

Does the Composition of Government Better Reflect the Party Preferences of Citizens who are Better Off, More Educated, and More Informed?

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Abstract

Studies on possible inequalities in the representation of citizens' preferences have mostly focused on the United States and have yet to arrive at definitive conclusions. Rather than analyzing the representation of political opinions on issues that citizens may not have thought much about, we focus on the representation of the party preferences of citizens with different levels of income, education, and political information. This paper focuses on elections in non-presidential systems covered by CSES modules 1 to 4. Using multi-level Bayesian analyses, we find that better off citizens are better represented than the poor in about a third of elections. Inequalities in representation are greater under proportional representation and in countries with lower levels of inequality. However, the tendency for the rich to be better represented may be due to the over-representation of right-of-centre governments in the dataset. We conclude that the inequalities in representation do not exist in most elections.

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In recent years, as public debate about increasing economic inequality has heated up, several scholars have considered the possibility that different segments of the population have different political preferences and that these preferences are differentially represented by policymakers. There seems to be a fear that citizens who are better off have more influence over governments, which adopt policies that favour the rich over the poor, thus increasing income inequalities.

Some studies have found that the preferences of the rich have a stronger influence on government policy than those of the poor (e.g. Bartels, 2008; Gilens, 2012; Gilens and Page, 2014), while others focusing on representation over time have found that the preferences of different groups move in parallel over time, making unequal over time responsiveness of government policy to preferences impossible (e.g. Soroka and Wlezien, 2008, 2010). Most of these studies have focused on the United States.

While it remains unclear whether inequalities in representation exist in the US, little is known about how representative governments are elsewhere. Studies on possible inequality in representation focus exclusively on the US case or on a small sample of countries. Moreover, there is a limitation to the use of policy issues to assess representation, as these studies do. Responses to survey questions on such issues may not reflect “real preferences”, especially if respondents have not given them much thought.

This paper’s contribution is twofold. It, first of all, extends work on representation to 83 elections in 36 countries, allowing us to have a broader perspective on potential inequalities in representation. Moreover, it focuses on a different measure of the public’s preferences. Rather than using questions on policy or on ideological self-placement, which have been used in the literature on ideological congruence (e.g. Blais and Bodet, 2006; Budge and McDonald, 2007; Golder and Stramski, 2010; Golder and Lloyd, 2014), we focus on party evaluations, that is how much citizens like or dislike parties. Since citizens are exposed to political parties throughout their adult lives, they presumably have feelings about them, which may be more “real” than policy preferences or ideology.

Past research and expectations

Several studies (Bartels, 2008; Gilens, 2005, 2009, 2011, 2012; Gilens and Page, 2014) have shown that the preferences of better-off Americans have

more influence on government policy than the preferences of the less well off. However, the work of Soroka and Wlezien (2008, 2010), which has focused on responsiveness to public preferences over time, has found that differences in preferences are generally small. Moreover, several authors have found that to the extent that preferences do differ, they move in parallel, thus making the differential responsiveness impossible (Page and Shapiro, 1992; Enns and Kellstedt, 2008; Soroka and Wlezien, 2008). In short, studies have been inconclusive on whether inequalities in representation exist and even on the preferences of different groups differ.

Such studies of representation use one of two measures of popular preferences. Some authors (Gilens, 2005, 2009, 2011, 2012; Soroka and Wlezien, 2008, 2010) use responses to individual policy questions. Others (Bartels, 2008; Ura and Ellis, 2008) use composite measures of policy “mood”, using answers to a number of policy questions. However, given that a number of studies suggest that most citizens do not think about policy in terms of conventional political ideologies (e.g. Converse, 1964), it is unclear that these are ideal measures of popular preferences. Numerous studies have shown that citizens rely on shortcuts from elite (Lupia, 1994) and better-informed individuals (Page and Shapiro, 1992). Thus, it is possible that preferences do not differ much across groups because a critical mass of citizens take cues from citizens who do have “real” preferences.

In this paper we adopt a different perspective on representation. Rather than relying on policy questions, individually or in combination, we use questions on political objects citizens are exposed to throughout their adult lives: political parties. We use questions asking people how much they like/dislike parties on a scale from 0 to 10. We measure responsiveness to popular preferences by the extent to which individual party like-dislike scores are associated with the composition of cabinets in non-presidential systems. This perspective has two major advantages. First, it allows us to avoid using questions on issues people may not know much about. Second, it allows us to study a much broader set of countries.

Our indicator of preferences is situated somewhere between ideological self-placement and vote choice. Party preferences are shaped to a large extent by voters’ ideological orientations as well as their opinions about specific policy issues. However, they are influenced by many other factors, in particular voters’ judgments about parties’ competence. In other words, elections are not only about issue positions. They are also about valence (Clarke et al. 2004). Because elections are not only about issues or ideologies, an impor-

tant question is whether the parties that voters prefer exercise power (they are in government) and the parties that they dislike have little or no power (they are in opposition).

We use party preferences instead of the vote as our reference point because vote choice is affected by strategic considerations that lead citizens to vote for a party that is not their most preferred because their preferred party is perceived to be non-viable (Cox 1997) for instance. There is a huge literature that has documented the presence of a significant amount of strategic voting, in PR as well as in “majoritarian” elections (Abramson et al. 2010; Alvarez and Nagler 2000; Blais and Nadeau 1996; Blais et al. 2001; Gschwend 2007; Meffert and Gschwend 2010). According to one study, in a typical election as many as 26% of voters vote for a party that is not their most preferred one (Blais and Gschwend 2011). Vote choice is thus different from party preference and from a normative perspective priority should be given to citizens’ preferences. The bottom line question, as we have indicated above, is whether party preferences are reflected in government.

Another reason for preferring party preferences over vote choice is that citizens do not all have one single choice that fully reflects their preferences. Voters and non-voters alike frequently have second choice parties that they like almost as much as their first choices. People also very frequently have parties they strongly dislike. This is, particularly, important to keep in mind given the literature showing that negative evaluations are often more important than positive ratings (see for example, Soroka, 2014). Merely focusing on people’s vote choice means that we ignore that fact that, for many citizens, their primary focus on voting day is ensuring that their least liked party ends up with no representation in either the legislature or the government.

We consider three individual characteristics that may be associated with better representation: income, education, and political information. Two of these, income and education, have been considered elsewhere (e.g. Soroka and Wlezien, 2008, 2010) with respect to representation. Political information, to our knowledge, has not. It is important, however, notably because politically informed citizens have different opinions and vote differently. (Bartels, 1996; Blais et al., 2009). Therefore, it may be that better informed citizens are more capable of ensuring that their preferences are reflected in government.

Are there reasons to believe that the party preferences of the rich, the better educated and the more informed might be better represented in government? The first question is whether party preferences are affected by income, education, and information. There is evidence that they are. There

is little doubt that the rich and the poor have different interests when it comes to the degree of redistribution that governments should aim for and thus that the rich are more likely to prefer parties on the right, at least on the economic dimension. Likewise, the better educated tend to be more liberal on social issues, and this should induce them to prefer socially liberal parties. Finally, the better informed are less affected by incumbency (Bartels 1996) or visibility (Blais et al. 2009). At the same time, however, some have argued that social background characteristics have become less important over time (Franklin et al. 1992; Clarke et al. 2004; but see Blais et al. 2002), and thus income, education, and information may not be that strongly related to party preferences. However, our approach takes into consideration citizens' evaluations of a range of parties and not just the party they voted for. We, therefore, may pick up differences that such studies could not identify.

The most difficult question, however, is whether the party preferences of the rich, educated, and sophisticated are likely to be overrepresented in cabinet. After all, votes are counted equally and in principle should have the same influence on government. We see two potential reasons why the preferences of the rich, educated, and informed could be better represented. The first is that the rich, the better educated, and the better informed are more likely to vote (Nevitte et al. 2009). Abstainers preferences are not taken into account. As a consequence, the preferences of the groups with higher turnout should be better represented in both the legislature and the cabinet. At the same time, however, the correlation between turnout and education or income is not very strong (and varies substantially across countries; see Gallego forthcoming). Most studies have found that electoral outcomes would not be that different under higher turnout (see Lutz and March 2007). Information may make more of a difference, because it should be more strongly correlated to turnout (see Larcinese 2007) but again existing research suggests that, even if electoral outcomes would be somewhat different under full or better information, the differences would be modest, not significant enough to elect a different president or prime minister (Bartels 1996; Blais et al. 2009).

The second reason could be that the rich/educated/sophisticated are more prone to vote for parties that make it into cabinet. How could this happen? We see two potential mechanisms. The first would be that the rich especially may be generally more satisfied with the existing government, possibly because governments are generally more attentive to the needs and interests of the better off (Gilens 2005) and that most of the time incumbent govern-

ments tend to be reelected (on the incumbency advantage see Gelman and King 1990). Note, however, that the incumbency advantage has not been really documented in parliamentary systems. The second mechanism would be that the rich/educated/sophisticated are less inclined to like ‘extremist’ parties that are very unlikely to be in government. The rich and the educated would tend to be more satisfied with mainstream parties and would be more wary of parties that question the existing consensus. We are not aware of studies that have tested that hypothesis. Again, however, the effect is bound to be indirect and relatively weak: the better educated are somewhat more likely to vote for mainstream parties and mainstream parties are somewhat more likely to be in government. We, therefore, have three individual level hypotheses, suggesting that citizens with higher income, education, and political information are better represented.

Hypothesis 1 *The higher a citizen’s income, the better they are represented*

Hypothesis 2 *The more educated a citizen is, the better they are represented*

Hypothesis 3 *The more informed a citizen is, the better they are represented*

We also take into consideration the possibility that differences in preferences and in their representation depend on contextual factors. In the United States, Gelman (2009) found that vote preferences differ more among income groups in poor than in rich states. The rich are more likely to vote Republican and the poor more likely to vote Democratic, but such differences are greater in poor US states than in rich states. Rigby and Wright (2011) find similar differences across US states but with a different type of preference. Rather than focusing on vote choice, they look at differences in policy preferences. They find that in poor states, income groups differ more on economic issues, while in rich states, they differ more on social issues. They also find cross-state differences in responsiveness to the preferences of income groups. Inequalities in representation are greater in poor states than in rich states. Such differences between poor and rich states may be true of countries as well. Because people vote more on the basis of economic considerations than non-economic considerations and preferences are more distinct on economic issues in poor regions than in rich regions, party preferences may be more distinct in poor countries than in rich countries. Thus we expect that as GDP

per capita increases, preferences become less distinct. Moreover, inequalities in the representation of party preferences should be lower in countries with higher GDP per capita.

Hypothesis 4 *Preferences are less distinct in elections where GDP per capita is higher.*

Hypothesis 5 *Inequalities in representation are lower in elections where GDP per capita is higher.*

It is important to consider why preferences would differ more in poor places than in rich places and why representation would be more unequal in the former. Rigby and Wright (2011) suggest that, in poor states, there are more poor needy people who have higher demands for redistribution, while a smaller number of rich people face a greater burden of redistribution and, therefore, are more opposed to the demands of the poor. While they do not analyze the impact of such a variable, a measure of inequality, like the Gini coefficient, would probably better explain variation in the distinctiveness of preferences and in representation than income per capita if what explains such differences is demand for and opposition to redistribution. We, therefore, propose two hypotheses regarding the effects of election-level inequalities on the distinctiveness of preferences.

Hypothesis 6 *The higher the level of inequality, the more distinct preferences are between income groups.*

Hypothesis 7 *The higher the level of inequality, the greater the difference between the representation of richer and poorer citizens.*

We also consider the possibility that electoral systems matter. Proportional systems have been found to be associated with a higher frequency of centre-left than centre-right governments (Iversen and Soskice, 2006). Iversen and Soskice (2006) argue that this is the case because, in proportional systems, parties representing middle classes will form coalitions with parties representing the poor, because, by having their own parties, middle classes do not have to worry about their parties' commitment to serving their class interests. Conversely, in non-proportional systems, middle classes should form parties with better off individuals because they fear that any middle and lower class party will adopt policies that threaten their interests. On

the basis of the Iversen and Soskice model, we would expect representational inequalities to be greater under non-proportional systems. In their perspective, parties representing the lower classes should be better represented in proportional systems than in non-proportional representation.

It is, however, possible that opposite is the case. Recent work on representation has found that the representation of preferences, whether ideological self-placement (Golder and Lloyd, 2014) or party ratings (Blais, Guntermann and Bodet, 2014) is more variable in proportional systems than in non-proportional systems. We, therefore, might expect that citizens with more resources may use those to ensure that they get their preferred outcome in proportional systems, while in non-proportional systems, there is a minimal level of representation that is essentially guaranteed for everyone. We thus have two contradictory expectations on which systems lead to greater inequalities in representation. On the basis of this prior research, we thus expect that the effect of electoral institutions is null. Representation is no more nor less unequal under one system or the other. Therefore, proportionality could affect representation in either way and we have no clear expectations that one system leads to more unequal representation than the other.

The Data

We use modules 1, 2, and 3 as well as the subset of module 4 that is presently available of the Comparative Study of Electoral Systems (CSES). Each of these modules contains a party like/dislike question in which respondents are asked to rate each party on a scale from 0 to 10 where 0 means that they strongly dislike the party and 10 means that they strongly like the party. CSES collaborators were asked to request evaluations of the six most relevant parties, or even more if necessary, up to nine. All the surveys were conducted post election.

Our focus on lower house elections in non-presidential democracies. We adopt the criterion used by Cheibub, Gandhi and Vreeland (2010) to distinguish between presidential and non-presidential systems: non-presidential regimes are those in which the government is responsible to the legislative assembly. The only exceptions to our use of this criterion are cases where the president plays such a predominant role in cabinet formation that legislative elections have essentially no influence on government composition. Our

sample includes 83 legislative elections held in 36 countries. Seventy-one of the elections were held under PR and 12 were under non-PR. The non-PR elections were held in Australia, Canada, France, Great Britain, Japan, and Thailand.

We have included all lower house election studies in non-presidential democracies, except the 1998 Ukrainian election as well as the elections in Taiwan, since these were held under the presidential-parliamentary variant of semi-presidentialism, in which presidents have more control over the cabinet, and legislatures have less power than in the other variant, premier-presidentialism (Shugart 2005). Austria's constitution is also considered presidential-parliamentary. However, in that country, parties effectively control the recruitment of presidents, voting behaviour is stable, and power is shared between two parties, all of which limit the power of the president there (Muller 2009, cited in Shugart 2005). Therefore, we have elected to retain elections from Austria in spite of the formal constitutional powers of the president. In all the countries that we have included, a new cabinet was formed within a few months of the legislative election.

Criteria and Variables

We have three criteria for assessing the representation of party preferences. All are measured at the individual level. In other words, we have a measure of representation for every respondent included in the CSES election surveys, except those who do not answer questions. This is important in order to assess possible inequalities in representation. Our first criterion is whether a respondent's most liked party is in government. For each respondent, we determined the party they rate the highest, breaking ties randomly.¹ We then created a variable coded 1 if each respondent's most liked party was in cabinet and 0 if it was not. Criterion 2 is whether a respondent's least liked party is in government. We determined each individual's least liked party and, if that party was in government, the respondent was coded 1 on that variable. They were coded 0 otherwise. Finally, criterion 3 is how much more respondents like or dislike governing parties compared to non-governing parties. We calculated an overall evaluation of governing parties for each respondent, weighted by the proportion of seats each party won in

¹Using the `which.is.max` function in the `nnet` R package

the legislature, and subtracted from it their similarly weighted evaluation of non-governing parties.

As already mentioned, the three individual variables we considered that may affect how much influence citizens' preferences have on government composition are income, education, and political information. The information variable was created by counting the number of political information questions respondents answered correctly. Three questions were used.² Scores on this variable thus went from 0 to 3. Once we had these three initial variables, we recoded them into terciles. In order to avoid comparing groups of unequal size, which is a major issue in a cross-national study like the CSES, we created variables where a third of respondents were in each of the three categories.

We also included a second level of analysis, where we consider how macro level variables condition the relationships between income, education, and information, on the one hand, and our measures of representation. The election-level variables we include are GDP per capita (from the World Bank), the net Gini coefficient (post-tax, post-transfer) from Solt (2014), and a dummy indicating whether the electoral system is proportional or not. The latter was constructed on the basis of data from Matt Golder and elsewhere.

Bayesian Methods and Priors

This paper makes use of Bayesian multilevel models, which are a simple and efficient way of analyzing data with multiple levels of analysis (see, for example, Gelman and Hill, 2006; Stegmueller, 2013). They allow us to easily visualize the effect of each individual level variable in each upper-level unit, in this case, elections, along with measures of uncertainty. They also allow us to see easily see how upper-level variables condition relationships at the first level, also with measures of uncertainty.

Inference in Bayesian analysis does not involve confidence intervals or significance tests, whose interpretation is quite obscure even for experienced analysts. Rather than using arbitrary cutoffs, like 0.05, for null-hypothesis significance tests, using Bayesian methods, we interpret our results stating

²In modules 1-3 only three questions were asked. In module 4, four were asked, but one of them was about the unemployment rate, which is less political than the others. We, therefore, dropped that one

how confident we are in them. We can thus specify in a percentage how confident we are that a parameter is greater than or less than 0. We also make use of credible intervals rather than confidence intervals. Credible intervals allow us to assert that we are confident at a given level that the parameter is in a certain range.³

Bayesian analysis is founded on the updating of priors. Bayesians start out with priors, reflecting the existing state of knowledge, which they then update using data. By combining previous knowledge (the prior) by new data (the likelihood), researchers arrive at a posterior distribution for each parameter of interest, reflecting a weighted average of prior knowledge and new information. While we do have theoretically informed expectations with respect to some of the parameters, we do not have prior knowledge about any of the parameters of interest, we therefore set priors on all parameters that do not depend on higher-level variables to have non-informative priors, meaning priors that reflect a previous state of no knowledge. The distributions chosen for these priors are normal distributions centred at 0 with precision of 0.01 (i.e. variance of 100). In other words, our prior knowledge is a very wide distribution centred at 0. Essentially, this allows the data to determine the form of the posterior distributions. Our priors for variance parameters are uniform distributions bounded by 0 and 100, as suggested by Gelman et al. (2006) for multilevel models.

We do, however, have informed priors for parameters that depend on higher level variables. Multi-level Bayesian modelling essentially involves setting priors on lower-level parameters centred on values determined by higher-level parameters. Thus, for example, in models seeking to explain how strong the relationship is between income and one's most liked party being in government, our prior is a normal distribution centred at the predicted value of higher level models including a dummy for proportionality, the Gini coefficient, and GDP per capita. Using priors from upper-level models is what makes multi-level Bayesian models so simple to do and interpret.

Two sets of multilevel models were run. Initially, we ran models using varying intercepts and slopes that we did not model. These were used to determine how strongly preferences are associated with income, education, and political information terciles in each election. We then ran models where we modelled varying slopes and intercepts. We used these to explain why

³Essentially, credible intervals tell us the range of a given proportion of the posterior distribution.

representation is more strongly associated with the individual-level variables in some elections than in others.⁴

Do preferences differ across groups?

Given the varying findings of existing studies on whether preferences do actually differ across groups, it is important to begin by assessing the degree of divergence across groups. In order to determine how different groups preferences are, we ran some initial multilevel models where the dependent variable was the rating given to each party by respondents with income, education, and political information variables as individual level explanatory variables. We allowed intercepts and slopes to vary by party. The parameters of interest are the coefficients on the indicators for the third income tercile, indicating how much more or less liked each party is among people in the top tercile compared to the bottom tercile.

For income, we found that we can be 95% confident that 52% of the coefficients are different from 0, meaning that 95 % of their posterior distributions are above or below 0. In the language of frequentist statistics, there are significant differences across income groups in a small majority of cases. Sixty-two percent are different from 0 at the 90% level. On average the effect is relatively small, however. The mean absolute difference between ratings among citizens in the first and third terciles is 0.59 when differences are “significant”. The left panel of figure 1 shoes the coefficients for all parties along with 90% credible intervals.⁵

Differences are somewhat greater and more common among education groups. Sixty-three percent of coefficients on the dummy for the third education tercile, showing how much more or less respondents in the third tercile like/dislike each party than respondents in the first tercile, have 95 % of their distributions above or below 0. Seventy-two percent have 90% greater than or less than 0. The mean difference for differences associated with education groups in which we can be at least 95 % confident is 0.69. The centre panel of figure 2 shows coefficients on the dummy for the third education tercile.

For information, differences are smaller. Less than half (41%) of coeffi-

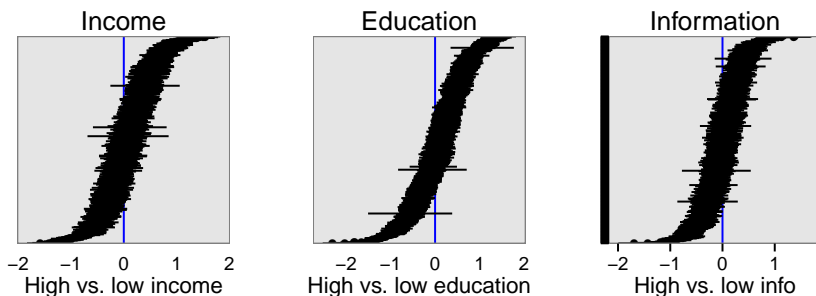
⁴All models were run using JAGS in R via R2Jags. They were run with 2 chains of 5000 iterations each, and a burnin of 2500.

⁵We have chosen to present varying coefficients in graphical rather than tabular form, due to the large number of coefficients.

cients are “significantly” different from 0 (at the 95 % level). Fifty-two are “significant” at the 90 % level. The mean of differences we can be confident in at the 95 % level associated with information is 0.5. The right graph in figure 3 shows the coefficients on the variable for the third tercile information variable, showing how much the preferences of the top information tercile differ from those of the bottom tercile.

To sum up, differences are relatively small among income, education, and information terciles, but we can be 95% confident in differences between the top and bottom income and education terciles for most parties. The greatest and most frequent differences are between citizens with high and low education.

Figure 1: Coefficients from preference models with 90% credible intervals



Where do preferences differ more?

An obvious addition to the models run in the previous section would be to add an extra level for elections. In other words, add a varying intercept for each election. The problem with such an approach is that coefficients on dummies for income, education, and information can be positive or negative. We, therefore, adopt a different approach. We calculated a dependent variable reflecting how different ratings are between top tercile and bottom tercile citizens on each variable. We kept the largest difference in ratings of parties between upper and lower terciles for each of income, education, and information for each election.

Table 1: Maximum Difference Associated with Income

	Coef	SD	Pr>or<0
Intercept	0.82	0.41	0.97
GDP per cap	-0.00	0.00	0.95
Gini	0.00	0.01	0.55
Proportional	0.24	0.13	0.96

As Table 1 shows, preferences differ more between top and bottom income groups where GDP per capita is lower and where the electoral system is proportional. We can be at least 95% certain in both of those relationships. Preferences are essentially no more nor less different in more unequal societies, as the coefficient on Gini shows. Table 2 shows that the only variable that conditions the relationship between education groups and preferences is Gini. We can be 90% confident that preferences are less distinct between the top and bottom education terciles in elections in countries that are more unequal. As we can see in table 3, none of the macro variables we consider condition the relationship between information groups and preferences.

Table 2: Maximum Difference Associated with Education

	Coef	SD	Pr>or<0
Intercept	1.27	0.44	1.00
GDP per cap	-0.00	0.00	0.60
Gini	-0.02	0.01	0.90
Proportional	0.15	0.14	0.86

Table 3: Mean Difference Associated with Information

	Coef	SD	Pr>or<0
Intercept	0.43	0.49	0.82
GDP per cap	0.00	0.00	0.70
Gini	0.01	0.01	0.78
Proportional	0.03	0.15	0.58

Who is better represented?

Criterion 1: Are citizens' most liked parties in government?

The first criterion for assessing representation is whether each respondent's most liked party was in cabinet following each election. For each survey respondent, we determined their most liked party using their like/dislike ratings, breaking ties at random. We then assigned respondents whose most liked party was in government a 1 and those whose preferred party was not in government a 0. We then ran models using this variable as the dependent variable and dummies for the second and third terciles of income, education, and information as independent variables, allowing us to see how much more likely someone in the third tercile is than someone in the first tercile to find their most liked party in government. At this stage, we ran independent models for each set of variables, income, education, and information. In all models in this section, slopes and intercepts are allowed to vary but are not modelled. In other words, we allow the average level (intercept) and the effects of income, education, and information (slope) to vary across elections, but we do not seek to explain, in this section, why they are higher in some elections than in others. We do so in the next section.

Here we assess the relationship between income, education, and information, on the one hand, and representation, on the other, as defined by criterion 1. In other words, we assess the extent to which having higher income, education or information makes a citizen's most liked party more likely to be in government. For there to be differences in representation across income, education, or political information terciles, there must be differences in the proportion of citizens in each income category who like each party most. We first calculated the proportions in each category that like each party most, then we calculated differences in the proportions liking each party most between the top and bottom terciles. We then retained the largest difference, which we took as indicative of potential inequalities in representation. Figure 2 shows the distributions of the largest differences in proportions for all elections. For income, the largest differences ranges from 1.4 to 35.9 points with a median of 4.9 points. In about half of elections (61.7%) the largest difference was at least 5 percentage points. The median largest difference between top education tercile citizens and low education citizens is 5.2 percentage points. The smallest is 0.6 points and the largest is 40.7. In 86.1% of elections, the

largest difference was greater than 5 points. of The median largest difference between the high and low information terciles is 9.3 points. The smallest difference is 3.0 points and the largest is 29.6 percentage points. In 87.5% of elections, the largest difference is greater than 5 percentage points. In sum, the distributions of largest differences in proportions liking each party most are relatively similar across income, education, and information groups. In sum, differences across income, education, and information terciles are not huge, but they do exist.

Figure 2: Distributions of largest differences between upper and lower income, education, and information groups (Criterion 1)

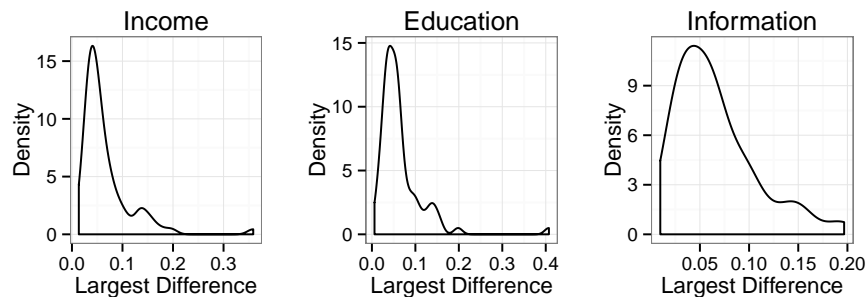


Figure 3 shows us how well represented top income tercile citizens are compared to bottom tercile citizens in each election. The graph shows differences in the predicted probability of one's party being in government between the third tercile (highest tercile) and the first tercile (lowest tercile). For each election, the mean difference is represented by a dot and 90% credible intervals are also shown. These give the range of probability differences covered by 90% of the posterior distribution. The appropriate interpretation is that we can be least 90% confident that the difference lies between the lower and upper bounds of the interval. We can see a large range of differences due to income. The elections are ordered by magnitude of the difference. The election where high income individuals are best represented, compared to low income citizens, are in the top right and those where they are least well represented are in the bottom left. Using the credible intervals, we can determine where we can be at least 90% confident that more income is associated with better representation, that is where dots are right of the vertical line and where intervals do not cross the line. We can also see where being better

off is associated with worse representation, when the dot is left of the vertical line and the intervals do not cross it and where there are no differences in the probability of finding one's preferred party in government associated with income, that is, where the credible intervals cross 0.

Figure 3: Difference between the probability that a rich and a poor citizen's most liked party is in cabinet

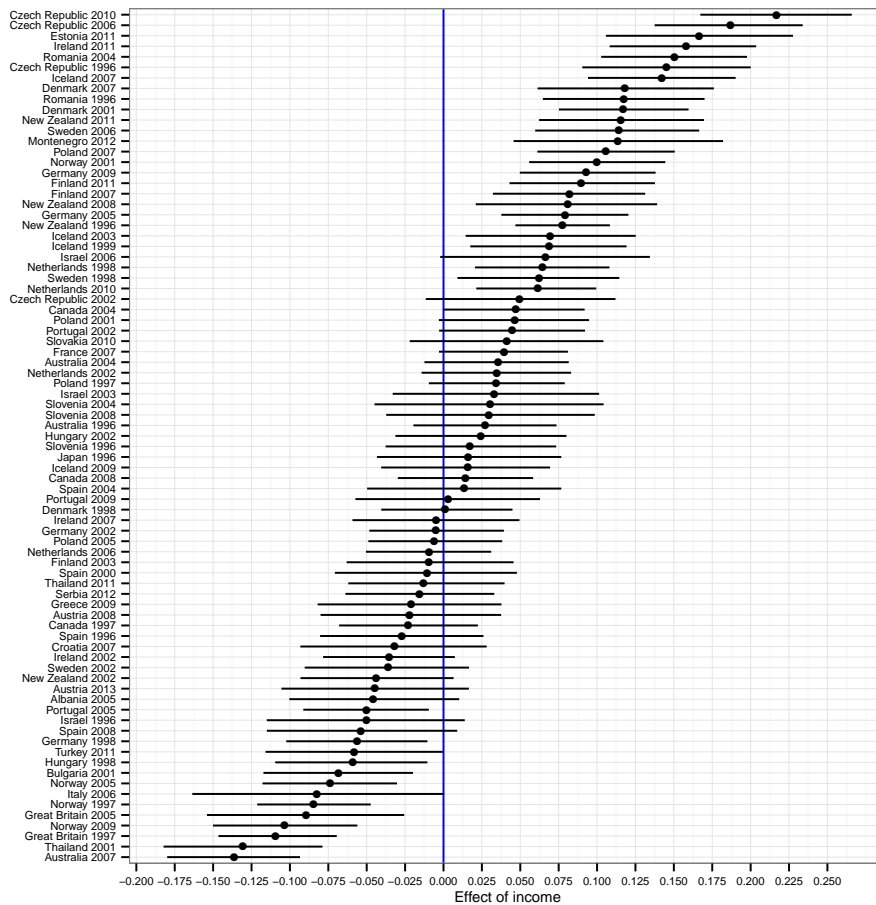


Figure 4 shows a similar graph for education and figure 5 shows one for information. We note that the range of differences associated with education is similar to that for differences associated with income, while that for information is narrower.

Figure 4: Difference between the probability that a high education and low education citizen's most liked party is in cabinet

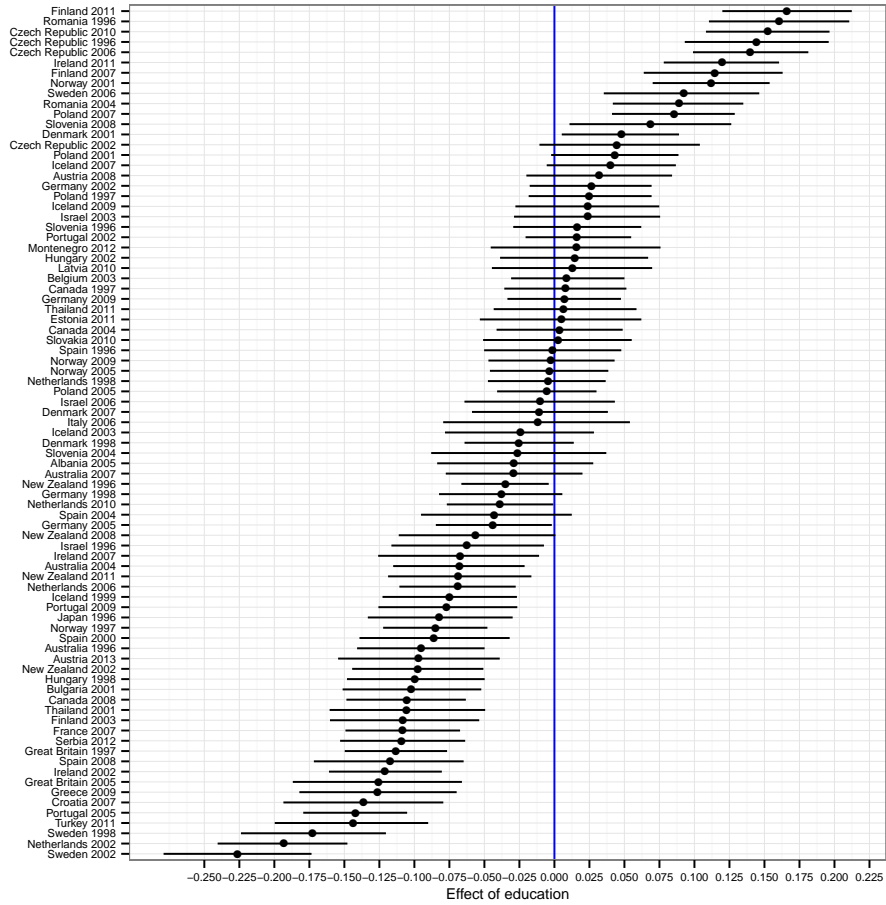


Figure 5: Difference between the probability that a high and low information citizen's most liked party is in cabinet

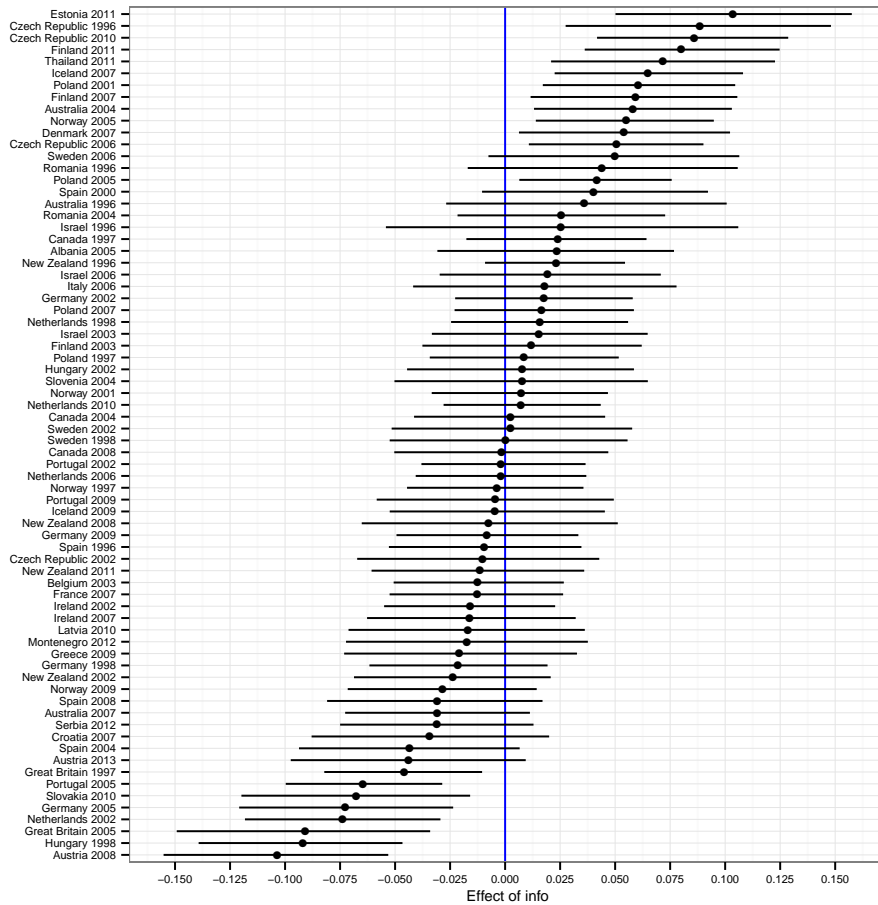


Table 4: Pr most liked party in cabinet (top vs. bottom tercile)

Variable	More likely/less likely
1 Income	33.3%/14.8%
2 Education	15.7%/41%
3 Information	18.1%/11.1%

Table 4 shows the proportions of elections where top tercile citizens are better represented than individuals in the bottom tercile on criterion 1 for

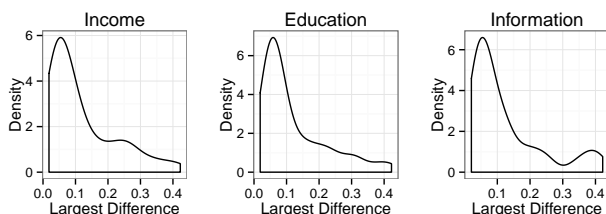
each of income, education, and information. It also shows where the reverse is true. We can see that income is most frequently positively associated with having one's party in cabinet. High income citizens are better represented in just over a third of elections. Education, however, has the opposite effect in about 40% of elections. After many elections, citizens with higher education were in fact less likely to find their preferred party in government than those with low education.

Overall, having a higher income tends to be associated with citizens' most liked parties being represented in government. Conversely, the first choices of people with high education are often less likely to be in government. Nevertheless, we can see that these differences do not exist everywhere. Particularly interesting is the fact that better off citizens are only better represented in about a third of elections.

Criterion 2: Are citizens' least liked parties in government?

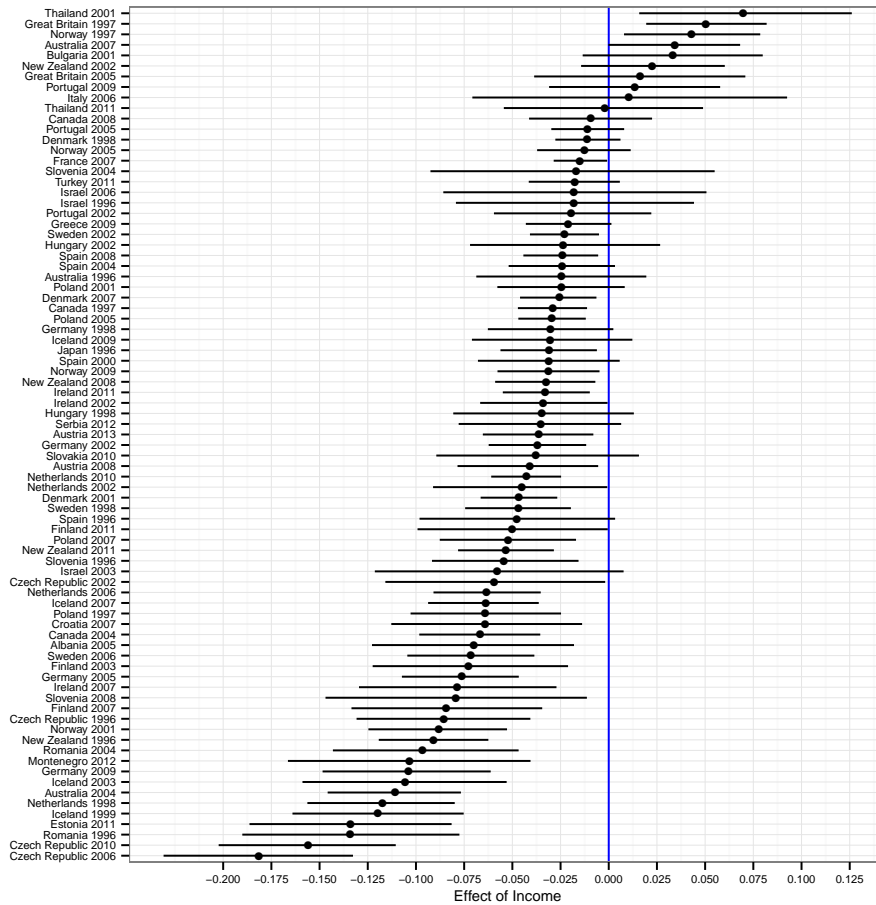
For criterion 2, we assess how much more or less likely citizens with more income, education, and information are to find their least liked party in government. Citizens are well represented when the party they like the least is in the opposition. Figure 6 shows the distributions of largest differences in proportions most disliking parties in each election. The median largest difference in percentages of least liked parties between upper and lower income terciles is 8.2 percentage points. The largest differences range from 1.8% to 42.3%. In two-thirds of cases the largest difference was greater than five percentage points. The largest differences between top and bottom education groups range from 1.9 points to 42.2 points with a median of 7.2. In 77.8% of elections, the difference was larger than 5 points. For political information, the range is 2.1 to 42.4 percentage points. The median is 7.7 points. Seventy-one percent of largest differences are greater than five points. In short, the proportions least liking parties are about as distinct as those most liking parties.

Figure 6: Distributions of largest differences between upper and lower income, education, and information groups (Criterion 2)



Figures 7 to 9 show how much more or less likely citizens in the top income, education, and information terciles are to live with their least liked parties in government. Since citizens are well represented on this criterion when the party they like the least is in the opposition, we should give these graphs the opposite interpretation we had for those for criterion 1. Elections that appear in the lower left are those where people in the upper terciles are better represented than those in the lower terciles, because the party they dislike the most is more likely to be outside of government. Cases in the upper right are those where people with more income, education, and knowledge are less well represented, because their least liked parties are in government. As with criterion 1, we can see a range of differences in how well represented citizens in the top terciles are compared to those in the bottom terciles. For criterion 2, however, there are fewer elections where citizens in the top terciles are less well represented than those in the bottom terciles and the magnitudes of the differences in probabilities are smaller on the right side of the 0 line than on the left side.

Figure 7: Difference between the probability that a rich and a poor citizen's least liked party is in cabinet



Similarly to criterion 1, income tends to improve the representation of citizens' preferences. As we can see in table 5, in 60.5% of elections, rich citizens' least liked parties were less likely to be in government than poor citizens' least liked parties. In only 3.7% (three elections), were the least liked parties of upper income tercile respondents more likely to be in government than those of individuals in the lower tercile. Education appears to be more helpful than it was for criterion 1, but less helpful than income. In 53.0% of elections, more educated citizens' least liked parties were less likely to be in government. In only 8.4% of elections, were more educated people's least liked parties more likely to be in government. Information was also associated

with better representation in government. In 50% of elections, the most informed tercile's least liked party was less likely to find itself in government, while in 2.8% it (two elections) was it more likely to be in government. It, therefore appears, that income, education and information are associated with having one's most disliked party in opposition in a majority of elections.

Figure 8: Difference between the probability that a high education and low education citizen's least liked party is in cabinet

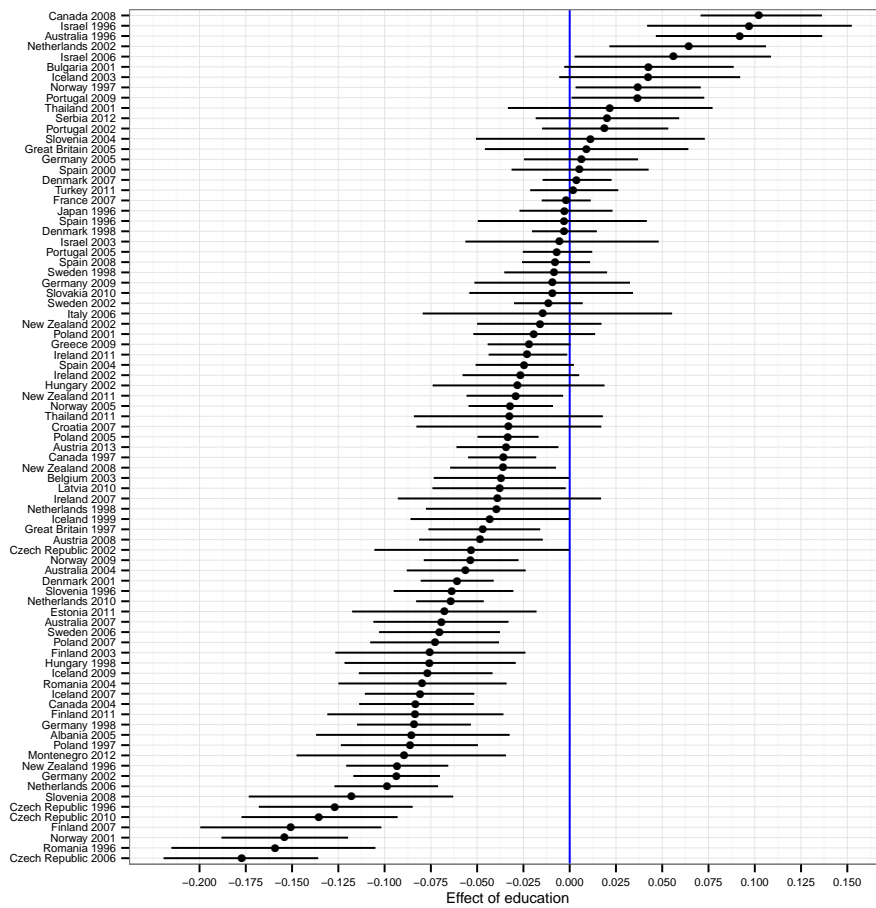


Figure 9: Difference between the probability that a high information and low information citizen's least liked party is in cabinet

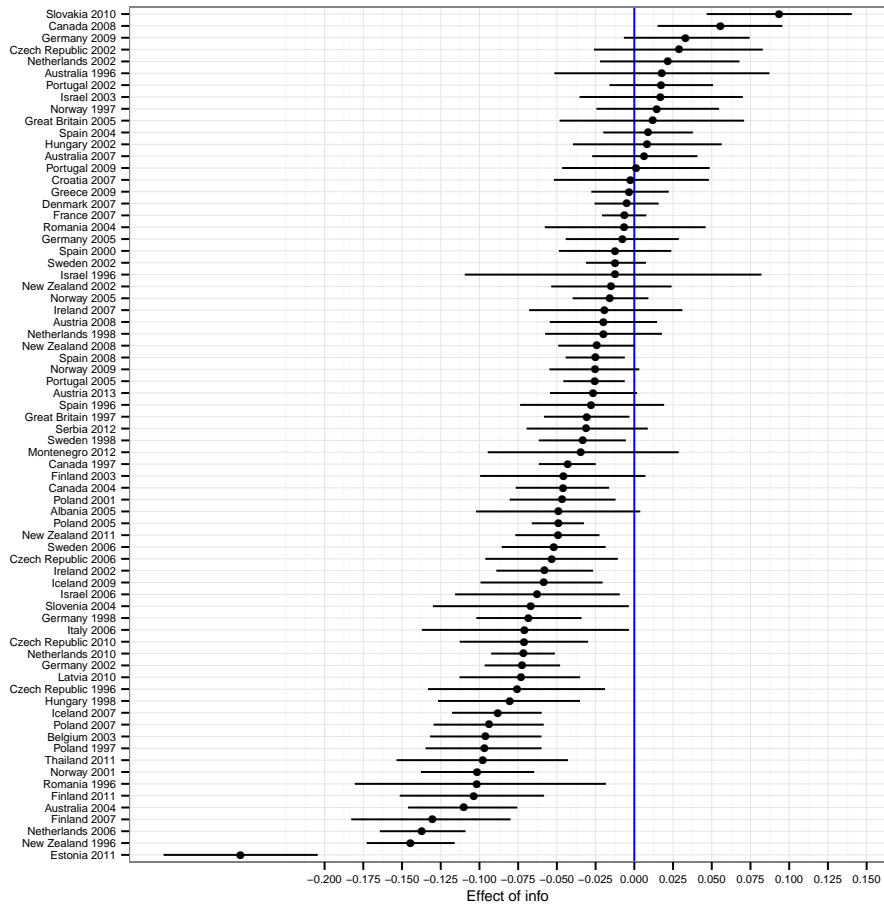


Table 5: Pr least liked party in cabinet (top vs. bottom tercile)

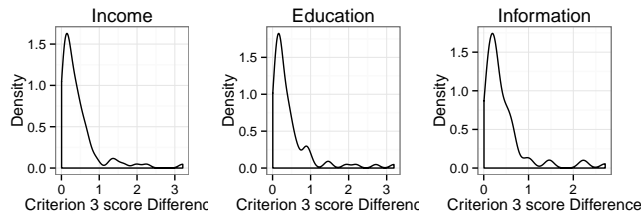
	Variable	More likely/less likely
1	Income	3.7%/60.5%
2	Education	8.4%/53%
3	Information	2.8%/50%

Criterion 3: How much do citizens like governing parties compared to non-governing parties?

Criterion 3 assesses how well citizens like governing parties compared to non-governing parties. We calculated a weighted average of each respondent’s evaluations of governing parties, where the weights were seat proportions in the legislature, and subtracted from it a similarly weighted average of their evaluations of non-governing parties.

Absolute differences between criterion 3 scores of first and third terciles vary from 0 to 3.21 points. The median difference is 0.25. Differences between education groups range from 0 to 3.19. The median difference is 0.23. For information, the range is 0 to 2.71 with a median of 0.26. We can see in figure 10 that the three distributions of differences in scores are concentrated below 1. Thus, differences are generally small but they do exist. Half of differences are greater than 0.25 and a quarter are greater than 0.5.

Figure 10: Distributions of differences in criterion 3 scores between top and bottom terciles)



Figures 11 to 13 show the coefficients on the variables for the third terciles. In other words, it shows, in each election, how much more or less citizens in the top tercile like governing parties compared to non-governing parties. They are better represented when they like parties in government more than they like parties in the opposition. Therefore, elections that appear in the top right are cases where upper tercile citizens are better represented.

For criterion 3, as we can see in table 6, income and information appear to be the most important determinants representation. In 43.2% of elections, citizens in the top income tercile were better represented than those in the bottom tercile. In only 17.2% was the opposite the case. The top education tercile had higher scores on criterion 3 in 33.7% of elections and lower scores in 25.3%. The top information tercile was better represented in

37.5% of elections and less well represented in 6.9%. Thus, both income and information appear to be important for representation.

Figure 11: Difference between government/opposition evaluations of rich and poor

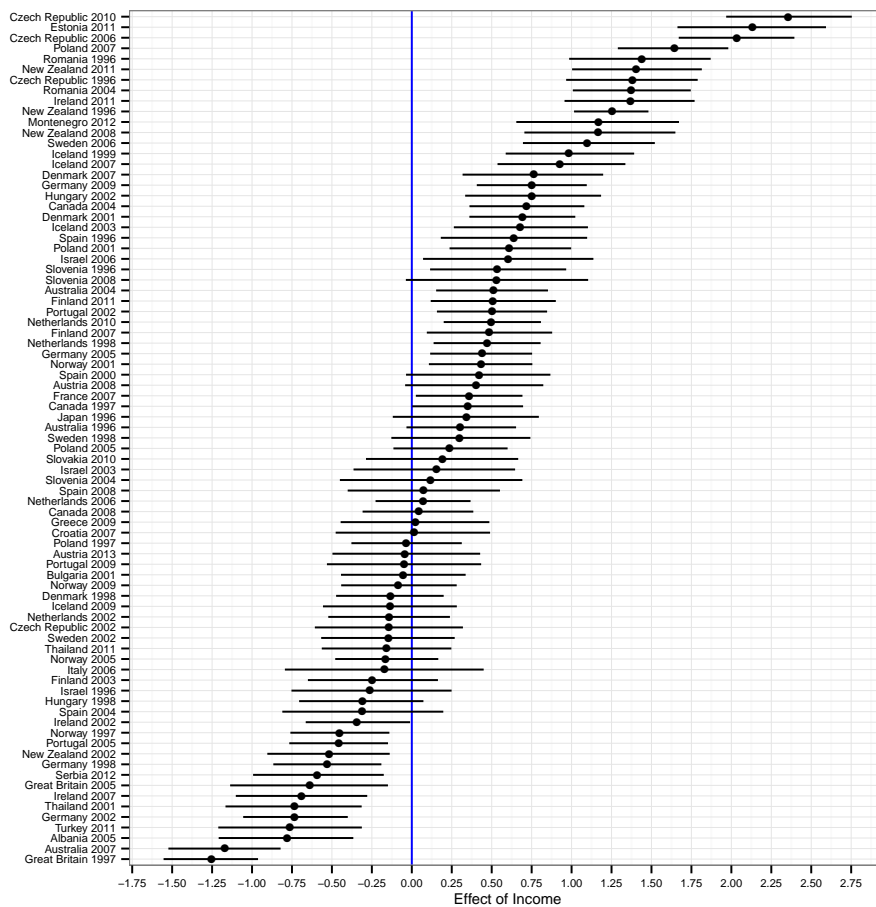


Figure 12: Difference between government/opposition evaluations of high education and low education citizens

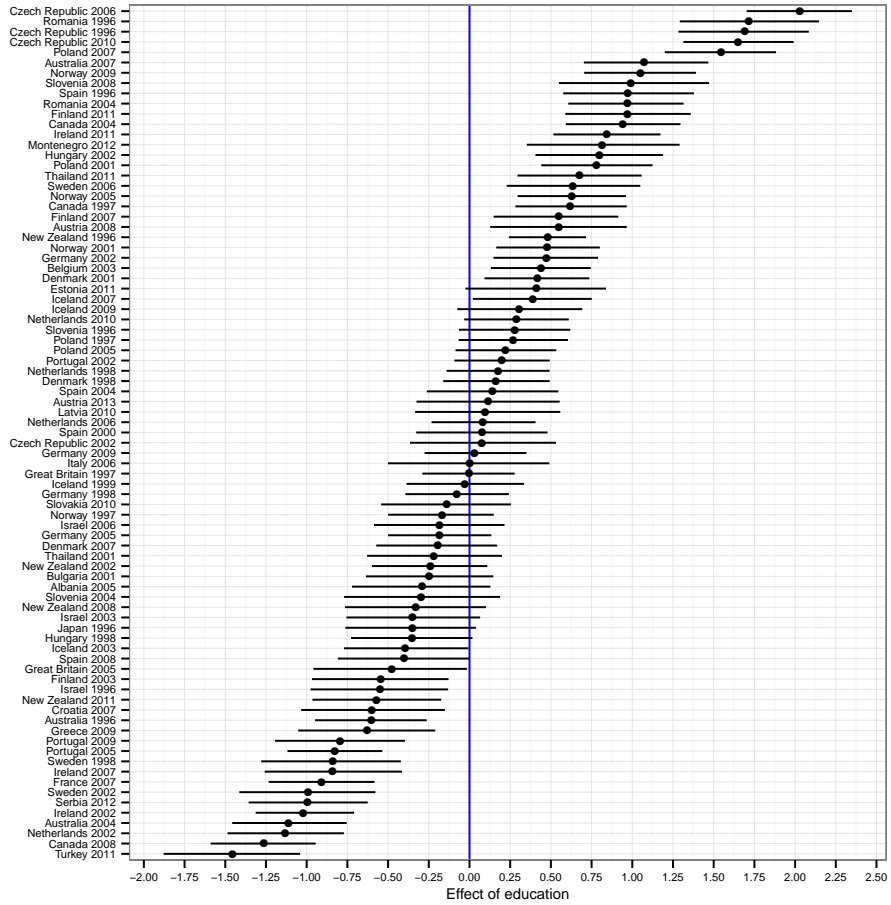


Figure 13: Difference between government/opposition evaluations of high information and low information citizens

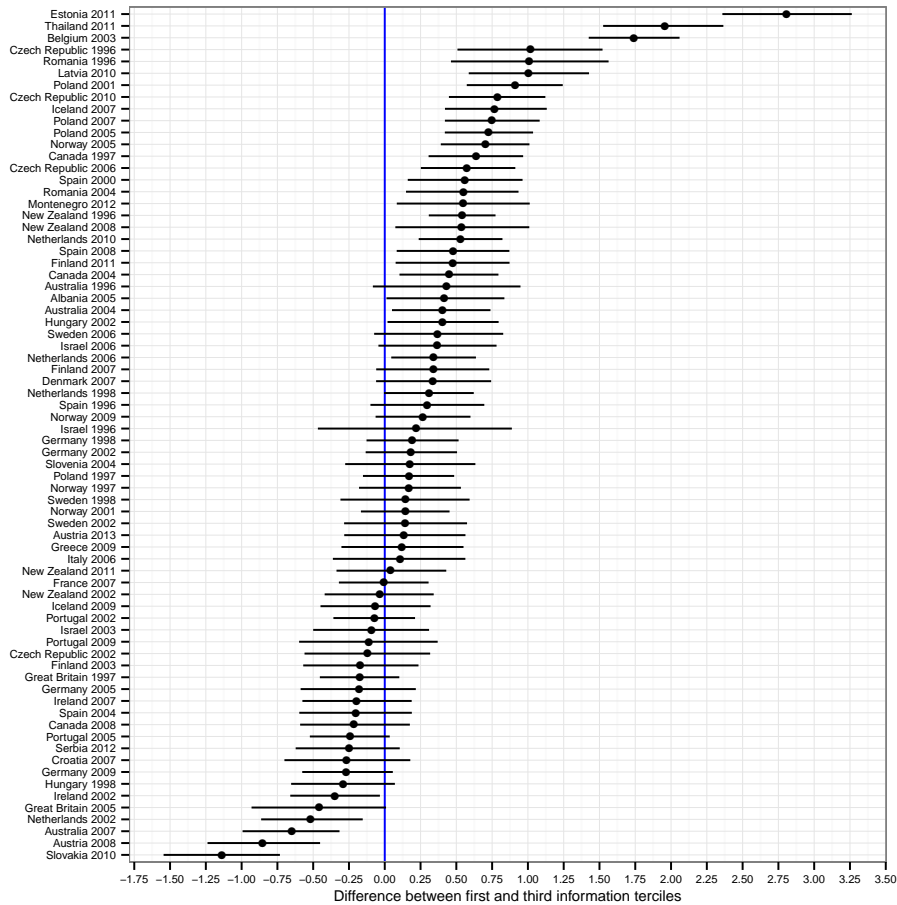


Table 6: Criterion 3 scores (top vs. bottom tercile)

Variable	More likely/less likely
1 Income	43.2%/17.3%
2 Education	33.7%/25.3%
3 Information	37.5%/6.9%

Table 7 shows the results from three models, one for each criterion, including all three independent variables. All differences were calculated holding

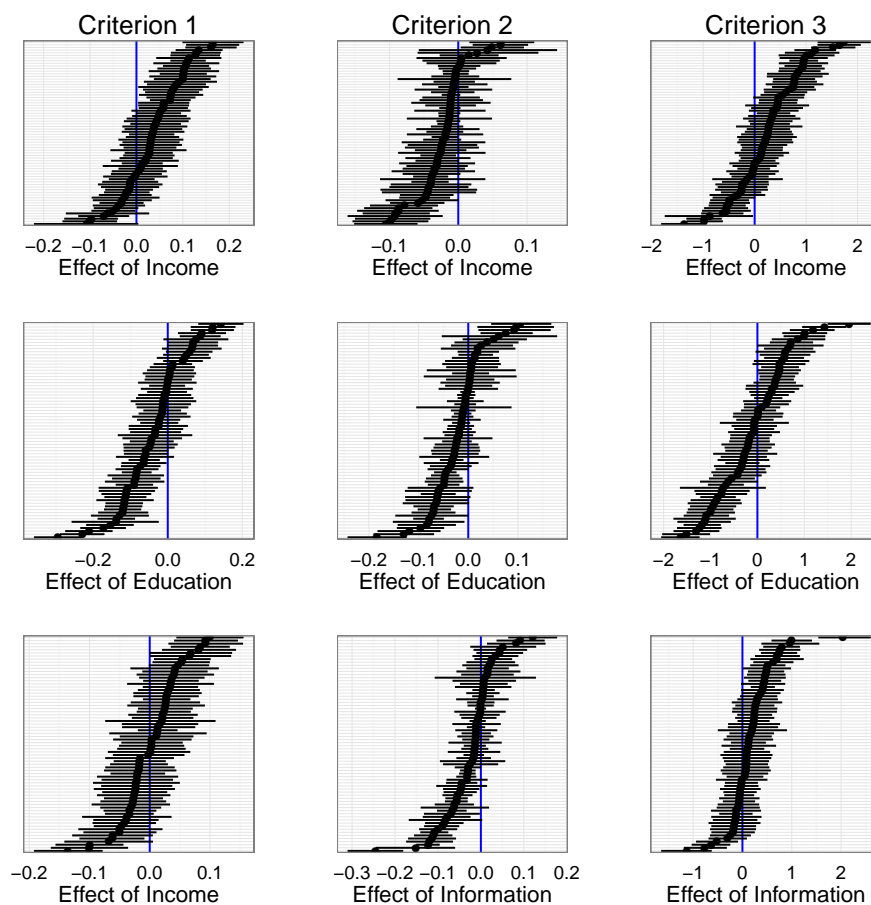
the other two variables at the middle tercile. Therefore, they should be interpreted as showing the difference in predicted probabilities (criteria 1 and 2) or evaluations of government vs opposition (criterion 3) parties between citizens in the top and bottom terciles on each variable when the other two variables are at their central values (tercile 2).

Figure 14 shows the differences between upper and lower terciles for income, education, and information. Income is still associated with better representation on criterion 1, while education is associated with worse representation. Information is most frequently associated with better representation under criterion 2, with income and education, making a difference slightly less often. Income is also the variable most associated with better representation on criterion 3. In sum, people who are better off are better represented than people who are less well off in about a third of elections (criteria 1 and 3), while information seems most important for representation under criterion 2.

Table 7: Difference between top and bottom terciles from full models

	Variable	Criterion 1	Criterion 2	Criterion 3
		Higher/lower	Higher/lower	Higher/lower
1	Income	37.1%/5.7%	4.3%/22.9%	34.3%/14.3%
2	Education	7.1%/37.1%	5.7%/27.1%	22.9%/25.7%
3	Information	11.4%/7.1%	4.3%/32.9%	22.9%/5.7%

Figure 14: Differences for three criteria from full models



One possibility is that citizens with higher incomes, education and information are better represented in some elections because they vote more. In order to assess this possibility, we ran three more full models, similar to those above but now with a dummy variable for self-reported turnout included along with the indicators for income, education and income terciles. The coefficient on the voted dummy was allowed to vary across elections in all three models. Table 8 reports the results from these models. When we control for turnout, we find that income still makes a difference in all three models in at least a third of elections. All variables make a difference in more elections under criterion 2 and now income is the most important variable there, being associated with improved representation in two thirds of elec-

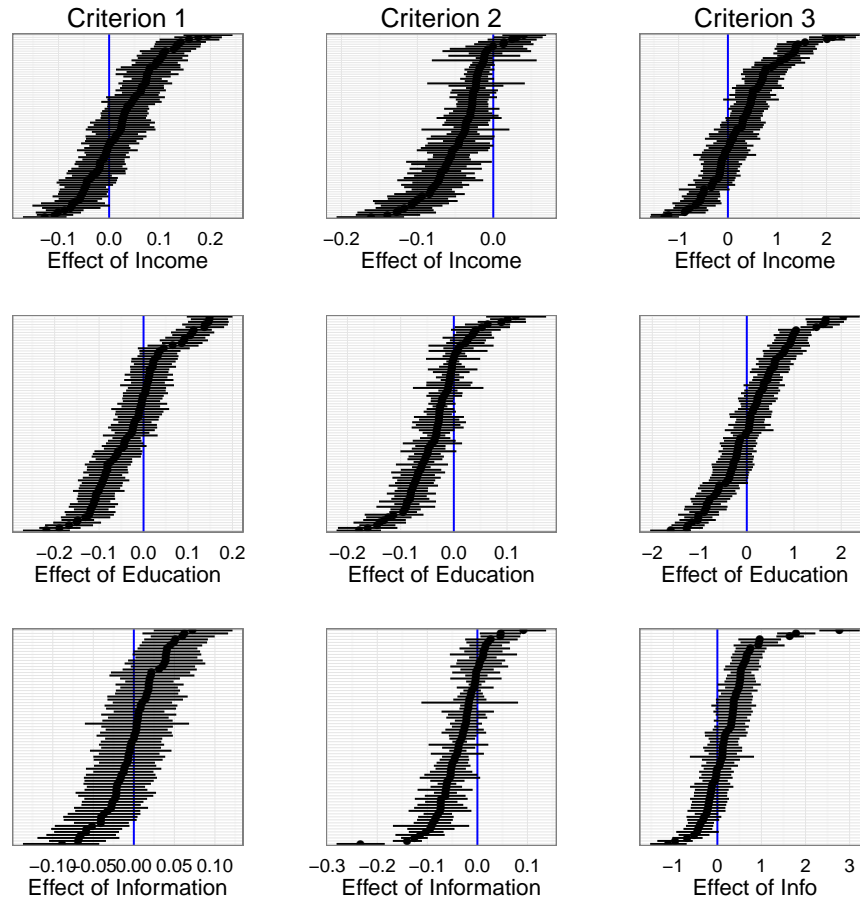
tions. To sum up, differences in representation associated with income and education appear to be unrelated to whether people voted (or at least claim to have voted). Even when controlling for self-reported turnout, income is associated with better representation. Admittedly, this analysis is based on a limited indicator of whether people voted, their self-reported turnout.

Nevertheless, the finding that citizens in the top income tercile are better represented than those in the bottom tercile is quite robust. This is the case in a third of elections under criteria 1 and 3 in all models and in at least one out of five under criterion 2. We can also think about this the other way around. Better off citizens' party preferences do not have greater influence on government composition in most elections. Therefore, the fear that governments better represent the rich and thus adopt policies that help the rich to the detriment of the poor, thus increasing inequalities does not seem warranted in the majority of elections, at least when it comes to the partisan composition of governments.

Table 8: Difference between top and bottom terciles from full models including turnout

Variable	Criterion 1	Criterion 2	Criterion 3
	Higher/lower	Higher/lower	Higher/lower
1 Income	33.8%/16.2%	2.5%/66.2%	43.8%/16.2%
2 Education	14.6%/42.7%	7.3%/46.3%	32.9%/22%
3 Information	11.1%/11.1%	4.2%/48.6%	34.7%/9.7%

Figure 15: Differences for three criteria controlling for turnout



How do we explain inequalities in representation?

In this section, we attempt to gain some understanding of the inequalities in representation we did find. We focus on the most robust finding, which is that upper income tercile citizens are better represented than their lower tercile counterparts in about a third of elections. In order to do that, we ran multilevel models that are similar to those we ran for the previous section but now we modelled varying slopes and coefficients. In other words, these

models try to explain why representation is better under each criterion in some elections (varying intercepts) than others and why income matters more in some elections than in others (varying slopes). Since we are interested in inequalities we focus on explaining varying slopes although we present the results for all coefficients

The macro variables we included in the second level, as explained above, are a dummy for whether an electoral system is proportional, GDP per capita, and the net, post-tax and post-transfer, Gini coefficient. Table 9 presents the results for criterion 1. Looking at the cross-level interactions between the dummy for the third income tercile and the three macro variables, we can see that we can be 96% confident that the difference in the probability of one's most liked party being in government is greater under PR than under non-PR. We can also be 99% confident that the difference between the top and bottom income terciles becomes smaller as gini increases. In other words, inequalities in representation between rich and poor decrease as income inequality increases. Both findings are surprising. We expected no difference between proportional and non-proportional systems and we expected more inequalities in representation in more unequal societies. GDP per capita is essentially associated with no difference in the degree to which income makes a difference in representation, since we can only be 56% confident that the effect is negative.

Figure 16 plots out the difference in predicted probabilities, along with 90% credible intervals, of citizens in the top and bottom terciles of finding their most liked parties in cabinet. It shows how these vary with the Gini coefficient for both proportional and non-proportional systems. We can see that the difference between rich and poor decreases as inequality increases. The bottom panel shows the posterior distribution of the difference in differences between rich in poor between proportional and non-proportional systems. The shaded region shows 90% of the distribution, which is all above 0. We can thus be at least 90% confident that the difference in predicted probabilities between rich and poor is greater under PR than non-PR systems.

Table 9: Model with modelled varying coefficients (criterion 1)

	Coef	SD	Pr>or<0
Intercept	0.17	1.43	0.55
Intercept*Proportional	0.03	0.13	0.61
Intercept*Gini	0.26	0.34	0.77
Intercept*GDP per cap	-0.11	0.05	0.99
Income2	1.46	0.73	0.98
Income2*Proportional	0.10	0.07	0.94
Income2*Gini	-0.42	0.17	0.99
Income2*GDP per cap	-0.01	0.03	0.65
Income3	2.20	1.25	0.96
Income3*Proportional	0.21	0.11	0.96
Income3*Gini	-0.66	0.30	0.99
Income3*GDP per cap	-0.01	0.05	0.56

Figure 16: Difference between the first and third income terciles, PR, and income inequality (Criterion 1)

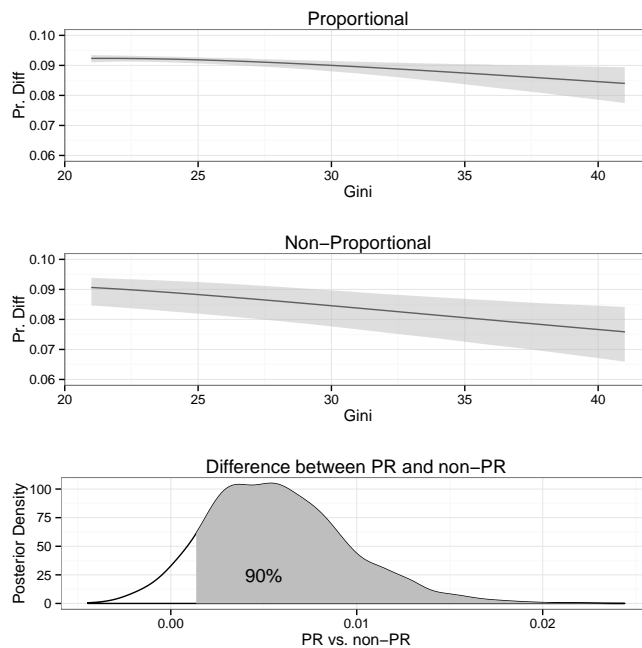


Table 10 shows the coefficients for the modelled varying coefficients model for criterion 2. Here positive interaction coefficients show that a variable decreases the difference between the top and bottom income terciles, while negative coefficients suggest the opposite. The results allow us to be 97% confident that PR is associated with larger differences between the rich and the poor's probabilities of finding their least liked parties in cabinet, 99% confident that higher values of the Gini coefficient are associated with smaller differences, and 90% confident that higher values of GDP per capita are associated with larger differences.

Table 10: Modelled varying income coefficients model (criterion 2)

	Coef	SD	Pr>or<0
Intercept	2.46	2.99	0.80
Intercept*Proportional	0.25	0.29	0.80
Intercept*Gini	-0.15	0.70	0.59
Intercept*GDP per cap	-0.34	0.12	1.00
Income2	-0.21	0.84	0.60
Income2*Proportional	-0.10	0.08	0.89
Income2*Gini	0.17	0.20	0.81
Income2*GDP per cap	-0.04	0.03	0.93
Income3	-1.90	1.11	0.96
Income3*Proportional	-0.19	0.10	0.97
Income3*Gini	0.67	0.26	0.99
Income3*GDP per cap	-0.05	0.04	0.90

Coefficients for the criterion 3 model are presented in table 11. We can see that we can be 94% confident that the difference in scores between the top and bottom income groups is greater under PR than non-PR and 93% confident that it is smaller in countries with greater inequality.

Table 11: Modelled varying income coefficients model (criterion 3)

	Coef	SD	Pr>or<0
Intercept	-0.19	7.90	0.50
Intercept*Proportional	-0.27	1.19	0.58
Intercept*Gini	0.76	2.02	0.64
Intercept*GDP per cap	-0.14	0.43	0.62
Income2	1.09	1.75	0.73
Income2*Proportional	0.22	0.16	0.91
Income2*Gini	-0.45	0.41	0.86
Income2*GDP per cap	0.03	0.06	0.70
Income3	3.73	2.79	0.90
Income3*Proportional	0.44	0.28	0.94
Income3*Gini	-1.00	0.66	0.93
Income3*GDP per cap	-0.05	0.11	0.66

Another way of trying to understand why income is associated with better representation in some places is to actually look at the governments that were formed following the elections. Table 12 shows the names of the parties that were in government, their relative ideological positions, and the weighted ideological positions of their governments for cases where the rich were better represented than the poor on criterion 1. Ideological positions, available for most elections, are those from CSES country experts. They were asked to place parties on a left-right scale from 0 to 10. In order to show where each party, and in turn government, is relative to the political centre in each election, the mean party placement was calculated for each election and was subtracted from each party's score. Thus, a score above zero means that a party is to the right of the centre in a particular election, and a negative score indicates a party that is left of the centre in an election. Mean government scores are a weighted mean of these relative party scores, where the weights are the proportion of seats each party had in cabinet. We can see that all but three of these governments mean ideological positions were right of centre.

Table 12: Parties in cabinets in which the rich are better represented on criterion 1, their ideologies, and mean ideology

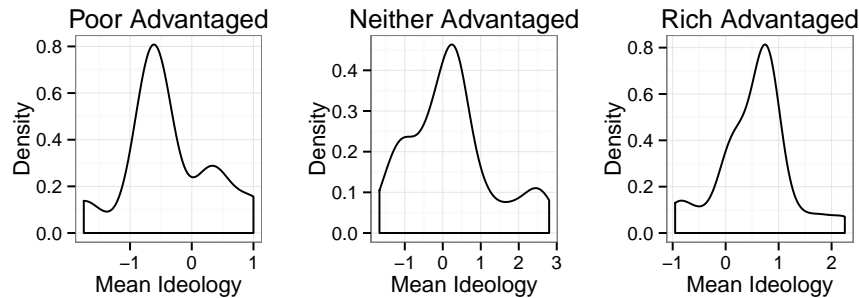
Election	Parties in government (Relative Ideology of parties)	Mean Ideology
Canada 2004	Liberal Party of Canada (0.8)	0.8
Czech Republic 1996	Civic Democratic Party (2), Christian Democratic Union (0), Civic Democratic Alliance (2)	0.75
Czech Republic 2006	Civic Democratic Party (4), Christian Democratic Union-Czechoslovak Peoples' party (0), Green Party (0)	2.25
Czech Republic 2010	Civic Democratic Party (3.14), Tradition, responsibility, prosperity 09 (4.14), Public Affairs 0.14	0.89
Denmark 2001	Left-Liberal Party (2.12), Conservative People s' Party (1.12)	0.9
Denmark 2007	Left-liberal party (2), Conservative People's Party (1)	0.82
Estonia 2011	Estonian Reform Party (4.67), Pro Patria and Res Publica Union (2.67)	3.74
Finland 2007	Centre Party of Finland (0), National coalition party (3), Swedish People's Party in Finland (1), Christian Democrats (1)	0.4
Finland 2011	National Coalition Party (1.88), Social Democratic Party (-1.12), Left Alliance (-3.12), Green League (-1.12), Swedish People's Party in Finland (1.88), Christian Democrats in Finland (0.88)	0.01
Germany 2005	Social Democratic Party (-1), Christian Democratic Union (2), Christian Social Union (3)	0.18
Germany 2009	Christian Democratic Union (-0.14), Free Democratic Party (-0.14), Christian Social Union (-0.14)	-0.05
Iceland 1999	Independence party' (NA), Progressive party' (NA)	NA
Iceland 2003	Independence Party (2.8), Progressive Party (0.8)	0.9
Iceland 2007	Independence Party (3.33), Social Democratic Alliance (-0.67)	0.67
Ireland 2011	Fine Gael (1.83), Labour party (-0.17)	0.58
Israel 2006	Kadima (-1.67), Labor (-2.67), Shas (0.33)	-0.5
Montenegro 2012	Socialist People s Party (4.43), Force for unity (1.43), Croatian Civic Initiative (-0.57)	1.34
Netherlands 1998	Labor party (-1), People's Party for Freedom and Democracy (2), Democrats 66 (0)	0.25
Netherlands 2010	People's Party for Freedom (1.89), Christian Democratic Appeal (0.89)	0.69
New Zealand 1996	National Party (1), New Zealand First (0)	0.75
New Zealand 2008	National Party (0.88)	0.88
New Zealand 2011	National party (1.78)	1.78
Norway 2001	Conservative Party (2.83), Christian Peoples Party (-0.17), Liberal Party (NA)	0.72
Poland 2001	Coalition of the Alliance of the Democratic Left (-2.44), Polish People's Party (-0.44)	-0.95
Poland 2007	Civic platform (1), Polish Peasant Party (0)	0.77
Romania 1996	Romanian Democratic Convention (0.8), Social Democratic Union (-0.2), Democratic union of Hungarians in Romania (0.8), National Liberal Party (NA)	0.1
Romania 2004	National Liberal Party (1.17), Democratic Party (0.17), Democratic Alliance of Hungarians in Romania (NA), Humanist Party of Romania (-0.83)	0.14
Sweden 2006	Conservative Party (2.57), Centre Party (0.57), People's Party Liberals (1.57), Christian Democrats (1.57)	0.47

Table 13 shows the composition of governments in which the poor were better represented than the rich under criterion 1. Only 3 of the governments were right of centre. It thus appears that the rich are better represented when governments are right of centre and the poor do better when governments are left of centre. Further evidence of this is provided by figure 17, which shows the distribution of weighted mean ideological positions of cabinets where the poor are better represented, where neither the poor nor the rich are better represented, and where the rich do better. The mean weighted relative ideological placement of governments where the better off were better represented was 0.54, the mean placement of cabinets where the top and bottom income terciles were equally represented was 0.21 and the mean placement of governments in which the poor were better represented than the rich was -0.38. It thus seems quite clear that the poor do better than the rich when governments are right of centre, the rich are better represented when cabinets are left of centre, and both top and bottom income terciles are equally well represented when governments' mean positions are closer to the centre.

Table 13: Parties in cabinets in which the rich are better represented on criterion 1, their ideologies, and mean ideology

Election	Parties in government (Relative Ideology of parties)	Mean Ideology
Australia 2007	Australian Labor Party (-1.75)	-1.75
Bulgaria 2001	National Movement Simeon the Second (0.8), Movement for Rights and Freedoms (0.2)	0.34
Germany 1998	Social Democratic Party (-1), Alliance 90/Greens (-2)	-0.59
Great Britain 1997	Labour (-0.75)	-0.75
Great Britain 2005	Labour (-0.6)	-0.6
Hungary 1998	Alliance of Young Democrats (0.4), Independent Smallholder's Party (1.4), Hungarian Democratic Forum (NA)	0.31
Italy 2006	Democrats of the Left (-2.5), Daisy-Democracy is Freedom (-1.5), Communist Refoundation Party (-3.5)	-0.58
Norway 1997	Christian People's Party (NA), Center Party (NA)	NA
Norway 2005	Labour party (-1.75), Socialist Left Party (-2.75), Center party (-0.75)	-0.6
Norway 2009	Labour party (-1.75), Socialist Left Party (-2.75), Center party (-0.75)	-0.58
Portugal 2005	Socialist Party (1)	1
Thailand 2001	Thais Love Thais Party (NA), New aspiration party (NA), Thai National Party (NA)	NA

Figure 17: Distributions of mean ideological placements of cabinets by group advantaged



Do these findings explain the results from the multilevel models presented above? In other words, are inequalities in representation greater under proportional representation and in more egalitarian countries because governments there tend to be more often right of centre? Figures 18 and 19 suggest that that is not the case. Figure 18 shows the distribution of mean cabinet ideological positions by electoral system. We can see that cabinets in both PR and non-PR systems tend to be slightly right of centre. Cabinets in PR are on average slightly to the left of those under non-PR, consistent with the findings of Iversen and Soskice (2006). The mean ideological position of cabinets in proportional systems is 0.19 and, in non-proportional systems, it is 0.73. Figure 19 shows a scatter plot and a linear regression line of the ideological positions of governments on the Gini coefficient. The relationship is weak but positive. Therefore, the position of governments with respect to

the ideological centre cannot directly explain why PR and the Gini coefficient condition the relationship between income and representation.

Figure 18: Distributions of mean ideological placement of cabinets by electoral system

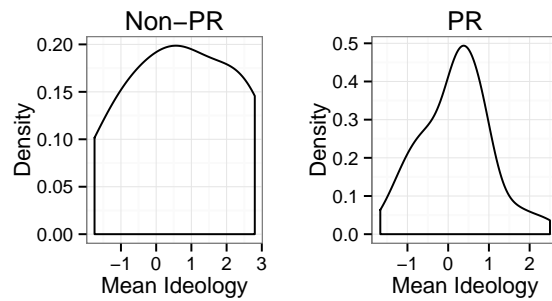
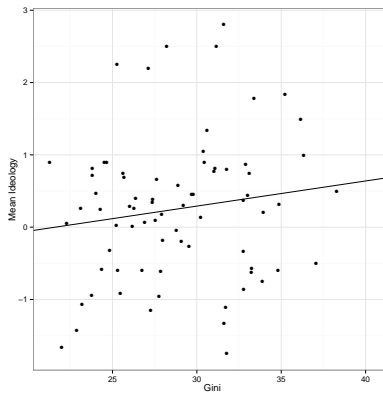


Figure 19: Mean ideological placement of cabinets by Gini coefficient



Cabinet ideology, however, can possibly help us understand why the rich are better represented more frequently than the reverse in our dataset. The mean ideological position of governments in the CSES data is 0.25, suggesting that governments tend to be slightly right of centre. This likely reflects the sample of elections included. The rich tend to be better represented simply because governments on average are right of centre. As long as there is no tendency for governments to be right of centre in the full population of non-presidential systems, there is thus no reason to think that the rich

are better represented than the poor more often than the poor are better represented than the rich. Therefore, fears that inequalities are perpetuated by biased representation may be totally unfounded. If the elections in the CSES are representative of all elections, there is at worst a weak tendency for governments to over-represent the rich.

The fact that cabinets in the dataset tend to be on the right suggests a possible explanation for why inequalities in representation are greater under PR and in elections held in less unequal countries. There is some evidence that vote choice is more strongly related to income in proportional systems than in non-proportional systems (Huber and Stanig, 2009) and in countries that are more unequal (Huber, 2014). If that is also the case with respect to like/dislike scores, then inequalities in representation may be greater under PR in this dataset, because governments tend to be right of centre, while the rich tend to like parties of the right and the poor, parties of the left. Moreover, inequalities may be greater in more egalitarian countries because the poor tend to have stronger preferences there for parties that are left of centre and the rich have stronger preferences for parties of the right. Therefore, since right of centre governments are more common in the CSES data, we should find greater inequality under PR and in more egalitarian countries.

Conclusion

We have found that the variable that is most frequently associated with better representation is income. Richer citizens are better represented when we look at whether citizens' most liked party is in government, whether their least liked party is in government or how much they like government compared to opposition parties. Overall the rich do better in about a third of elections. Another way to think of this result is that the rich are no better represented than the poor in two thirds of elections and are even less well represented than the poor in some cabinets.

We also found that the rich tend to do better than the poor under PR systems, in conditions of lower inequality and when governments are right of centre. While the latter finding does not directly explain the previous two. It may explain them indirectly. If preferences differ more between the rich and the poor in proportional elections and in more egalitarian countries, if the rich are better represented than the poor when governments are right of centre, and if governments are more likely to be right of centre, then the rich

will tend to be more advantaged under PR and in more egalitarian countries.

However, the general tendency for the rich to be better represented than the poor more often than the reverse should only exist if governments of the right are more frequent than governments that are left of centre. If in the full population of elections, left-of-centre governments are as frequent as those that are right of centre, there should be no systematic tendency for the rich to be better represented than the poor.

We take these results as suggesting that the rich are not necessarily better represented than the poor. The weak tendency for them to do better when it comes to representation than the poor likely depends on the sample of elections in the CSES dataset. Our results thus suggest that, if there is a tendency for the rich to be better represented, it is not that their party preference are more likely to be reflected in government. It may very well be that their policy preferences have more influence on policy than those of the poor, but such a bias in representation likely does not directly result from the electoral process. In short, in democratic elections, each citizen has one vote which gives them equal influence over the composition of governments.

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