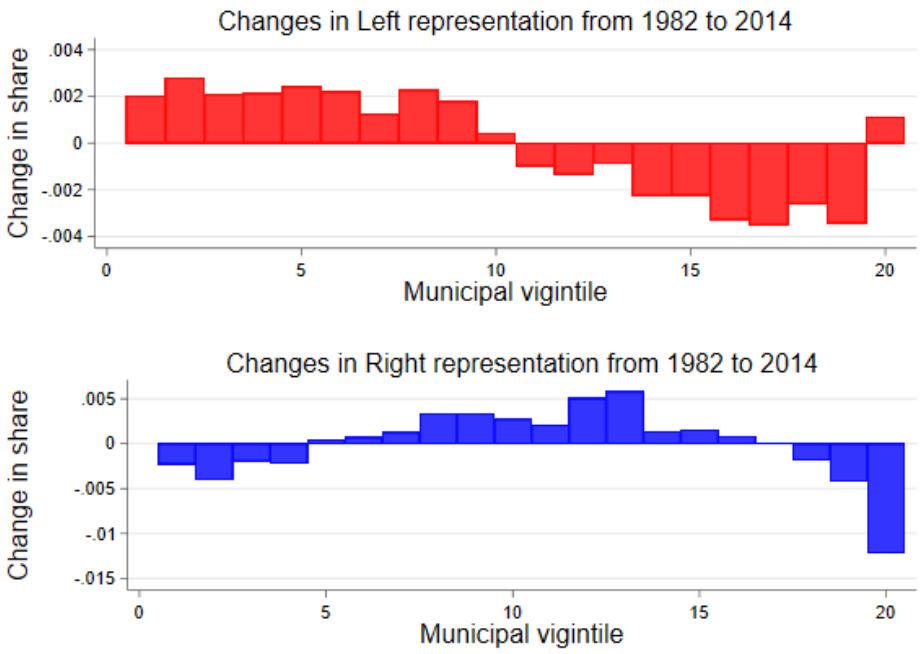
Uslaner, Eric M., and Mitchell Brown. 2005. "Inequality, trust, and civic engagement." *American Politics Research* 33(6): 868-894.

V-Dem. 2018. "V-Dem Annual Democracy Report 2018. Democracy for All?" Democracy for All. Accessed online 2021-03-01 here.

Van der Zwan, Roos, Marcel Lubbers, and Rob Eisinga. 2019. "The political representation of ethnic minorities in the Netherlands: ethnic minority candidates and the role of party characteristics." *Acta Politica* 54(2): 245-267.

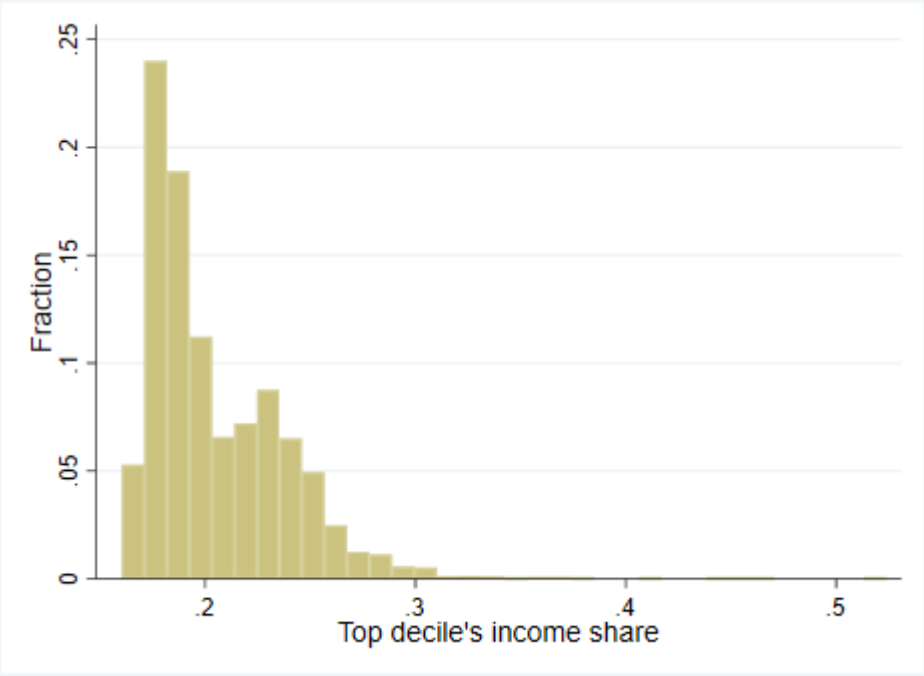
Appendix

Figure A1. Changes in representation from 1982 to 2014



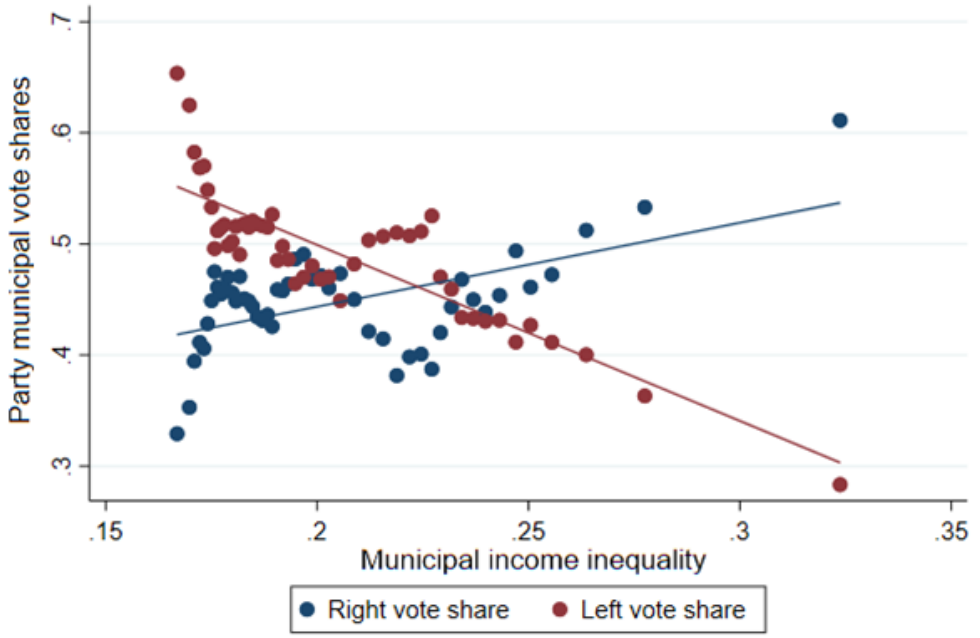
Notes. The change in the distribution of all elected candidates from the Right and Left blocs across the municipal income distribution (controlling for age-cohort and gender) from 1982 to 2014. Sample is restricted to municipal politicians aged 25 to 60. Disposable income derived from household is used in the analysis. Negative (positive) values on the Y-axis imply that the share of politicians in a particular segment of the income distribution decreases (increases) over time.

Figure A2. Histogram of income inequality. All municipalities (1982 - 2014).



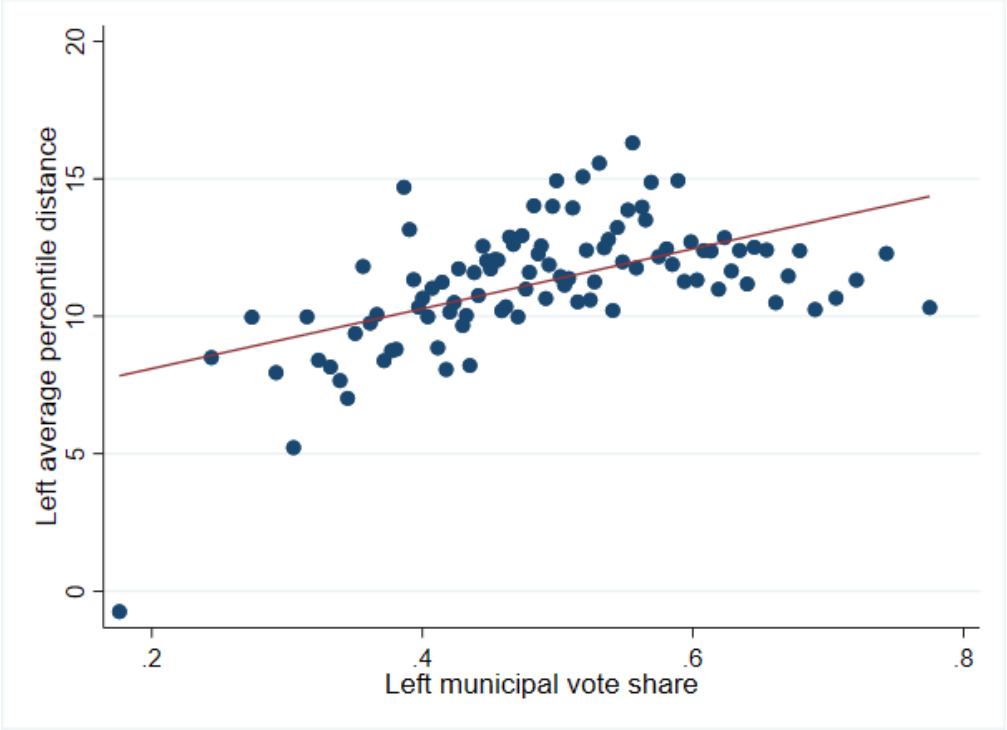
Notes. Top decile's share of total income at municipal level. Individual disposable income derived from household total is used.

Figure A3. Income inequality and Party bloc vote share



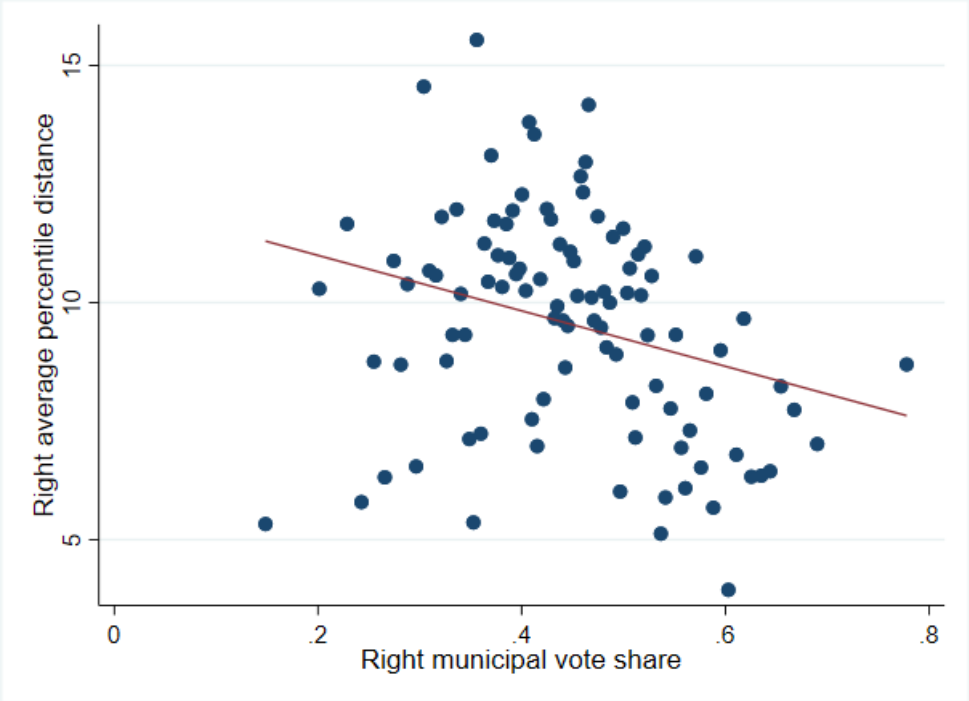
Notes. Binscatter. Bivariate relationship between the vote shares of respective blocs and municipal income inequality. Disposable income inequality measured by top 10 share. Bin size: n=50.

Figure A4. Left vote share and income representation



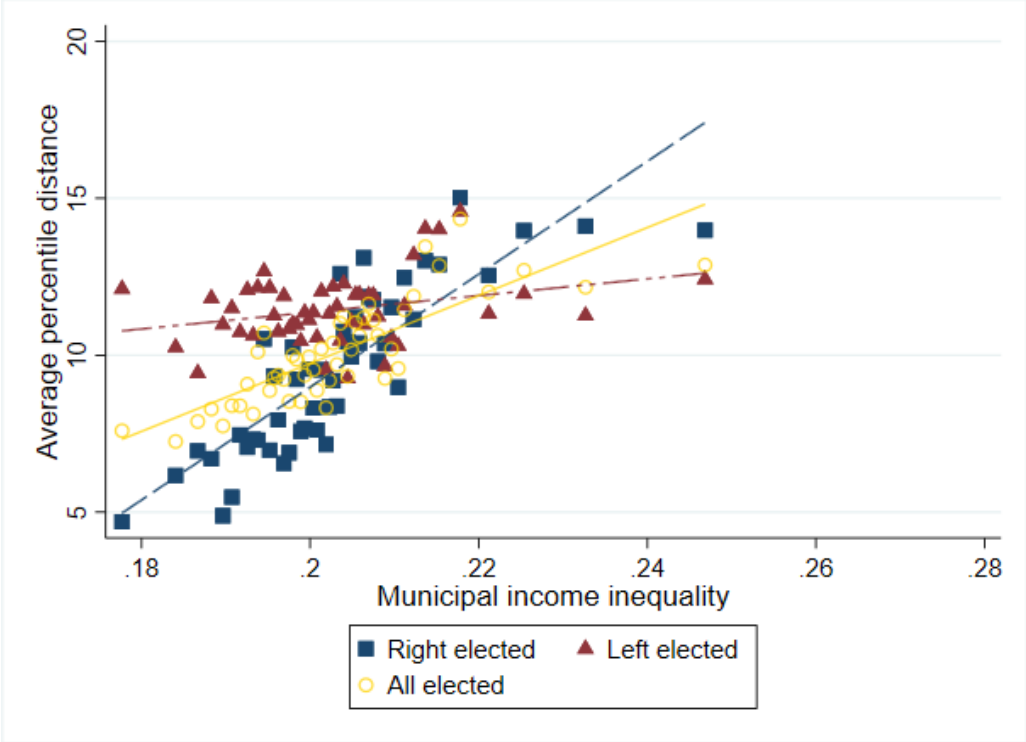
Notes. Binscatter. Bivariate relationship between the Left-bloc vote share and Left income representation. Individual disposable income derived from household total used in the analysis. Bin size: n=100.

Figure A5. Right vote share and income representation



Notes. Binscatter. Bivariate relationship between the Right-bloc vote share and Right income representation. Individual disposable income derived from household total used in the analysis. Bin size: n=100.

Figure A6. Income representation and inequality without outliers

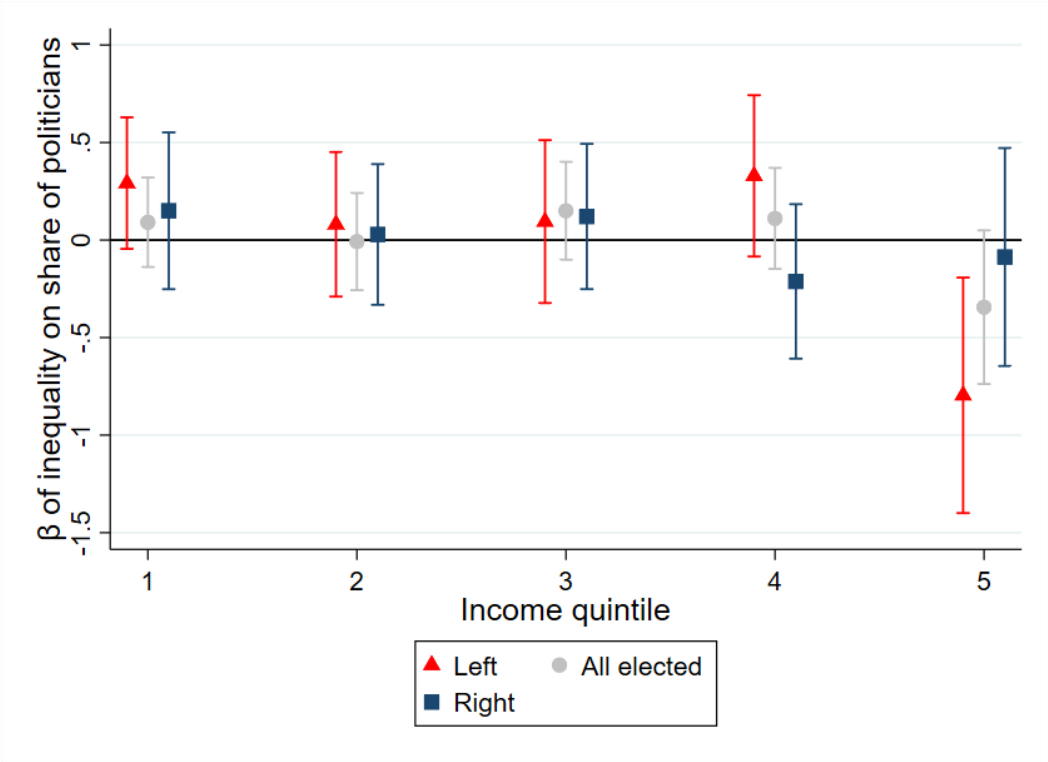


Notes. Binscatter of relationship between inequality and representation. Municipalities with top income shares above 0.3 are not included in the graph. Year-fixed effects and controls for party vote shares are included. Y-axis shows the distance between average income percentile for elected politicians within a municipality and its population. X-axis shows the inequality level (top decile's share of total income) within a municipality. Individual income derived from household disposable income is used in the analysis. Sample is restricted to individuals aged

25 to 60. Percentiles are adjusted for age-cohort and gender. Higher values on the Y-axis indicate worse income representation. Bin size: n=50.

Figure A8. Sensitivity test: figure 3 without outliers

(Regression estimates based on fully-specified models. 95% CI bounds)



Notes. Reproduction of Figure 3 without outlier municipalities. 15 regression estimates with 95% confidence intervals. Estimated effects of inequality (top 10 share) on outcome variables measuring the share of (all/Left/Right) elected politicians within each of five municipal income quintiles. All estimates are based on fully-specified regression models that include controls for time trends, party bloc vote share, municipality size (log-transformed), and immigrant share of population and average years of education. Individual income derived from household disposable income is used in the analysis. The five income quintiles are communicating vessels and the total change within all five quintiles is zero per definition. Estimates can be seen in regression table form in table A10.

Table A1. Regression model of income distance for all elected

	(1)	(2)	(3)	(4)
Top 10 share	49.33**	-7.581	-18.55**	-20.58**
	(22.39)	(8.920)	(7.603)	(8.355)
Controls				
Year FE	YES	YES	YES	YES
Left vote share	13.10***	7.930***	6.286***	6.340***
	(2.235)	(1.595)	(1.525)	(1.528)
Municipality size		3.243***	2.792***	2.729***
		(0.214)	(0.189)	(0.236)
Immigrant share			23.44***	23.28***
			(2.735)	(2.747)
Average education				0.197
				(0.370)
Obs	2860	2860	2860	2860
Adj. R^2	0.151	0.324	0.357	0.357

*Notes. Same results as Table 2 but with control variable estimates displayed. Outcome variable is defined as the difference in average percentile between all elected politicians and the population within a municipality. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A1 is the same as Table 2 but with visible control variable estimates.

Table A2. Sensitivity test: table 2 without outliers

	(1)	(2)	(3)	(4)
Top 10 share	97.89***	4.904	-11.69	-14.48
	(16.23)	(11.19)	(11.09)	(11.97)
Controls				
Year FE	YES	YES	YES	YES
Left vote share	15.30***	8.520***	6.610***	6.661***
	(2.047)	(1.648)	(1.608)	(1.607)
Municipality size		3.186***	2.774***	2.693***
		(0.217)	(0.195)	(0.241)
Immigrant share			23.25***	23.05***
			(2.725)	(2.732)
Average education				0.254
				(0.381)
Obs	2824	2824	2824	2824
Adj. R^2	0.168	0.322	0.354	0.354

*Notes. Robustness check of table 2 without outliers. 36 municipalities with top income shares above 0.3 are not included in the sample. Outcome variable is defined as the difference in average percentile between all elected politicians and the population within a municipality. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A2 essentially confirm the results in Table 2, although dropping the outliers provides less precise estimates.

Table A3. Table 3 with control variable estimates

	(1)	(2)	(3)	(4)
Panel A: LEFT PARTIES				
Top 10 share	-21.60	-65.97***	-73.19***	-38.61***
	(17.88)	(12.20)	(12.31)	(11.39)
Controls (Panel A)				
Year FE	YES	YES	YES	YES
Left/Right vote share	7.303***	3.269	2.187	1.255
	(2.565)	(2.407)	(2.437)	(2.364)
Municipality size (ln)		2.528***	2.232***	3.310***
		(0.281)	(0.275)	(0.339)
Immigrant share			15.42***	18.12***
			(3.906)	(3.854)
Average education				-3.358***
				(0.638)
Panel B: RIGHT PARTIES				
Top 10 share	94.28***	22.63	0.540	-25.88
	(32.81)	(17.15)	(14.60)	(16.00)
Controls (Panel B)				
Year FE	YES	YES	YES	YES
Left/Right vote share	-14.88***	-9.254***	-5.187*	-6.205**
	(3.571)	(3.026)	(2.786)	(2.734)
Municipality size (ln)		4.303***	3.560***	2.711***
		(0.343)	(0.306)	(0.394)
Immigrant share			39.38***	37.06***
			(4.357)	(4.263)
Average education				2.647***
				(0.616)
Obs	2860	2860	2860	2860
Adj. R^2 (Panel A)	0.085	0.153	0.166	0.190
Adj. R^2 (Panel B)	0.100	0.213	0.247	0.257

*Notes. Same as table 3 but with control variable estimates displayed. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A4. Sensitivity test: table 3 without outliers

	(1)	(2)	(3)	(4)
Panel A: LEFT PARTIES				
Top 10 share	13.12	-60.46***	-71.02***	-35.62**
	(20.66)	(19.45)	(19.51)	(17.76)
Controls (Panel A)				
Year FE	YES	YES	YES	YES
Left/Right vote share	8.111***	2.742	1.527	0.878
	(2.554)	(2.378)	(2.425)	(2.388)
Municipality size (ln)		2.521***	2.259***	3.281***
		(0.292)	(0.285)	(0.348)
Immigrant share			14.78***	17.32***
			(3.800)	(3.733)
Average education				-3.221***
				(0.642)
Panel B: RIGHT PARTIES				
Top 10 share	169.4***	56.18***	23.74	-4.935
	(21.36)	(17.13)	(16.91)	(18.21)
Controls (Panel B)				
Year FE	YES	YES	YES	YES
Left/Right vote share	-18.07***	-10.88***	-6.375**	-7.239**
	(3.338)	(3.057)	(2.852)	(2.809)
Municipality size (ln)		4.134***	3.465***	2.599***
		(0.345)	(0.310)	(0.390)
Immigrant share			38.84***	36.50***
			(4.372)	(4.265)
Average education				2.723***
				(0.623)
Obs	2824	2824	2824	2824
Adj. R^2 (Panel A)	0.075	0.141	0.150	0.174
Adj. R^2 (Panel B)	0.109	0.213	0.247	0.257

*Notes. Robustness check of table 3 without outliers. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A4 shows that dropping the outliers only affects the results by reducing Right-bloc estimates.

Table A5. Summary statistics for share of elected in quintiles

	Variable	Obs	Mean	Std.	Min	Max
Quintile 1	All elected share	2860	0,125	0,065	0,000	0,481
	Left elected share	2860	0,092	0,081	0,000	1,000
	Right elected share	2860	0,154	0,113	0,000	1,000
Quintile 2	All elected share	2860	0,154	0,066	0,000	0,476
	Left elected share	2860	0,155	0,096	0,000	1,000
	Right elected share	2860	0,148	0,103	0,000	0,750
Quintile 3	All elected share	2860	0,178	0,066	0,000	0,476
	Left elected share	2860	0,196	0,101	0,000	0,750
	Right elected share	2860	0,156	0,106	0,000	1,000
Quintile 4	All elected share	2860	0,219	0,070	0,029	0,500
	Left elected share	2860	0,246	0,109	0,000	0,714
	Right elected share	2860	0,193	0,110	0,000	1,000
Quintile 5	All elected share	2860	0,324	0,098	0,000	0,714
	Left elected share	2860	0,311	0,129	0,000	0,900
	Right elected share	2860	0,348	0,153	0,000	1,000

Notes. Share of all elected politicians and Left/Right elected politicians across municipality income quintiles in the pooled dataset. Individual income derived from household disposable income used in analysis. Quintiles adjusted for age-cohort (five years) gender and year based on the main sample aged 25 to 60,

Table A6. Figure 3 as regression table.

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Panel A: All elected					
Top 10 share	0.0955	0.153+	0.114	-0.0139	-0.349***
	(0.0728)	(0.0900)	(0.0764)	(0.0975)	(0.127)
Controls (Panel A)					
Year FE	YES	YES	YES	YES	YES
Left vote share	-0.0591***	-0.0150	0.00142	-2.78e-06	0.0727***
	(0.0143)	(0.0145)	(0.0149)	(0.0161)	(0.0231)
Municipality size (ln)	-0.0146***	-0.0144***	-0.0152***	-0.000415	0.0447***
	(0.00196)	(0.00210)	(0.00234)	(0.00232)	(0.00411)
Immigrant share	-0.216***	-0.0852***	0.00357	0.0632+	0.235***
	(0.0264)	(0.0255)	(0.0311)	(0.0326)	(0.0478)
Average education	-0.00960***	-0.00327	0.0119***	0.00584	-0.00490
	(0.00343)	(0.00326)	(0.00384)	(0.00367)	(0.00621)
Panel B: Left elected					
Top 10 share	0.334***	0.151	0.0685	0.0391	-0.593***
	(0.108)	(0.142)	(0.191)	(0.227)	(0.222)
Controls (Panel B)					
Year FE	YES	YES	YES	YES	YES
Left vote share	0.0347+	0.000717	-0.0387	-0.0732***	0.0765**
	(0.0194)	(0.0222)	(0.0237)	(0.0273)	(0.0370)
Municipality size (ln)	-0.0177***	-0.0196***	-0.0171***	0.00146	0.0530***
	(0.00280)	(0.00345)	(0.00360)	(0.00421)	(0.00590)
Immigrant share	-0.152***	-0.0902**	0.0132	0.0575	0.172**
	(0.0357)	(0.0359)	(0.0373)	(0.0504)	(0.0669)
Average education	0.0204***	0.0168***	0.0151**	-0.0105	-0.0418***
	(0.00559)	(0.00572)	(0.00614)	(0.00685)	(0.00942)
Panel C: Right elected					
Top 10 share	0.250+	0.205	0.124	-0.247**	-0.332
	(0.142)	(0.143)	(0.108)	(0.123)	(0.232)
Controls (Panel C)					
Year FE	YES	YES	YES	YES	YES
Right vote share	-0.0159***	-0.0127***	-0.0140***	0.000337	0.0423***
	(0.00402)	(0.00341)	(0.00288)	(0.00362)	(0.00604)
Municipality size (ln)	-0.310***	-0.187***	-0.0319	0.0552	0.473***
	(0.0481)	(0.0438)	(0.0551)	(0.0593)	(0.0721)
Immigrant share	-0.0319***	-0.0127**	0.01000**	0.0159***	0.0186*
	(0.00606)	(0.00533)	(0.00480)	(0.00584)	(0.00947)
Average education	-0.0159***	-0.0127***	-0.0140***	0.000337	0.0423***
	(0.00402)	(0.00341)	(0.00288)	(0.00362)	(0.00604)
Obs	2860	2860	2860	2860	2860

*Notes. 15 separate regressions that are the basis for figure 3. Estimated effects of inequality (top 10 income share) on outcome variables measuring the share of (all/Left/Right) elected politicians within each of five municipal income quintiles. All estimates are based on fully-specified regression models that include controls for time trends, party bloc vote share, municipality size (log-transformed), and immigrant share of population and average years of education. Individual income derived from household disposable income is used in the analysis. The five income quintiles are communicating vessels and the total change within all five quintiles is zero per definition. *** p<0.01, ** p<0.05, + p<0.1*

Table A7. Figure A8 as regression table.

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Panel A: All elected					
Top 10 share	0.0911	-0.00796	0.150	0.111	-0.344+
	(0.117)	(0.127)	(0.128)	(0.132)	(0.201)
Controls (Panel A)					
Year FE	YES	YES	YES	YES	YES
Left vote share	-0.0582***	-0.0238	0.00142	0.00699	0.0736***
	(0.0153)	(0.0153)	(0.0159)	(0.0167)	(0.0246)
Municipality size (ln)	-0.0146***	-0.0137***	-0.0151***	-0.00124	0.0447***
	(0.00200)	(0.00220)	(0.00243)	(0.00244)	(0.00426)
Immigrant share	-0.215***	-0.0809***	0.00122	0.0588*	0.235***
	(0.0263)	(0.0257)	(0.0314)	(0.0325)	(0.0481)
Average education	-0.00994***	-0.00314	0.0115***	0.00535	-0.00377
	(0.00346)	(0.00338)	(0.00386)	(0.00369)	(0.00633)
Panel B: Left elected					
Top 10 share	0.292+	0.0807	0.0947	0.329	-0.796**
	(0.172)	(0.189)	(0.213)	(0.211)	(0.308)
Controls (Panel B)					
Year FE	YES	YES	YES	YES	YES
Left vote share	0.0401**	-0.00193	-0.0434*	-0.0566**	0.0619
	(0.0195)	(0.0226)	(0.0239)	(0.0270)	(0.0382)
Municipality size (ln)	-0.0171***	-0.0193***	-0.0176***	-0.000392	0.0544***
	(0.00290)	(0.00333)	(0.00352)	(0.00409)	(0.00618)
Immigrant share	-0.139***	-0.0913**	0.0136	0.0425	0.174***
	(0.0335)	(0.0358)	(0.0380)	(0.0491)	(0.0665)
Average education	0.0186***	0.0169***	0.0160**	-0.0111+	-0.0404***
	(0.00569)	(0.00552)	(0.00627)	(0.00674)	(0.00962)
Panel C: Right elected					
Top 10 share	0.150	0.0286	0.121	-0.212	-0.0871
	(0.205)	(0.184)	(0.190)	(0.202)	(0.285)
Controls (Panel C)					
Year FE	YES	YES	YES	YES	YES
Right vote share	0.00927	-0.0326	-0.0382*	-0.0599**	0.121***
	(0.0339)	(0.0273)	(0.0214)	(0.0282)	(0.0410)
Municipality size (ln)	-0.0156***	-0.0117***	-0.0135***	2.02e-05	0.0408***
	(0.00411)	(0.00348)	(0.00296)	(0.00376)	(0.00591)
Immigrant share	-0.310***	-0.181***	-0.0342	0.0557	0.469***
	(0.0486)	(0.0442)	(0.0559)	(0.0599)	(0.0722)
Average education	-0.0323***	-0.0129**	0.00948*	0.0158***	0.0199**
	(0.00609)	(0.00530)	(0.00487)	(0.00604)	(0.00951)
Obs	2824	2824	2824	2824	2824

Notes. 15 separate regressions that are the basis for figure A8. Estimated effects of inequality (top 10 income share) on outcome variables measuring the share of (all/Left/Right) elected politicians within each of five municipal income quintiles. All estimates are based on fully-specified regression models that include controls for time trends, party bloc vote share, municipality size (log-transformed), and immigrant share of population and average years of education. Individual income derived from household disposable income is used in the analysis.

Table A8. Fully-specified regression model for individual parties.

	(1) S	(2) V	(3) MP	(4) C	(5) FP	(6) M	(7) KD
Top 10 share	-8.961*** (2.171)	-4.200 (6.786)	5.232 (7.346)	-16.59*** (4.702)	-10.48** (5.129)	-4.406 (3.298)	-5.573 (6.440)
Controls							
Year FE	YES	YES	YES	YES	YES	YES	YES
Vote share	0.285 (0.595)	2.757 (1.749)	13.08** (6.317)	2.655** (1.231)	-0.396 (2.824)	-0.0983 (1.180)	6.801** (2.675)
Municipality size	0.724*** (0.0739)	0.701*** (0.139)	0.456** (0.201)	0.451*** (0.149)	0.504*** (0.126)	0.680*** (0.112)	0.353 (0.219)
Immigrant share	3.520*** (0.949)	2.760 (2.059)	4.539+ (2.746)	7.745*** (2.210)	7.003*** (1.767)	5.978*** (1.489)	4.001+ (2.391)
Average education	-0.521*** (0.133)	-0.910*** (0.290)	-0.568 (0.351)	0.888*** (0.258)	0.0981 (0.237)	-0.0384 (0.199)	0.397 (0.382)
Constant	2.444** (1.074)	4.311** (2.025)	0.533 (2.800)	-11.15*** (2.207)	0.229 (1.664)	-1.676 (1.415)	-6.227** (2.713)
Obs	2,855	2,357	1,992	2,738	2,543	2,803	2,095
Adj. R^2	0.162	0.038	0.018	0.070	0.096	0.107	0.046

*Notes. Outcome variable is defined as the difference in average income vigintile between elected politicians from each party and the population within the same municipality. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Gini and percentile-ratio analyses

Table A9. Sensitivity test: table 2 with Gini coefficient

	(1)	(2)	(3)	(4)
Gini	53.17***	0.750	-18.17**	-21.49**
	(19.11)	(9.274)	(7.068)	(8.157)
Controls				
Year FE	YES	YES	YES	YES
Left vote share	15.03***	8.752***	5.770***	5.736***
	(2.359)	(1.700)	(1.630)	(1.625)
Municipality size		3.185***	2.796***	2.701***
		(0.218)	(0.189)	(0.237)
Immigrant share			24.41***	24.35***
			(2.851)	(2.851)
Average education				0.305
				(0.387)
Obs	2860	2860	2860	2860
Adj. R^2	0.160	0.324	0.358	0.358

*Notes. Robustness check of table 2 using Gini as the main independent variable. Outcome variable is defined as the difference in average percentile between all elected politicians and the population within a municipality. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A10. Sensitivity test: table 2 with bottom-end inequality

	(1)	(2)	(3)	(4)
P10/P50	-33.31***	-13.01***	0.194	-0.564
	(4.844)	(3.735)	(3.803)	(3.964)
Controls				
Year FE	YES	YES	YES	YES
Left vote share	12.91***	10.43***	8.061***	7.994***
	(1.786)	(1.432)	(1.420)	(1.426)
Municipality size		3.039***	2.688***	2.736***
		(0.207)	(0.185)	(0.245)
Immigrant share			22.61***	22.57***
			(2.955)	(2.959)
Average education				-0.138
				(0.406)
Obs	2860	2860	2860	2860
Adj. R^2	0.170	0.329	0.355	0.355

Notes. Robustness check of table 2 using the income ratio of the 10th and 50th percentiles in a municipality as the main independent variable. Higher variable values imply lower bottom-end inequality. Outcome variable is defined as the difference in average percentile between all elected politicians and the population within a

*municipality. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A11. Sensitivity test: table 3 with Gini coefficient

	(1)	(2)	(3)	(4)
Panel A: LEFT PARTIES				
Gini	-11.33	-52.85***	-67.43***	-31.06***
	(17.65)	(11.96)	(11.54)	(10.49)
Controls (Panel A)				
Year FE	YES	YES	YES	YES
Left/Right vote share	7.964***	2.993	0.697	1.070
	(2.749)	(2.458)	(2.489)	(2.454)
Municipality size (ln)		2.523***	2.223***	3.271***
		(0.285)	(0.274)	(0.341)
Immigrant share			18.80***	19.41***
			(4.187)	(4.014)
Average education				-3.339***
Panel B: RIGHT PARTIES				
Gini	95.12***	31.41**	-1.246	-30.99**
	(26.00)	(15.62)	(12.22)	(13.82)
Controls (Panel B)				
Year FE	YES	YES	YES	YES
Left/Right vote share	-17.34***	-10.82***	-4.985+	-5.158+
	(3.500)	(3.043)	(2.836)	(2.793)
Municipality size (ln)		4.197***	3.570***	2.663***
		(0.344)	(0.304)	(0.393)
Immigrant share			39.56***	38.82***
			(4.498)	(4.392)
Average education				2.866***
				(0.636)
Obs	2860	2860	2860	2860
Adj. R^2 (Panel A)	0.085	0.153	0.166	0.190
Adj. R^2 (Panel B)	0.100	0.213	0.247	0.257

*Notes. Robustness check of table 3 using Gini as the main independent variable. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A12. Sensitivity test: table 3 with bottom-end inequality

	(1)	(2)	(3)	(4)
Panel A: LEFT PARTIES				
P10/P50	-1.161	13.86**	25.00***	4.033
	(6.708)	(6.067)	(5.962)	(5.638)
Controls (Panel A)				
Year FE	YES	YES	YES	YES
Left vote share	9.550***	7.713***	5.713**	3.845*
	(2.590)	(2.533)	(2.503)	(2.249)
Municipality size (ln)		2.248***	1.952***	3.287***
		(0.275)	(0.264)	(0.354)
Immigrant share			19.08***	18.02***
			(4.370)	(4.123)
Average education				-3.816***
				(0.713)
Panel B: RIGHT PARTIES				
P10/P50	-59.08***	-33.43***	-12.65**	-0.658
	(6.967)	(6.038)	(5.982)	(5.916)
Controls (Panel B)				
Year FE	YES	YES	YES	YES
Right vote share	-13.20***	-11.08***	-6.806***	-8.165***
	(2.924)	(2.526)	(2.361)	(2.450)
Municipality size (ln)		4.064***	3.503***	2.730***
		(0.314)	(0.294)	(0.407)
Immigrant share			35.58***	35.93***
			(4.480)	(4.415)
Average education				2.226***
				(0.684)
Obs	2860	2860	2860	2860
Adj. R^2 (Panel A)	0.085	0.142	0.154	0.186
Adj. R^2 (Panel B)	0.111	0.224	0.249	0.255

*Notes. Robustness check of table 3 using income ratio of the 10th and 50th percentiles in a municipality as the main independent variable. Higher variable values imply lower bottom-end inequality. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A13. Table 4 with the Gini coefficient

	(1) Poorer poor	(2) Richer poor
Panel A: LEFT PARTIES		
Gini	-29.59** (14.90)	-45.20** (19.67)
Panel B: RIGHT PARTIES		
Top 10 share	-17.40 (17.29)	-37.40 (18.87)
Controls (both panels)		
Year FE	YES	YES
Left/Right vote share	YES	YES
Municipality size (ln)	YES	YES
Immigrant share	YES	YES
Average education	YES	YES
Obs	1431	1429
Adj. R^2 (Panel A)	0.165	0.234
Adj. R^2 (Panel B)	0.233	0.281

*Notes. Robustness check of table 4 using income ratio of the municipal Gini as the main independent variable. Sample in Column 1 is restricted to municipalities where the average income in the first decile is among the lowest 50%. Sample in Column 2 is restricted to municipalities where the average income in the first decile is among the highest 50%. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*

Table A14. Table 4 with the P10/P50 ratio

	(1) Poorer poor	(2) Richer poor
Panel A: LEFT PARTIES		
P10/P50	1.272 (8.862)	15.53* (8.006)
Panel B: RIGHT PARTIES		
Top 10 share	6.695 (9.925)	11.66 (7.673)
Controls (both panels)		
Year FE	YES	YES
Left/Right vote share	YES	YES
Municipality size (ln)	YES	YES
Immigrant share	YES	YES
Average education	YES	YES
Obs	1431	1429
Adj. R^2 (Panel A)	0.162	0.232
Adj. R^2 (Panel B)	0.232	0.280

*Notes. Robustness check of table 4 using income ratio of the 10^{th} and 50^{th} percentiles in a municipality as the main independent variable. Higher variable values imply lower bottom-end inequality. Panel A contains model estimates with income distance for elected Left-bloc politicians as outcome variable. Panel B contains model estimates when the outcome is measured for elected Right-bloc politicians. Municipality-clustered standard errors in parentheses. Individual income derived from household disposable income is used in the analysis. Average years of education. Municipality size has been log-transformed. *** p<0.01, ** p<0.05, + p<0.1*