Unequal Responsiveness and Government Partisanship in Northwest Europe

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Income bias in political representation has attracted the attention of many political scientists in recent years. More than any other scholarly work, Martin Gilens' (2012) study of unequal policy responsiveness in the United States has stimulated research and debate on this topic. Sorting survey respondents by relative income and estimating the probability of policy change based on some 1800 survey items asking about support for specific reform proposals, Gilens finds that the preferences of high-income citizens predict policy change, but the preferences of low-income and even middle-income citizens have no influence on policy outcomes when they diverge significantly from the preferences of high-income citizens. These findings have sparked lively debates among scholars working on American politics. One debate focuses on the frequency and extent of divergence in preferences between income groups. Simply put, do low- and middle-income citizens lose out to affluent citizens all the time or only occasionally? And, perhaps more importantly, do they lose out on issues that truly matter to them or (mostly) on issues that are not so salient? A second debate concerns the causal mechanisms behind the incomes biases in policy responsiveness identified by Gilens and many other scholars.[1] Our paper seeks to contribute to the latter debate by bringing data from four European countries to bear and by exploring whether or not policy-making under Left-leaning governments is less biased (or differently biased) than policy-making under Right-leaning governments.[2]

It is tempting to suppose that the income biases identified by Gilens and others represent a uniquely American phenomenon. Indeed, many explanations for unequal responsiveness advanced by students of American politics imply that we should observe much more equal policy responsiveness in countries with lower income inequality, stronger unions, lower income inequality in voter turnout and less costly, publicly subsidized election campaigns. However, recent studies replicating Gilens' research design find that policy responsiveness is also biased in favor of affluent citizens in Germany

[1] Other studies that document income biases in policy responsiveness in the American case include Rigby and Wright (2011, 2013), Hayes (2013), Bartels (2016) and Ellis (2017).

[2] On the debate about the frequency and extent of divergence in policy preferences by income, see Soroka and Wlezien (2008), Gilens (2009), Bashir (2015), Enns (2015), Gilens (2015a), Branham, Soroka and Wlezien (2017) and Bowman (2020). In due course, we will touch on some aspects of this debate as well.

(Elsässer, Hense, and Schäfer 2020), the Netherlands (Schakel 2019), Norway (Mathisen 2019), and Sweden (Persson 2020). In what follows, we summarize the main findings of these studies and reanalyze the data on which they are based.[3] While the original studies focused on overall differences in political influence between low-income and high-income citizens, our reanalysis focuses on differences between middle-income and high-income citizens and the conditioning effects of government partisanship. We present results based on pooling data for the four countries as well as separate results for each country and discuss common patterns as well as cross-country differences.

While Gilens (2012:ch.7) finds that responsiveness is equally skewed in favor of affluent citizens', regardless of whether Democrats or Republicans control Congress and White House, most studies of unequal responsiveness in the US support the intuitive hypothesis that the Democrats represent low- and middle-income citizens better than Republicans (Ellis 2017, Rhodes and Schaffner 2017, Becher, Stegmueller, and Käppner 2018, Lax, Phillips and Zelizer 2019). The aforementioned studies of unequal responsiveness in European democracies do not address the question of whether or not government partisanship (or the partisan affiliation of legislators) moderates responsiveness to the preferences of different income groups,[4] but there is a large comparative literature examining the effects of government party affiliation on social spending, welfare state generosity, redistribution, and other policy outcomes on which citizens' preferences are polarized by income.[5] Much of this literature follows Garrett (1998) in positing that governing Left and Right parties alike seek to maximize their re-election chances by boosting macroeconomic performance and also cater to the policy preferences of their core constituencies, with core constituencies of Left parties identified as risk-exposed wage-earners with relatively low earnings and the core constituencies of Right parties identified as occupational strata characterized by lower exposure to labor market risks and higher earnings.

[3] Gilens' approach to the study of policy responsiveness has also been replicated for Spain (Lupu and Tirado 2021) and for Switzerland (Wagner 2021), but these cases are not relevant for our present purposes. While democratization makes Spain a special case (as Lupu and Tirado emphasize), the partisan composition of government does not vary in the Swiss case.

[4] With a different research design, Schakel and Burgoon's (2021) analysis of party manifestos connects the literature on unequal representation with the literature on partisan effects.

[5] Noteworthy contributions to this literature include Huber and Stephens (2001), Allan and Scruggs (2004), Iversen and Soskice (2006) and Kwon and Pontusson (2010).

This stylized differentiation of Left and Right parties and their core constituencies would lead us to expect that Left-leaning governments are more responsive to the policy preferences of low- and middle-income citizens, and less responsive to the preferences of high-income citizens, than Right-leaning governments. At the same time, recent literature (e.g., Mudge 2018, Manwaring and Holloway 2021) suggests that the mainstream Left—Social Democratic (and Labour) parties—have undergone a profound transformation since the 1980s, moving towards the center and adopting policy priorities associated with the notion of a "Third Way." Key features of this trend have been a move away from redistributive tax policies and a focus on social investment, a policy shift apparently designed to appeal to new middle strata and "socio-cultural professionals" in particular (Gingrich and Häusermann 2015). Against this background, we first analyze whether Left-leaning governments mitigate income biases in policy responsiveness across all issues included in our datasets. We then focus on economic and social policies with direct distributive implications (loosely speaking, "welfare-state issues") and, finally, explore temporal change in the effects of government partisanship on unequal responsiveness in this policy domain.

To anticipate, our results confirm that government policies in the four countries that we analyze are more responsive to the preferences of high-income citizens than to the preferences of middle- and low-income citizens. In terms of party effects, we find that the unequal responsiveness is less pronounced under Left-leaning governments in Germany, the Netherlands, and Sweden, but even under Left-leaning governments there is still bias in favor of the high-income citizens, at least in Germany and the Netherlands. The Norwegian case is a puzzling exception in that Left-leaning government seem to favor the affluent more than Right-leaning governments. However, this inversion of partisan conditioning disappears when we restrict our analysis to economic and welfare issues. More tentatively, we also find some support for the proposition that partisan conditioning of unequal responsiveness on distributive issues has indeed diminished over time.

In what follows, we proceed directly to empirics, leaving theoretical issues for later discussion. The first section presents the data we analyze and addresses methodological issues. The second section looks at patterns of unequal responsiveness across our four countries and presents the results of estimating different regression models with support for policy change at the 10th, 50th and 90th income

percentiles as predictors of policy adoption. In the third section, we introduce government partisanship as a variable that conditions policy responsiveness to the preferences of different income groups. In the fourth section, we restrict the analysis to economic and redistributive issues and, in the fifth section, we explore changes in partisan conditioning over time. The final section summarizes our empirical findings and discusses their implications for the debate on mechanisms behind income bias in political representation.

1. Data and methodology

For each of our four countries included in our analyses, authors of this paper created original datasets that matched public opinion with policy outcomes. In so doing, we followed the approach set out by Gilens (2012). For each country, we identified questions in pre-existing public opinion surveys that asked respondents to indicate whether they supported specific proposals for policy change. We limited the selection of survey items to those that asked about policy changes that could be implemented at the national level, with questions worded in such a way that it was possible to determine whether a proposed change was implemented after the survey. For Sweden and Norway, the original datasets included questions about constitutional changes, but we have removed these questions from the analyses presented here. Note also that some questions in the original datasets and the merged dataset are phrased in terms of support for status quo policy and that responses to such questions have been inverted to capture support for changing policy in a particular direction.[6]

The merged dataset contains nearly 2,000 survey items, covering everything from raising the retirement age and cutting taxes to immigration reform, building nuclear power plants and gay marriage. As shown in Table 1, the items are unevenly distributed across countries and over time. In the pooled analyses presented below, we account for cross-country imbalances by weighting the observations

[6] For more detailed information about each of the original datasets, see Elsässer, Hense and Schäfer (2020), Schakel (2019), Mathisen (2019) and Persson (2020).

according to the inverse of the number of observations for each country, ensuring that each country has the same weight. (The weights are adjusted when we analyze subsets of survey items).

[Table 1]

The research projects on which we draw harmonized the income categories of respondents in in the manner proposed by Gilens (2012: 61-62), using percentile midpoints to calculate respondents' preferences at the 10th, 50th, and 90th percentiles (henceforth P10, P50 and P90). For each of these percentiles, we measure the proportion of respondents who favor policy change out of all respondents who favor or oppose policy change. An obvious and important limitation of the approach adopted here is that we do not have any information about the salience of proposed policy changes for respondents.

The dependent variable in our regression models is a dummy variable that takes the value of 1 if the policy change in question was enacted within a given time-period after a given survey and takes the value of zero otherwise. Like Gilens (2012), we estimate the probability of a policy change in the direction preferred by respondents at different positions in the income distribution and do not take into account how much policy changed. For example, we treat all increases or decreases in unemployment benefits as equivalent, irrespective of their magnitude.

Using information from legislative records, government budgets, and newspaper articles, our survey items were coded as adopted or not adopted within two and four years of the survey in which they appeared. Our main results are based on two-year windows for adoption, but we report results based on four-year windows (Gilens' default) in the appendix. We prefer two-year windows because they provide a more precise measure of partisanship for the government, but the results for four-year windows turn out to be very similar to results presented below.[7]

Our measure of partisanship in government is the combined share of cabinet portfolios held by left-wing parties (Social Democratic and Green parties), as reported on an annual basis by Armingeon, Engler and Leeman (2021). For each survey item, we calculate the average share of cabinet portfolios

[7] Note also that our "adoption windows" include the year in which the survey item was fielded for Germany and Sweden and the remainder of the year in which the survey item was fielded for the Netherlands and Norway (in addition to the following two or four years). For each country, more than three quarters of the policy changes that were adopted within four years were in fact adopted within the first two years following the survey being fielded. Based on the original Swedish dataset, Persson (2020) explores policy responsiveness over 12 years and finds that the income bias in responsiveness increases with time.

held by left-wing parties in the year of the survey and in the two or four subsequent years. By country, Table 2 shows average values for our partisanship variable as well as support for policy change at P10, P50 and p90 and the frequency of policy change. For now, suffice it to note that, over the time period(s) covered by our analyses, Left parties have participated in government more frequently and more extensively in Norway and Sweden than in Germany and, especially, the Netherlands.

[Table 2]

We assess how government partisanship affects responsiveness to low, middle-income, and high-income citizens by interacting our measure of government party affiliation with measures of those citizens' support for policy change. To avoid the complications associated with interpreting interaction effects estimated with logistic regression models (see, e.g., Gomila, 2020), we present results based on estimating linear probability models (with heteroskedasticity-consistent standard errors) throughout the paper. (We obtain very similar results when we estimate logistic regression models, available upon request).

It is important to keep in mind that the public opinion data that form the basis for our analyses refer to policy changes that were discussed in each country at a particular point in time. Therefore, the issues captured in our data and the overall balance across policy areas differ across countries and, over time, within countries. As indicated in Table 1, a further complication has to do with the sources of the survey data. While the German dataset relies exclusively on commercial surveys, the Swedish dataset consists entirely of survey items collected in publicly funded surveys designed by academics, and the Dutch and Norwegian datasets combine both types of surveys. As shown in Table 2, our data suggest that policy change is much more common in Germany than in Sweden, but this may well be because the survey sources are different in the two countries, commercial surveys being more likely to ask about policy changes currently being discussed by policy-makers. With data at our disposal, we cannot say with any certainty that status-quo bias is stronger in Sweden than in Germany. More generally, cross-national differences in policy responsiveness should be interpreted with caution. However, our main interest here pertains patterns of unequal responsiveness within countries (how government partisanship conditions responsiveness to P10, P50 and P90) and, for this purpose, cross-country differences in the

questions asked in surveys are less relevant. In addition, cross-national and temporal variation in survey items becomes less of a concern when we focus on issues pertaining economic and welfare policies. The issues pertaining to this policy domain are quite similar across our four cases and have not changed so much since the 1980s.

2. Unequal responsiveness

We begin our empirical analysis by looking at overall policy responsiveness to the preferences of P10, P50 and P50 in our four countries. In so doing, we replicate the results of the aforementioned country studies and establish the baseline for our subsequent analysis of how government partisanship conditions income biases in policy responsiveness. As indicated at the outset, our analysis goes beyond our previous work by focusing on the political representation of middle-income citizens relative to high-income citizens. With some justification, Elkjaer and Klitgaard (2021) criticize the literature on unequal responsiveness for only showing that the affluent are better represented than the poor—a finding that is arguably unsurprising and entirely consistent with the "median-voter theorem."

Figure 1 shows the bivariate coefficients that we obtain when we regress policy adoption within a two-year window on our measures of support for policy changes at P10, P50 and P90 in separate models for each percentile. For comparison, we include equivalent estimates based on Gilens' data for the US in this table. We also show the results of estimating the same models with our pooled dataset for the four European countries. While overall responsiveness to public opinion varies across countries, unequal responsiveness appears to be a common feature of liberal democracies. In Germany, the Netherlands and Sweden, the likelihood of policy change increases significantly with P90 support for policy change, but this is not the case for P50 support, let alone P10 support. While the coefficients for P50 and P10 support almost exceed the 95% significance threshold in the Netherlands, they are indistinguishable from zero in Germany and Sweden. Among the four European countries, Norway stands out as the only country where support for policy change at any point in the income distribution increases the likelihood of adopting policy changes, though the influence becomes stronger as we move

up the income ladder. In this respect, Norway resembles the US. As measured here, income biases in unequal responsiveness are more pronounced in Germany, the Netherlands and Sweden than in the US. Pooling our European data, the size of the coefficient for P50 preferences is about half the size of the coefficient for P90 preferences and the size of the coefficient for P10 preferences is about one quarter of the coefficient for P90 preferences.

[Figure 1]

As commonly noted in the literature on unequal policy responsiveness, the policy preferences of low-, middle- and high-income citizens are correlated and this renders the results presented in Figure 1 questionable. The effect of support for policy change among low- and middle-income citizens that we observe in the Norwegian and US data may actually be the effect of support for policy change among high-income citizens (or vice versa). To get around this problem, Table 3 shows the average marginal effects we obtain when we replicate the pooled model shown in Figure 1 with two subsets of our data: first, a subset consisting of policy items on which P10 and P90 diverge by at least 10 percentage points and, secondly, a subset consisting of policy items on which P50 and P90 diverge by 10 points. Averaging across our four European countries, we find no responsiveness at all to the preferences of P10 or P50 when the analysis is restricted to survey items on which they clearly disagree with P90.

[Table 3]

Table A3 in the Appendix shows the results that we obtain when we include support for policy change of any two income groups and all three groups in the same model. When P10 or P50 is paired with P90, the coefficient for the lower income group is negative and statistically significant. When P10 is paired with P50 and when all three groups are included, the coefficient for P10 is again negative and statistically significant. Low-income citizens appear to be "perversely represented" in the sense that their support for policy change appears to reduce the probability of policy change. Following Gilens (2012: 253-258), it seems very likely that this effect is a statistical artifact, due to the inclusion of predictors with correlated measurement error (cf. Achen 1985). As suggested by Schakel, Burgoon, and Hakhverdian (2020), this problem can be addressed by estimating models that regress policy adoption on the difference in support for policy change between two positions in the income distribution, while controlling for support for policy change at the median income. We go beyond

Schakel, Burgoon, and Hakhverdian (2020) by estimating such models not only for the gap between P90 and P10 support for policy change, but also for the gap between P90 and P50 support for policy change and the gap between P50 and P10 support for policy change. The average marginal effects that we obtain by estimating such models provide a measure of the responsiveness to the preferences of one income group relative to another income group. Table 4 shows the marginal effects expressed as standardized (beta) coefficients, allowing for direct comparison of the effects of the three preference gaps. Figure 2, in turn, shows the predicted probabilities of observing a policy change for different values of the preference gap between P90 and P10 (left panel) and the preference gap between P90 and P50 (right panel) for each country individually and for the four countries combined. (To make the figure clearer, we show only the 95% confidence interval for the pooled results).

[Table 4, Figure 2]

To clarify, the preference gap variables shown in Figure 2 take on higher values when P90 is more in favor of (or less opposed to) a policy change than P50 and P10. A positive effect of this variable indicates a bias in favor of the affluent, as policy change becomes more likely when high-income citizens are more supportive of policy change relative to low- or middle-income citizens. An obvious complication is that the middle of the scale includes any scenario in which preferences are the same at different positions in the income distribution, regardless of whether the two income groups favor or oppose policy change. This complication is at least partially resolved by controlling for the level of P50 support for policy change.[8]

For all four countries, Table 4 and Figure 2 indicate policy-making is more responsive to the preferences of high-income citizens than to the preferences of middle-income citizens and, less surprisingly, to the preferences of low-income citizens. The bias in favor of the high-income citizens

[8] As shown in the Appendix (Tables A4-A6), the coefficients for P50 support are invariably positive and mostly clear the 95% threshold for statistical significance. To account for overlapping preferences, we have also estimated models including both P90-P50 and P50-P10 gaps while still controlling for P50 support for policy change. Based on these models, Figure A1 (Appendix) plots estimates of the influence of the P50 alongside estimates of P50–(P50-P10) and P50+(P90-P50). The Figure A1 suggests that the net influence of P10 preferences is negative in Germany and Sweden and positive but very small in Norway and the US. In the Netherlands, policy appears to be more responsive to P10 preferences than P50 preferences. Policy responsiveness to P50 is particularly weak in Sweden, but even in the other three countries, responsiveness to P90 preferences is several times greater than responsiveness to P50 preferences (about 2.5 times greater in Norway and five times greater in Germany).

relative to the middle is only slightly less pronounced than the bias in favor of the high-income citizens relative to low-income citizens in the Swedish case and it is more pronounced than the bias in favor of of high-income citizens relative to low-income citizens in the Dutch case. In Germany and Norway, these two biases are essentially identical. While we observe a significant bias in favor of the middle-income citizens relative to low-income citizens in Germany, this bias is quite small in Norway and Sweden and non-existent in the Netherlands. Overall, the basic patterns are strikingly similar across the four countries, despite cross-country differences in the samples of survey items on which these results are based.

Finally, Figure 3 summarizes the results that we obtain when we try to capture different "coalition scenarios" with the pooled dataset (following Gilens 2012: 83-85). The two panels in this figure are based on estimating separately the average marginal effects of P90, P50, and P10 support for policy changes (i.e., bivariate models) for two different subsets of survey items. The results in the left-hand panel are based on the subset of survey items where P90 and P50 support differs by less than 8 percentage points and P10 support differs by more than 10 percentage points from that of the other income groups. Conversely, the right-hand panel is based on a subset of survey items where P50 and P10 support differs by less than 8 points and P90 support differs by more than 10 points. The alternative theoretical accounts of redistributive politics by Iversen and Soskice (2006) and Lupu and Pontusson (2011) both suggest that P50 and P10 preferences will prevail over P90 preferences when they are closely aligned. While P50 preferences seem to be well represented when they are asymmetrically aligned with P90 preferences, P50 preferences do not seem to affect the likelihood of policy change when they are instead asymmetrically aligned with P10 preferences. We hasten to add that this analysis is based on rather small samples and that the results shown in Figure 4 are quite sensitive to the thresholds that we use to identify different coalition scenarios.[9]

[Figure 3]

[9] Gilens (2012) uses 5 percentage points as the criterion for characterizing two income groups as being closely aligned. This would leave us with only 78 instances of P90 and P50 being closely aligned against P10 and would substantially reduce the average marginal effects of P90 and P50 support alike.

3. Partisan conditioning of policy responsiveness

We now turn to the question of how government partisanship affects policy responsiveness. We address this question by adding measures of government partisanship to models that identify the effects of preference gaps between income groups while controlling for P50 support for policy change and interacting preference gaps with government partisanship. A negative interaction effect indicates that the pro-affluent bias in policy responsiveness becomes smaller as the presence of Left parties in government increases.[10]

As we have seen (Table 4), preference gaps between P90 and P50 or P10 are consistently better predictors of policy adoption than preference gaps between P50 and P10 and the effects of the P90-P50 gap are quite similar to the effects of the P90-P10 gap. In light of these findings, and the pivotal role that most theories of democratic politics assign to middle-income citizens, we will focus here on partisan conditioning of the effects of preference gaps that involve the affluent and, especially, the gap between the preferences of the high-income and middle-income citizens. In other words, the question we ask is the following: do Left (or Left-leaning) governments cater less to the high-income citizens relative to low- and middle-income citizens than non-Left (Right-leaning) governments?

Reported in Tables 5 and 6, our main results are based on the measure of government partisanship identified above, viz. the average share of cabinet portfolios held by Social Democratic and Green parties in the year that a particular survey item was fielded and the two subsequent years.[11] As anticipated at the outset, Norway stands out as an exceptional case in Tables 5 and 6. In the other three countries, the effect of P90 being more supportive of policy change than the P10 and P50 are positive and significant from a substantive as well as a statistical point of view. The coefficients for

[10] A possible bias in our data would arise if different kinds of questions were asked under left versus right governments. However, when looking at the proportions of different questions in different issue areas asked in the countries we find no systematic evidence that it should be the case.

[11] In the Appendix, we also show results with 4-year windows for coding policy adoption and cabinet shares averaged over five years (Tables A9-A10). Our partisanship measure becomes less precise as we extend the length of the window for coding policy adoption, more often encompassing two or even three different governments. Nonetheless, the results with 4-year windows are quite similar to the results presented in Table 5. We also obtain similar results when we measure government partisanship by a dummy for the prime minister being from a Left party and restrict the analysis to survey items for which this dummy has the same value over the two-year window for coding policy adoption (see Tables A11-A12).

Left participation in government are negative, but only statistically significant in the Swedish case, and the same goes for the coefficient for the interaction term. It is important to note here that our Swedish sample of survey items is nearly three times as large as our German and Dutch samples, explaining why coefficients of similar magnitude for Sweden clear statistical significance thresholds while the German coefficients do not. When we pool the three countries, the coefficients for the interaction terms easily clear the 99% threshold. According to these results, pro-affluent bias in policy responsiveness is significantly less pronounced when Left parties are in power in Germany, the Netherlands and Sweden alike. In Norway, by contrast, the interaction terms are positive (and significant with 99% confidence). In the Norwegian case, we only observe pro-affluent bias in policy responsiveness when Left parties are in power.

[Tables 5-6]

Based on the results in Table 6, Figure 4 displays predicted probabilities of policy adoption at different values of the P90-P50 gap under two partisan scenarios: no Left parties in government (left-hand panel) and Left parties holding all cabinet seats (right-hand panel).[12] Again, the Norwegian case stands out as exceptional in this figure. Importantly, Figure 4 also illustrates that Left government diminishes but does not eliminate pro-affluent bias in Germany and the Netherlands. Sweden appears to be the only case in which policy is equally responsive to the high-income citizens and the middle citizens when Left parties control the government.

[Figure 4]

4. Redistributive policy responsiveness

The Norwegian puzzle invites further discussion of how party politics is related to income biases in political responsiveness. As noted in the introduction, our theoretical expectations regarding the impact of government partisanship apply most clearly to issues involving economic and social policies with direct distributive implications. It is much less evident that the citizens' preferences are

[12] For the Netherlands, the second scenario is simulated based on Left parties holding 50% of cabinet portfolios, as this is the maximum value for the period under investigation.

polarized by income on the many and varied "non-economic" or "non-material" issues that divide Left and Right parties and, if there is polarization by income, it may well be the inverse of the polarization that we observe with issues pertaining to economic policy (in particular, fighting unemployment, taxation and social spending). Indeed, an extensive literature on new cleavages in electoral politics argues that mainstream Left parties have sought to offset the decline of the traditional working class by aligning their programs with the preferences of "new middle strata"—relatively affluent and primarily urban voters—on environmental issues as well as immigration and a host of "cultural" issues encompassed by the notion of "cosmopolitanism" while retaining the support of low-income voters by maintaining some commitment to redistribution (e.g., Kitschelt 1994, Kriesi 2006, Gingerich and Häusermann 2015). This general characterization holds for Dutch, German and Swedish Social Democrats as well as Norwegian Social Democrats, but one might plausibly assume that the urban-rural divide is a more prominent feature of Norwegian politics (and perhaps Norwegian income inequality as well) and that this has rendered the Norwegian Social Democrats (and other progressive parties with an urban base) less responsive to low-income citizens than their Dutch, German and Swedish counterparts (Bjørklund 1992; Rokkan 1966).

A detailed analysis of the issues on which Norwegian governments headed by Social Democrats have gone against the preferences of low- and middle-income citizens lies beyond the scope of this paper. We must also set aside the question of whether or not the strength of the populist Progress Party (with a vote share ranging between 14.6% and 22.9% since 2000), and its participation in government between 2014 and 2020, might have rendered Right-leaning governments more responsive to low-income citizens. What we can do to shed some light on "Norwegian exceptionalism" and, more generally, to further our understanding of partisan conditioning of unequal responsiveness is to replicate the preceding analysis for a subset of survey items that pertain to economic and welfare issues. Needless to say, this involves a significant reduction in the total number of data points at our disposal and some loss of statistical power.

In assigning survey items to policy domains, we have relied on the typology proposed by Kriesi *et al* (2006). Thus, the category "economic issues" includes all policy questions on macroeconomic management, government regulation of the economy as well as government interventions (industrial

policy), taxes and government spending on income transfer programs as well as public services. Pooling data across the four countries, this definition of economic (and welfare) issues yields a sample of 681 surveys (as compared to 1,958 items for the preceding analysis).

To begin with, Table 7 shows the results of estimating our baseline models with preference gaps as the main independent variables (controlling for P50 support), without interacting preference gaps with government partisanship. For Germany and Sweden, these results are quite similar to the results for all survey items (shown in Table 4). In both of these cases, P90 preferences dominate P50 and P10 preferences. In the German case, P50 preferences also dominate P10 preferences. Although the coefficients for preference gaps are also positive for the Netherlands and Norway, however, none of the Norwegian coefficients clears conventional thresholds for statistical significance, suggesting that there is no systematic bias in favor of the affluent on economic issues. In the Dutch case, curiously, P90 preferences dominate P50 preferences but not P10 preferences.

[Table 7]

Turning to the conditioning effects of government partisanship, we again interact our partisanship variable (Left parties' share of cabinet portfolios) with the preference gaps, for both P90-10 and P90-50. The results are reported in Tables 8 and 9. The first thing to note is that Norway no longer stands out as an exceptional case when we restrict the analysis to economic and welfare issues. For the Netherlands and Sweden alike, Left participation in government significantly reduces pro-affluent bias in this policy domain. We do not observe such an effect for Norway, but it is no longer the case that Left participation increases unequal responsiveness and we also do not observe any significant reduction unequal responsiveness in the German case. In short, the conventional partisan hypothesis seems to hold for the Netherlands and Sweden, but not for Germany and Norway.

[Tables 8-9]

5. Changes in policy responsiveness over time

Our German data begin in 1998, at a time when many Social Democratic parties, including the German one, had already embraced more market-friendly, less redistributive "Third Way" policies, but our data for the other three countries extend farther back in time (to the early 1980s for the Netherlands and to the 1960s for Norway and Sweden). To explore whether the reorientation of Social Democratic parties in the 1990s entailed a decline in policy responsiveness to the preferences low- and middle-income citizens under Left government participation, we have conducted separate analyses for the period before 1998 and from the period from 1998 onwards. We first did this for all survey items included in our dataset and then for items coded as economic and welfare issues. Showing predicted probabilities of policy under two government partisanship scenarios, Figures 5 and 6 summarize the results obtained when we pool survey items from all countries, i.e., from three countries (the Netherlands, Norway and Sweden) for 1960-97 and from all four countries for 1998-2016.[13]

[Figures 5-6]

Our analysis of temporal change features only pooled results for two reasons. To begin with, it goes without saying that the number of observations in country-specific analyses becomes very small when we restrict them to economic and welfare policies in one or the other sub-period.[14] Secondly, irrespective of the loss of statistical power, country-specific analyses restricted to one of these sub-periods often end up comparing one or two Left-leaning governments with an equally small number of Right-leaning governments and they are arguably "contaminated" by the idiosyncratic experiences of one of these governments. We would not want to generalize about long-term changes in partisan conditioning of unequal responsiveness based on which parties happened to be government during the Great Recession of 2008-10.[15] Pooling data across our four countries serves to minimize the effects of

[13] For full regression results, see Table A16 in the Appendix.
[14] For 1960-97, the number of economic/welfare items in our dataset ranges between 63 (for the Netherlands) and 112 (for Norway). For 1998-2016, the number ranges between 49 (for Norway) and 167 (for Sweden).
[15] Over the period 2008-10, the Norwegian Social Democrats held the office of prime minister while the Dutch Labor Party was a junior coalition party and the Swedish Social Democrats were in opposition. The German Social Democrats exited the government after the election in September, 2009.

such events and would seem to be justified in light of the common patterns of unequal responsiveness and partisan conditioning that we have already observed.

While Figure 5 displays our estimates of effects of the 90-50 preferences gap on the probability of policy adoption under Left and Right governments, Figure 6 displays our estimates of effects of the 90-10 preferences gap on the probability of policy adoption under Left and Right governments. (In all models, we still control for P50 support for policy change). When we include all survey items in our analysis, Left and Right governments alike were more responsive to the preferences of high-income citizens than to the preferences of middle-income citizens as well as low-income voters in the period 1960-97. Though the changes may not meet conventional criteria for statistical significance, the pro-affluent bias of Left government appears to have diminished over time while the pro-affluent bias of Right governments appears to have increased. The contrast with the results we obtain when we restrict the analysis to economic and welfare issues is striking. In this policy domain, Right governments were more responsive to P90 preferences than to P50 and P10 preference in the period 1960-97 and their pro-affluent bias seems to have become at least marginally more pronounced since the mid-1990s. By contrast, our results indicate that the Left governments were more responsive to P50 and, especially, P10 preferences than to P90 preferences before the mid-1990s. However, Left governments appear to have been more responsive to P90 preferences than to P50 and P10 preferences since the mid-1990s and have become indistinguishable from Right governments in this respect.

These findings must obviously be interpreted with caution. As shown in Figures 5 and 6, the confidence intervals for estimates of the effects of preferences gaps on the probability of policy change under different partisan scenarios overlap in all but one of the panels (the effect of the 90-10 gap in the redistributive domain). However, this is precisely the point: pooling data to generalize across Northwest European countries, we only find significant evidence that the responsiveness of Left government differs from that of Right governments *in redistributive policy domain prior to the mid-1990s*. Though our estimates for the conditional effects of 90-50 and 90-10 preferences gaps are substantively quite similar, our results suggest that what most consistently distinguished Left governments from Right government prior to the mid-1990s was their responsiveness to the preferences of low-income citizens.

6. Rethinking Unequal Responsiveness

How and why partisan conditioning of unequal responsiveness varies across countries, across policy domains and over time are questions that deserve further theoretical attention and empirical analysis. More data, and different kinds of data, are needed to go beyond the empirical findings on the impact of government partisanship presented above. Setting this task aside for the time being, let us close by briefly addressing a broader set of questions raised by our empirical results. What are we to make of the fact that income biases in policy responsiveness, measured in the manner of Gilens (2012), are at least as pronounced in "social Europe" as in "liberal America"? What are the implications of this observation for our understanding of the mechanisms behind unequal representation by income in contemporary democracies? And how do we reconcile the ubiquity of unequal policy responsiveness with the fact that tax-transfer systems are significantly more redistributive in Germany, the Netherlands, Norway and Sweden than in the US? Doesn't the latter observation mean that low- and middle-income citizens are, objectively speaking, better represented than they are in the US and, by implication, that there is something wrong with the empirical approach to unequal representation pioneered by Gilens?

Let us begin with the question of mechanisms. The "Americanist" literature identifies at least four plausible (and complementary) explanations for the income biases identified by Gilens (2012) and others.[16] Perhaps most prominently, and most obviously, this literature posits that the costs of election campaigns and politicians' reliance on private sources of campaign funding—what Gilens (2015a, p. 222) refers to as the "outsize role of money in American politics"—constitute a key reason why policy outputs disproportionately correspond to the preferences of affluent citizens. A second line of argumentation in the US literature invokes the income gradient in political participation—in the first instance, in electoral turnout—to explain unequal policy responsiveness. Yet another line of argument focuses on lobbying by corporations and organized interest groups, positing either that the policy preferences of affluent citizens coincide with corporate interests to a greater extent than the policy

[16] In addition to contributions cited already, see Hacker and Pierson (2010) and Gilens and Page (2014).

preferences of low and middle-income citizens or that affluent citizens are better organized and thus better represented through "extra-electoral" politics. Finally, Carnes (2013) has pioneered a line of inquiry that focuses on the social and occupational backgrounds of elected representatives as the key source of unequal policy responsiveness in the US.

As commonly noted by "Europeanists" (e.g. Elsässer, Hense and Schäfer, 2020), the fact that we also observe unequal responsiveness of a consistent and pervasive nature in countries like Germany and Sweden raises questions about the relevance of campaign finance. Surely, money matters to parties and politicians in these countries as well, but elections campaigns are much less expensive and, for the most part, financed by public subsidies. If campaign finance arrangements were the primary reason for unequal policy responsiveness, we ought to observe less unequal responsiveness in Northwest Europe. The point here is not to deny that campaign finance might be an important factor in the US case, but rather to point out that other factors must be taken into account in order to explain the ubiquity of unequal responsiveness across countries. The same arguably holds for electoral participation as an explanation of unequal responsiveness. In all four of the countries analyzed in this paper, we observe unequal turnout by income, but aggregate turnout is higher than in the US and the income gradient is flatter. And yet policy responsiveness does not appear to be markedly more equal.[17]

The argument about unequal responsiveness via the interest-group channel is more difficult to evaluate comparatively, but it seems reasonably clear that the corporations and business associations wield less unilateral influence over elected representatives and unelected policy-makers in countries with centralized policy consultations and, in particular, tripartite bodies that provide for negotiations over policy implementation as well as policy formulation between representatives of unions, employers and governments. Our four countries all exemplify this model of "corporatist intermediation." Particularly for our two Scandinavian countries, unions have historically played, and continue to play, an important role as counterweights to the political influence of business actors (organized or not). Again, it is puzzling that we do not observe more equal policy responsiveness under these circumstances.

[17] Across 25 European countries, Peters and Ensink (2015) find that aggregate voter turnout conditions the responsiveness of social spending to the preferences of poor and affluent citizens.

Of the various arguments invoked to explain unequal responsiveness in the U.S., the argument about descriptive misrepresentation by income and social class seems most easily applied to Northwest Europe. Elected representatives in Germany, the Netherlands, Norway, and Sweden are less likely to be multimillionaires than their American counterparts, but they come overwhelmingly from the ranks of university-educated professionals and tend to belong to the top two or three deciles of the income distribution. A growing number of studies show that occupation background, and associated life circumstances and social networks, influence the policy preferences and priorities of elected officials across a wide range of different national contexts (Carnes and Lupu 2015, Hemingway 2020, O'Grady 2019, Alexiadou 2021, Persson 2021). In a related vein, recent studies find that elected representatives tend to be more accurate in their perception of the preference of affluent citizens than in the perceptions of the preferences of poor citizens (Sevenans et al., 2020; Pereira, 2021).

The arguments reviewed above all focus on how political actors (parties or individual politicians) respond to demands expressed by citizens, interest groups or firms. Alternatively, the unequal policy responsiveness that we observe across many countries might plausibly be attributed to the systemic power of capital. Following Block (1977), the argument would be that governing parties are not responding to any specific demands placed on them by citizens or interest groups, but rather seeking to maximize their chances of re-election by incentivizing capital owners (private individuals) to invest and thereby improve macroeconomic performance. A crucial additional step in the argument would be that the policy preferences of high-income citizens tend to be more closely aligned with the interests of capital owners than the preferences of low- and middle-income citizens. For our present purposes, suffice it to note that this line of argument would seem to imply that unequal responsiveness should be most pronounced with regard to policy issues that bear directly on the interests of capital owners (and conflicts of interest between capital and labor). In other words, we should observe greater pro-affluent bias in the domain of economic and welfare policies than in other policy domains. Our analyses do not yield any evidence in support of this expectation.

Articulated by Persson (2020), another argument that might explain the ubiquity of unequal responsiveness concerns status-quo bias. Simply put, this argument posits that low-income citizens are less satisfied with the status-quo than high-income citizens and, as a result, more likely to support policy

changes in general. To the extent that this is true, and given the way that we measure policy outcomes, status-quo bias produces policy outcomes that look as if policy-makers were responding disproportionately to the demands of affluent citizens. Analyzing the Swedish dataset on which we draw for this paper, Persson (2020: 15) shows that income groups have had very similar preferences with regard to policy changes that have been adopted, but low-income citizens have been much more supportive of policy changes that have not been adopted than affluent citizens (with middle-income support very much in the middle). The implication for cross-national comparison is that we should observe more unequal responsiveness in countries with more status-quo bias. Across our four countries, this does not appear to be the case.[18] As noted at the outset, however, cross-country differences in degrees of status-quo may be an artifact of the kinds of survey items included in different national datasets and, in any case, the argument can hardly be dismissed based on only four observations.

Related to status-quo bias, there is an alternative interpretation of the evidence for unequal policy responsiveness presented above that we ought to engage with in a more systematic way than scholars working in this domain have done so far. Observing that policy change happens more often when it is supported by preferences of affluent citizens and that support by citizens in the lower half of the income distribution has little, if any effect, on the probability of policy adoption, it is commonplace to jump to the conclusion that politicians listen to affluents citizens more than they listen to low- and middle-income citizens. But perhaps it is the other way around? Perhaps it is the case that affluent citizens listen more to politicians than low- and middle-income citizens do? We know that income and education are closely corelated and many studies demonstrate that more educated citizens are more interested in and knowledgeable about politics (e.g., Schlozman, Verba and Brady 2012). Arguably, this means that affluent citizens are more likely to take their cues from policy-makers (or debate among "insiders") in deciding whether they favor or oppose specific policy proposals. More specifically, it seems quite plausible to suppose that more "sophisticated" citizens are more likely to rule out policy

[18] Measured by the percentage of survey items that were adopted, Sweden is the countries with the most status-quo bias and German stands out as the country with by far the least status-quo bias (see Table 2).

options that are unrealistic in the sense that they are unlikely to be entertained by policy-makers.[19] In other words, unequal responsiveness, measured by the differential between policy wins for high-income citizens and policy wins for low- or middle-income citizens, could be the result of high-income citizens adapting their preferences to prevailing winds in policy-making circles and thus, in a sense, anticipating policy decisions (rather than exercising influence over policy decisions).

Such an asymmetric process of preference adaptation, based on cueing on elite discourses, might in turn be invoked to explain why it is that the high-income citizens appear to be more politically influential than low- and middle-income citizens even when government policies involve extensive redistribution from the high-income to low- and middle-income households. However, our findings concerning partisan conditioning of unequal responsiveness raises questions about this line of argument. For the period prior to 1998, our results indicate that Left governments were more responsive to the preferences of low- and middle-income preferences in the domain of economic and welfare policies, but they were more responsive to high-income preferences in other policy domains. Simply put, why should the affluent (well-educated) adapt their preferences to elite discourses under some governments but not others and in some policy domains but not others? And why did low-income citizens apparently take cues from Left governments prior to the 1990s, but not thereafter? When all is said and done, the evidence on partisan conditioning presented in this paper strongly suggests that unequal policy responsiveness to the preferences of different income groups does capture something important about the distribution of political influence in Northwest Europe as well as the US.

How then might we reconcile the ubiquity of pro-affluent bias with the evident contrast between redistributive policy outputs in Northwest Europe and the US? An obvious answer is that contrasting policy outputs reflect the fact that affluent citizens in Norway and Sweden, and perhaps Germany and the Netherlands as well, are more supportive of redistribution that affluent citizens in the US, but this answer leaves something to be desired to the extent that it treats the policy preferences of affluent citizens as an exogenous variable. To explain the origins of redistributive politics in Northwest Europe

[19] In their study of Swedish parliamentarians and voters, Esaiasson and Holmberg (1996) show that citizens' and political representatives opinions co-vary over time: trends in opinion changes are very similar among voters and representatives, but changes appear to be driven by the elites rather than the citizens. See also Lenz 2012.

in terms of the preferences of affluent citizens would seem to be quite a stretch. Relatedly, it seems important, we think, to distinguish between "policy outputs" that are the consequence of political decisions that were taken many years ago and recent policy changes. There can be no doubt that the tax-transfer systems of Germany, the Netherlands, Norway and Sweden are more redistributive than the US tax-transfer system, but many policy decisions taken by German, Dutch and Swedish governments between the early 1990s and the mid-2010s entailed a retreat from redistribution (see Pontusson and Weisstanner 2018). Again, one of our key findings is that Left-leaning governments in Northwest Europe were more responsive to low- and middle-income citizens than to the high-income citizens in the economic and welfare policy domain over the period 1960-97, i.e., over the period when redistribution became a prominent feature of tax-transfer systems in these countries. In this respect, our empirical findings are consistent with the long-standing literature on partisan politics as factor behind cross-national variation in the development of the welfare state.

Returning briefly to the question of "Third Way Social Democracy," it deserves to be noted, in closing, that our empirical findings might be mobilized to challenge the conventional view that mainstream Left parties in Northwest Europe have sought to offset the decline of the working-class constituency by appealing to middle-class voters based on new ("post-materialist") issues while retaining the support of working-class voters based on their continued commitment to redistribution. This interpretation of the reorientation of mainstream Left parties would lead us to expect that they remain "pro-poor" in the domain of economic and welfare policy and that they have become more "pro-affluent" in other policy domains. Generalizing across our four countries, we find instead that mainstream Left parties, like mainstream parties of the Center-Right, have long (perhaps always) been biased in favor of affluent voters outside the domain of redistributive politics and that post-1998 Left governments are first and foremost distinguished from earlier Left governments by their lack of responsiveness to low- and middle-income citizens in the domain of redistributive politics.

TABLES AND FIGURES

Table 1: *Survey items by country*

country	N	years	sources
Germany	266	1998 – 2016	commercial
Netherlands	291	1979 – 2012	mostly public
Norway	557	1966 – 2014	mostly commercial
Sweden	844	1960 – 2012	public

Table 2: *Average values of independent and dependent variables by country (with standard deviations in parentheses)*

	Germany	Netherlands	Norway	Sweden
Policy change (2 years)	0.57 (0.50)	0.20 (0.40)	0.21 (0.41)	0.13 (0.34)
P10 support	0.55 (0.22)	0.48 (0.22)	0.48 (0.23)	0.55 (0.21)
P50 support	0.56 (0.21)	0.48 (0.22)	0.47 (0.23)	0.53 (0.22)
P90 support	0.57 (0.19)	0.48 (0.21)	0.46 (0.23)	0.48 (0.21)
P90 – P10 support	0.02 (0.15)	-0.01 (0.15)	-0.02 (0.12)	-0.07 (0.13)
P90 – P50 support	0.01 (0.10)	-0.00 (0.11)	-0.01 (0.09)	-0.05 (0.12)
P50 – P10 support	0.01 (0.08)	0.00 (0.08)	-0.01 (0.07)	-0.02 (0.07)
Left cabinet share	0.45 (0.36)	0.26 (0.14)	0.57 (0.32)	0.59 (0.43)

Figure 1: *Coefficients for income group policy support on the probability of policy change (with 95% confidence intervals), bivariate linear probability models (2-year windows)*

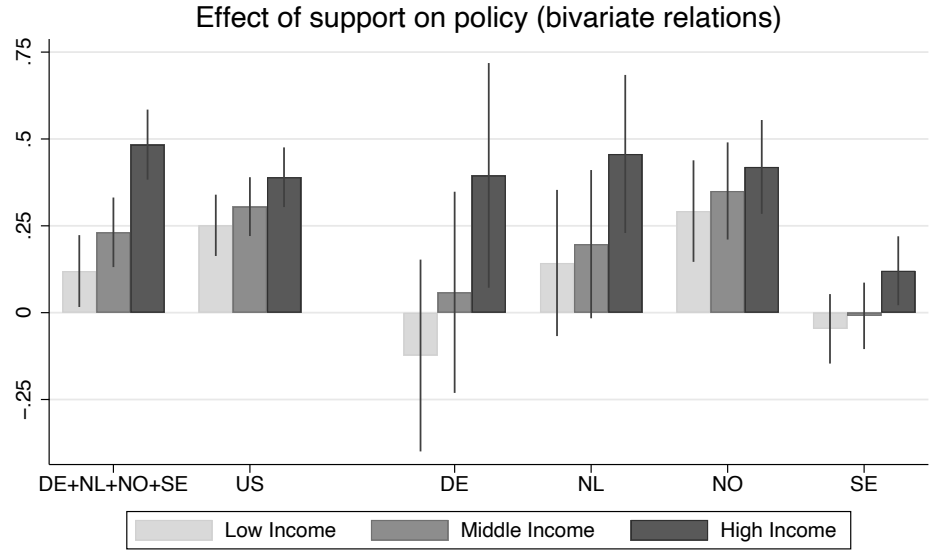


Table 3: *Average marginal effects of support for policy when preferences diverge by at least 10 percentage points, standardized beta coefficients (2-year windows)*

	P10 vs. P90		P50 vs. P90	
	P10	P90	P50	P90
Support for policy change	-0.061	0.563**	-0.090	0.539**
	(0.083)	(0.083)	(0.110)	(0.114)
Country dummies	Yes	Yes	Yes	Yes
Constant	0.604**	0.261**	0.605**	0.259**
	(0.058)	(0.062)	(0.078)	(0.084)
N	959	959	740	740
Adjusted R^2	0.168	0.217	0.144	0.182

*Note: * p<0.05, ** p<0.01.*

Table 4: *Average marginal effects of preference gaps on policy adoption, controlling for P50 support, standardized beta coefficients (2-year windows)*

	Pooled	Germany	Netherlands	Norway	Sweden
P90 – P10 support	0.212**	0.291**	0.241**	0.146**	0.171**
P90 – P50 support	0.218**	0.302**	0.309**	0.144**	0.158**
P50 – P10 support	0.113**	0.220**	0.068	0.085*	0.075*

*Note: * p < 0.05, ** p < 0.01. See Tables A4-A6 for full regression results.*

Figure 2: *Predicted probabilities of policy change at different preference gaps between P90 and P10 or P50 (2-year windows)*

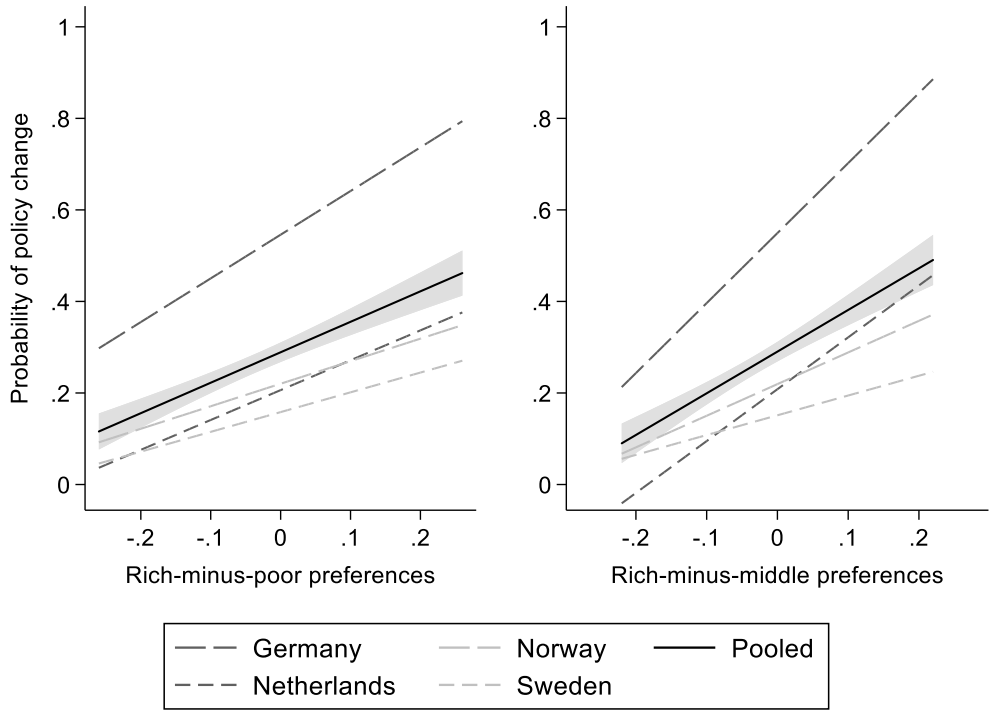
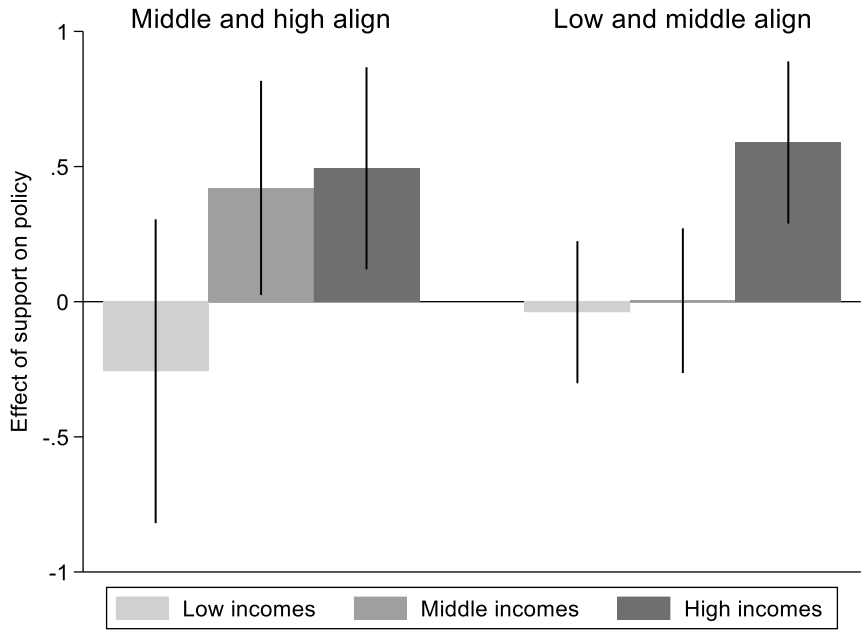


Figure 3: *Policy responsiveness when the preferences of two groups align and the third group diverges (2-year windows)*



Note: left-hand panel: N=115, right-hand panel: N=426. See Table A7 for full results.

Table 5: *Linear probability models interacting the P90-P10 gap with Left government (2-year windows)*

	Pooled	Pooled (w/o NO)	Germany	Nether-lands	Sweden	Norway
P90-P10 gap	0.791**	0.898**	1.235**	1.058**	0.742**	-0.125
	(0.122)	(0.134)	(0.297)	(0.317)	(0.138)	(0.303)
Left government	-0.025	-0.041	-0.049	-0.079	-0.065+	0.024
	(0.031)	(0.038)	(0.094)	(0.165)	(0.034)	(0.052)
P90-P10 × Left	-0.253	-0.441*	-0.483	-1.547	-0.547**	1.015*
	(0.190)	(0.214)	(0.509)	(1.047)	(0.186)	(0.449)
P50 support	0.220**	0.170**	0.223	0.284**	0.026	0.353**
	(0.049)	(0.062)	(0.156)	(0.108)	(0.049)	(0.071)
Country dummies	Yes	Yes	No	No	No	No
Constant	0.445**	0.484**	0.451**	0.097	0.185**	0.037
	(0.043)	(0.050)	(0.101)	(0.074)	(0.038)	(0.042)
N	1958	1401	266	291	844	557
Adjusted R^2	0.190	0.222	0.071	0.061	0.034	0.063

Note : $p<0.05$, ** $p<0.01$.*

Table 6: *Linear probability models interacting the P90-P50 gap with Left government (2-year windows)*

	Pooled	Pooled (w/o NO)	Germany	Nether-lands	Sweden	Norway
P90-P50	1.160**	1.316**	2.058**	1.500**	0.937**	-0.225
	(0.157)	(0.173)	(0.530)	(0.419)	(0.170)	(0.409)
Left government	-0.024	-0.040	-0.024	-0.141	-0.069*	0.025
	(0.032)	(0.038)	(0.090)	(0.165)	(0.032)	(0.052)
P90-P50 × Left	-0.510*	-0.800**	-0.951	-1.332	-0.859**	1.648*
	(0.231)	(0.250)	(0.837)	(1.462)	(0.211)	(0.651)
P50	0.299**	0.257**	0.364*	0.406**	0.063	0.399**
	(0.050)	(0.065)	(0.166)	(0.114)	(0.051)	(0.070)
Country dummies	Yes	Yes	No	No	No	No
Constant	0.406**	0.440**	0.366**	0.054	0.163**	0.013
	(0.044)	(0.051)	(0.105)	(0.074)	(0.036)	(0.041)
N	1958	1401	266	291	844	557
Adjusted R^2	0.190	0.224	0.067	0.087	0.038	0.066

Note: * *p<0.05,* ** *p<0.01.*

Figure 4: *Predicted probabilities of policy change conditional on the 90-50 gap and government partisanship (2-year windows)*

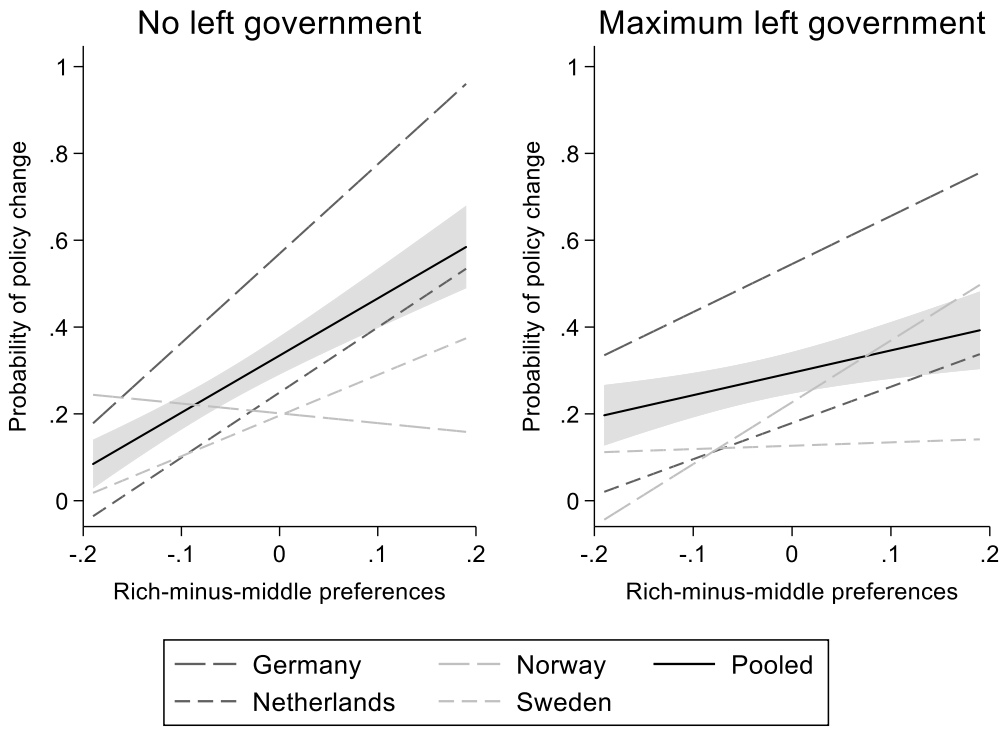


Table 7: *Average marginal effects of preference gaps on policy adoption, controlling for P50 support, standardized beta coefficients (2-year windows), economic and welfare policies only*

	Pooled	Germany	Netherlands	Norway	Sweden
P90 – P10 support	0.193**	0.326**	0.159	0.043	0.161*
P90 – P50 support	0.207**	0.345**	0.225*	0.079	0.163*
P50 – P10 support	0.085*	0.229**	0.033	-0.039	0.004

*Note: * $p < 0.05$, ** $p < 0.01$. See Tables A14-A16 for full regression results.*

Table 8: *Linear probability models interacting the P90-P10 gap with Left government (2-year windows), economic and welfare policies only*

	Pooled	Germany	Netherlands	Norway	Sweden
P90-P10 gap	0.626**	0.930*	1.099*	0.210	1.206**
	(0.197)	(0.423)	(0.453)	(0.557)	(0.262)
Left government	-0.087	-0.130	-0.265	-0.135	-0.212**
	(0.056)	(0.132)	(0.266)	(0.107)	(0.064)
P90-P10 × Left	0.007	0.436	-2.459+	-0.064	-1.210**
	(0.323)	(0.656)	(1.268)	(0.829)	(0.367)
P50 support	0.331**	0.482*	0.403*	0.330*	0.127
	(0.089)	(0.218)	(0.193)	(0.153)	(0.095)
Country dummies	Yes	No	No	No	No
Constant	0.397**	0.312*	0.084	0.167+	0.276**
	(0.073)	(0.150)	(0.126)	(0.096)	(0.072)
N	681	135	117	161	268
Adjusted R^2	0.168	0.087	0.030	0.014	0.067

*Note: + p<0.1, * p<0.05, ** p<0.01*

Table 9: *Linear probability models interacting the P90-P50 gap with Left government (2-year windows), only economic and welfare policies*

	Pooled	Germany	Netherlands	Norway	Sweden
P90-P50	0.958**	1.383+	1.858**	0.220	1.254**
	(0.243)	(0.773)	(0.583)	(0.688)	(0.271)
Left government	-0.081	-0.069	-0.389	-0.138	-0.196**
	(0.057)	(0.120)	(0.268)	(0.107)	(0.062)
P90-P50 × Left	-0.243	0.507	-3.907*	0.319	-1.295**
	(0.366)	(1.069)	(1.840)	(1.065)	(0.348)
P50	0.403**	0.636**	0.509*	0.360*	0.168
	(0.095)	(0.235)	(0.202)	(0.155)	(0.102)
Country dummies	Yes	No	No	No	No
Constant	0.363**	0.207	0.078	0.154	0.239**
	(0.074)	(0.153)	(0.127)	(0.096)	(0.071)
N	681	135	117	161	268
Adjusted R^2	0.170	0.078	0.058	0.020	0.077

*Note: + p<0.1, * p<0.05, ** p<0.01*

Figure 5: *Predicted probabilities of policy change by time period, conditional on the 90-50 gap and government partisanship (2-year windows)*

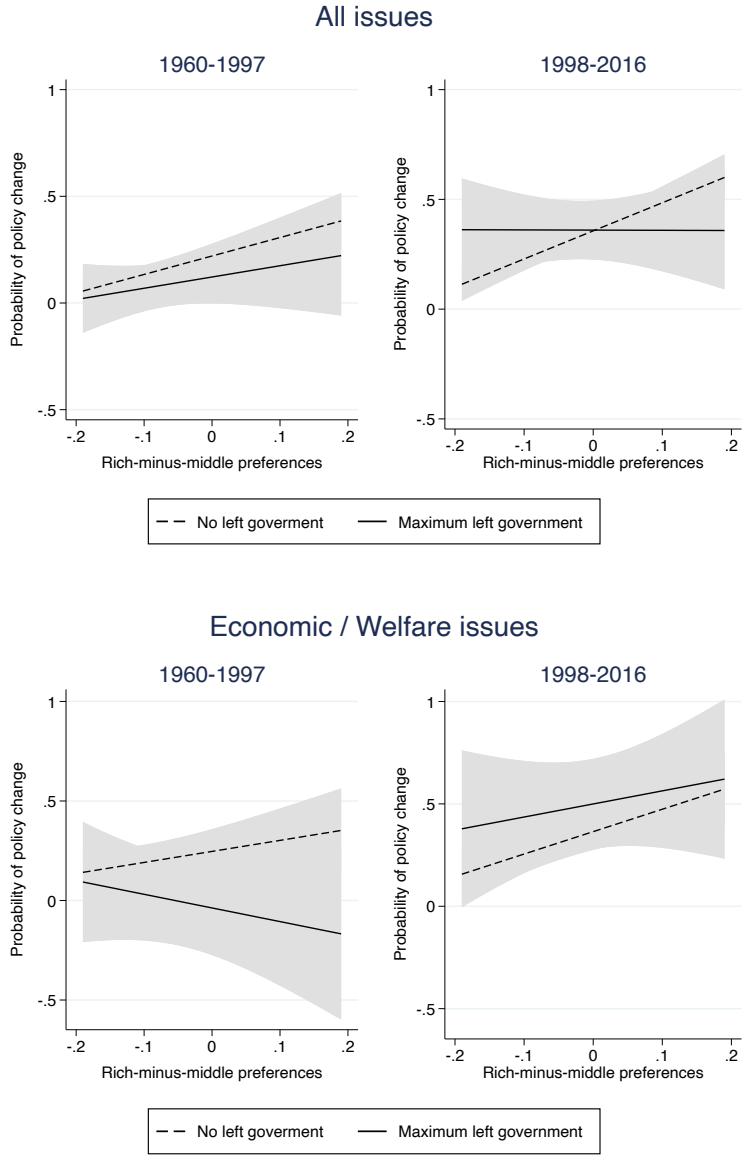
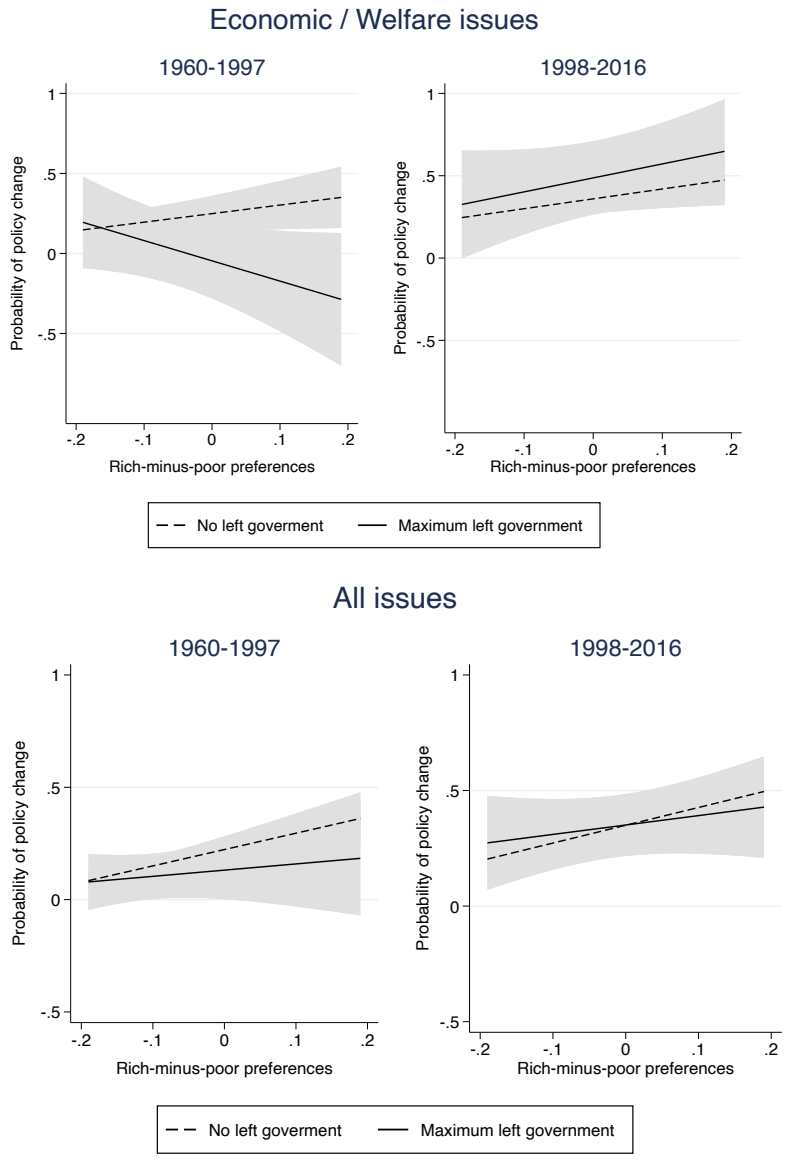


Figure 6: *Predicted probabilities of policy change by time period, conditional on the 90-10 gap and government partisanship (2-year windows)*



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APPENDIX

Table A1: *Average marginal effects of income-group preferences on policy change, 2-year windows*

	Pooled	Germany	Netherlands	Norway	Sweden
P10	0.074	-0.123	0.143	0.292**	-0.047
P50	0.157**	0.059	0.197+	0.350**	-0.009
P90	0.347**	0.395*	0.457**	0.420**	0.121*

*+ p < 0.10, * p < 0.05, ** p < 0.01*

Table A2: *Average marginal effects of income-group preferences on policy change, 4-year windows*

	Pooled	Germany	Netherlands	Norway	Sweden
P10	0.163	-0.145	0.308**	0.370**	0.023
P50	0.253**	0.009	0.380**	0.453**	0.058
P90	0.443**	0.348*	0.613**	0.538**	0.207**

*+ p < 0.10, * p < 0.05, ** p < 0.01. In the German data, the four-year window is only coded until 2013 (N=222). In the Swedish Data, the four-year window is only coded until 2010 (N=769).*

Table A3: *Combined models of the effects of income-group preferences on policy change (2-year windows)*

	P10 & P90	P50 & P90	P10 & P50	All
P10 support	-0.509**	-	-0.676**	-0.385**
	(0.080)		(0.149)	(0.148)
P50 support	-	-0.611**	0.793**	-0.188
		(0.101)	(0.147)	(0.185)
P90 support	0.767**	0.910**	-	0.838**
	(0.081)	(0.103)		(0.105)
Country dummies	Yes	Yes	Yes	Yes
constant	0.409**	0.390**	0.495**	0.406**
	(0.042)	(0.041)	(0.041)	(0.042)
N	1958	1958	1958	1958
Adjusted R^2	0.192	0.189	0.161	0.192

*+ p<0.1, * p<0.05, ** p<0.01.*

Table A4: *Average marginal effects of P90-P10 preference gaps on policy change, controlling for P50 support*

	Pooled	Germany	Netherlands	Norway	Sweden
P90-P10 preferences	0.212**	0.291**	0.241**	0.146**	0.171**
	(0.0767)	(0.184)	(0.155)	(0.142)	(0.0833)
P50 preferences	0.110**	0.098	0.150*	0.200**	0.020
	(0.0489)	(0.156)	(0.109)	(0.0709)	(0.0494)
Country dummies	Yes	No	No	No	No
N	1958	266	291	557	844
Adjusted R^2	0.190	0.073	0.061	0.057	0.026

*Standardized beta coefficients; * p<0.05, ** p<0.01.*

Table A5: *Average marginal effects of P90-P50 preference gaps on policy*

	Pooled	Germany	Netherlands	Norway	Sweden
P90-P50 preferences	0.218**	0.302**	0.309**	0.144**	0.158**
	(0.103)	(0.327)	(0.225)	(0.208)	(0.0987)
P50 preferences	0.148**	0.153*	0.216**	0.227**	0.046
	(0.0506)	(0.165)	(0.115)	(0.0707)	(0.0512)
Country dummies	Yes	No	No	No	No
N	1958	266	291	557	844
Adjusted R^2	0.189	0.068	0.089	0.056	0.020

*Standardized beta coefficients; * p<0.05, ** p<0.01.*

Table A6: *Average marginal effects of P90-10 preference gaps on policy*

	Pooled	Germany	Netherlands	Norway	Sweden
P50-P10 preferences	0.113**	0.220**	0.068	0.085*	0.075*
	(0.149)	(0.346)	(0.320)	(0.228)	(0.179)
P50 preferences	0.058*	0.014	0.097	0.180**	-0.028
	(0.0501)	(0.150)	(0.109)	(0.0740)	(0.0510)
Country dummies	Yes	No	No	No	No
N	1958	266	291	557	844
Adjusted R^2	0.161	0.042	0.009	0.043	0.003

*Standardized beta coefficients; * p<0.05, ** p<0.01.*

Table A7: *Policy responsiveness when the preferences of two groups align and the third group diverges (2-year windows)*

	Middle and high incomes align			Low and middle incomes align		
P10 support	-0.257	-	-	-0.039	-	-
	(0.287)			(0.134)		
P50 support	-	0.421*	-	-	0.004	-
		(0.202)			(0.137)	
P90 support	-	-	0.494*	-	-	0.589**
			(0.191)			(0.153)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.720**	0.351*	0.307+	0.530**	0.509**	0.184
	(0.194)	(0.169)	(0.166)	(0.101)	(0.102)	(0.112)
N	115	115	115	426	426	426
Adjusted R^2	0.170	0.193	0.213	0.121	0.121	0.166

*+ p<0.1, * p<0.05, ** p<0.01. See text for the criteria used to identify the two samples.*

Table A8: *Linear probability models interacting the P50-P10 gap with Left government (2-year windows)*

	Pooled	Pooled (w/o NO)	Germany	Nether-lands	Sweden	Norway
P50-P10	0.640*	0.773**	1.636**	0.730	0.087	-0.090
	(0.249)	(0.281)	(0.545)	(0.606)	(0.296)	(0.426)
Left government	0.009	0.002	-0.021	0.078	-0.008	0.024
	(0.030)	(0.037)	(0.094)	(0.158)	(0.027)	(0.052)
P50-P10 × Left	0.068	-0.101	-0.418	-1.449	0.441	0.957
	(0.375)	(0.432)	(1.008)	(2.063)	(0.383)	(0.681)
P50	0.118*	0.042	0.026	0.178	-0.044	0.322**
	(0.050)	(0.063)	(0.152)	(0.110)	(0.051)	(0.074)
Country dummies	Yes	Yes	No	No	No	No
Constant	0.490**	0.536**	0.550**	0.098	0.163**	0.049
	(0.044)	(0.050)	(0.101)	(0.075)	(0.036)	(0.043)
N	1958	1401	266	291	844	557
Adjusted R^2	0.160	0.187	0.035	0.005	0.003	0.042

** p<0.05, ** p<0.01.*

Table A9: *Linear probability models interacting the P90-P10 gap with Left government (4-year windows)*

	Pooled	Pooled (w/o NO)	Germany	Nether-lands	Sweden	Norway
P90-P10	0.791**	0.904**	0.893**	1.420**	1.017**	-0.080
	(0.144)	(0.157)	(0.341)	(0.402)	(0.186)	(0.335)
Left government	-0.043	-0.083+	-0.165	-0.145	-0.101*	0.076
	(0.036)	(0.043)	(0.107)	(0.214)	(0.041)	(0.058)
P90-P10 × Left	-0.193	-0.446+	0.167	-2.672*	-0.811**	1.158*
	(0.218)	(0.244)	(0.597)	(1.253)	(0.243)	(0.485)
P50	0.319**	0.258**	0.198	0.470**	0.097+	0.465**
	(0.051)	(0.066)	(0.165)	(0.114)	(0.056)	(0.074)
Country dummies	Yes	Yes	No	No	No	No
Constant	0.459**	0.514**	0.566**	0.103	0.204**	0.007
	(0.047)	(0.054)	(0.108)	(0.090)	(0.044)	(0.047)
N	1839	1282	222	291	769	557
Adjusted R^2	0.184	0.214	0.061	0.080	0.044	0.092

*+ p<0.1, * p<0.05, ** p<0.01. Note: In the German data, the 4-year window is only coded until 2013 (N=222); in the Swedish Data, it is only coded until 2010 (N=769).*

Table A10: *Linear probability models interacting the P90-P50 gap with Left government (4-year windows)*

	Pooled	Pooled (w/o NO)	Germany	Nether-lands	Sweden	Norway
P90-P50	1.182**	1.340**	1.386*	1.881**	1.272**	-0.109
	(0.186)	(0.205)	(0.595)	(0.557)	(0.220)	(0.437)
Left government	-0.041	-0.081+	-0.140	-0.193	-0.106**	0.081
	(0.036)	(0.044)	(0.101)	(0.220)	(0.039)	(0.058)
P90-P50 × Left	-0.462+	-0.791**	0.324	-2.788	-1.164**	1.654*
	(0.264)	(0.285)	(0.979)	(1.807)	(0.265)	(0.660)
P50	0.399**	0.347**	0.327+	0.587**	0.138*	0.520**
	(0.052)	(0.069)	(0.176)	(0.118)	(0.058)	(0.074)
Country dummies	Yes	Yes	No	No	No	No
Constant	0.417**	0.466**	0.484**	0.059	0.181**	-0.023
	(0.047)	(0.055)	(0.112)	(0.089)	(0.041)	(0.045)
N	1839	1282	222	291	769	557
Adjusted R^2	0.184	0.217	0.059	0.095	0.050	0.088

*+ p<0.1, * p<0.05, ** p<0.01. Note: In the German data, the 4-year window is only coded until 2013 (N=222); in the Swedish Data, it is only coded until 2010 (N=769).*

Table A11: *Linear probability models interacting the P90-P10 gap with Left government measured as dummy for Left prime minister (2-year windows)*

	Pooled	Pooled (w/o NO)	Germany	Nether-lands	Sweden	Norway
P90-P10	0.816**	0.890**	1.136**	0.854**	0.620**	-0.076
	(0.112)	(0.117)	(0.231)	(0.182)	(0.131)	(0.431)
Left government	-0.058*	-0.070*	-0.059	-0.133**	-0.069*	-0.002
	(0.026)	(0.028)	(0.088)	(0.047)	(0.032)	(0.058)
P90-P10 × Left	-0.340*	-0.590**	-0.417	-0.964**	-0.568**	0.906+
	(0.162)	(0.170)	(0.462)	(0.283)	(0.175)	(0.501)
P50	0.152**	0.132*	0.151	0.294**	-0.038	0.178+
	(0.054)	(0.064)	(0.159)	(0.107)	(0.054)	(0.104)
Country dummies	Yes	Yes	No	No	No	No
Constant	0.502**	0.523**	0.497**	0.091	0.203**	0.129*
	(0.043)	(0.048)	(0.097)	(0.055)	(0.039)	(0.062)
N	1478	1225	253	273	699	253
Adjusted R^2	0.202	0.243	0.069	0.102	0.029	0.039

*+ p<0.1, * p<0.05, ** p<0.01. Note: survey items for which government partisanship changed in year t+1 or t+2 have been excluded.*

Table A12: *Linear probability models interacting the P90-P50 gap with Left government measured as dummy for Left prime minister (2-year windows)*

	pooled DE-NL-SE	Germany	Netherlands	Sweden	Norway
P90-P50	1.268**	1.829**	1.373**	0.807**	-0.076
	(0.155)	(0.408)	(0.253)	(0.162)	(0.602)
Left government	-0.072*	-0.043	-0.137**	-0.072*	-0.004
	(0.028)	(0.079)	(0.049)	(0.031)	(0.059)
P90-P50 * Left	-0.857**	-0.706	-1.177**	-0.776**	1.284+
	(0.207)	(0.709)	(0.407)	(0.200)	(0.730)
P50	0.222**	0.295+	0.413**	0.002	0.209*
	(0.067)	(0.169)	(0.111)	(0.057)	(0.103)
country dummies	yes	no	no	no	no
constant	0.476**	0.417**	0.040	0.184**	0.115+
	(0.049)	(0.102)	(0.055)	(0.037)	(0.062)
N	1225	253	273	699	253
adj. R^2	0.245	0.064	0.125	0.040	0.036

*Standard errors in parentheses: + p<0.1, * p<0.05, ** p<0.01. Note: survey items for which government partisanship changed in year t+1 or t+2 have been excluded.*

Table A13: *Average marginal effects of P90-P10 preference gaps on policy change, controlling for P50 support, economic and welfare policies only*

	Pooled	Germany	Netherlands	Norway	Sweden
P90-P10 preferences	0.193**	0.326**	0.159	0.043	0.161*
	(0.126)	(0.229)	(0.217)	(0.280)	(0.187)
P50 preferences	0.164**	0.211*	0.196+	0.176*	0.072
	(0.0893)	(0.212)	(0.191)	(0.153)	(0.0971)
Country dummies	Yes	No	No	No	No
N	681	135	117	161	268
Adjusted R^2	0.167	0.094	0.026	0.017	0.018

Standardized beta coefficients; Standard errors in parentheses
*+ p<0.1, * p<0.05, ** p<0.01*

Table A14: *Average marginal effects of P90-P50 preference gaps on policy, controlling for P50 support, economic and welfare policies only*

	Pooled	Germany	Netherlands	Norway	Sweden
P90-P50 preferences	0.207**	0.345**	0.225*	0.079	0.163*
	(0.164)	(0.428)	(0.333)	(0.340)	(0.180)
P50 preferences	0.197**	0.278**	0.246*	0.191*	0.100
	(0.0946)	(0.233)	(0.206)	(0.155)	(0.105)
Country dummies	Yes	No	No	No	No
N	681	135	117	161	268
Adjusted R^2	0.168	0.089	0.043	0.021	0.016

*Standardized beta coefficients; * p<0.05, ** p<0.01.*

Table A15: *Standardized effects of P50-10 preference gaps on policy, controlling for P50 support, economic and welfare policies only*

	Pooled	Germany	Netherlands	Norway	Sweden
P50-P10 preferences	0.085*	0.229**	0.033	-0.039	0.004
	(0.241)	(0.432)	(0.418)	(0.511)	(0.351)
P50 preferences	0.098*	0.099	0.143	0.167*	0.031
	(0.0852)	(0.200)	(0.174)	(0.151)	(0.101)
Country dummies	Yes	No	No	No	No
N	681	135	117	161	268
Adjusted R^2	0.141	0.050	0.004	0.017	-0.006

*Standardized beta coefficients; * p<0.05, ** p<0.01.*

Table A16. *Interactions between preferences differences and left governments for different issue areas and time periods.*

	All Issues 1960-1997	All Issues 1998-2016	Economic Issues 1960-1997	Economic Issues 1998-2016	All Issues 1960-1997	All Issues 1998-2016	Economic Issues 1960-1997	Economic Issues 1998-2016
P90-P50	0.865**	1.280**	0.554+	1.094**				
	(0.227)	(0.204)	(0.329)	(0.333)				
P90-P10					0.728**	0.769**	0.534*	0.599*
					(0.178)	(0.161)	(0.269)	(0.264)
Left gov.	-0.098	0.003	-0.284+	0.135	-0.092	0.001	-0.295+	0.127
	(0.087)	(0.087)	(0.171)	(0.146)	(0.090)	(0.087)	(0.170)	(0.148)
P90-P50 X Left	-0.337	-1.290+	-1.240	-0.455				
	(0.685)	(0.692)	(1.018)	(1.050)				
P90-P10 X Left					-0.452	-0.362	-1.800+	0.250
					(0.547)	(0.538)	(0.930)	(0.794)
P50	0.297**	0.289**	0.223*	0.512**	0.234**	0.205**	0.202*	0.410**
	(0.063)	(0.074)	(0.096)	(0.135)	(0.061)	(0.071)	(0.091)	(0.128)
Constant	0.047	0.403**	0.031	0.221*	0.085+	0.441**	0.047	0.267**
	(0.043)	(0.057)	(0.069)	(0.100)	(0.044)	(0.056)	(0.069)	(0.098)
N	881	1077	276	405	881	1077	276	405
adj. R^2	0.051	0.211	0.056	0.164	0.057	0.206	0.059	0.157

*Standard errors in parentheses: + p<0.1, * p<0.05, ** p<0.01.*

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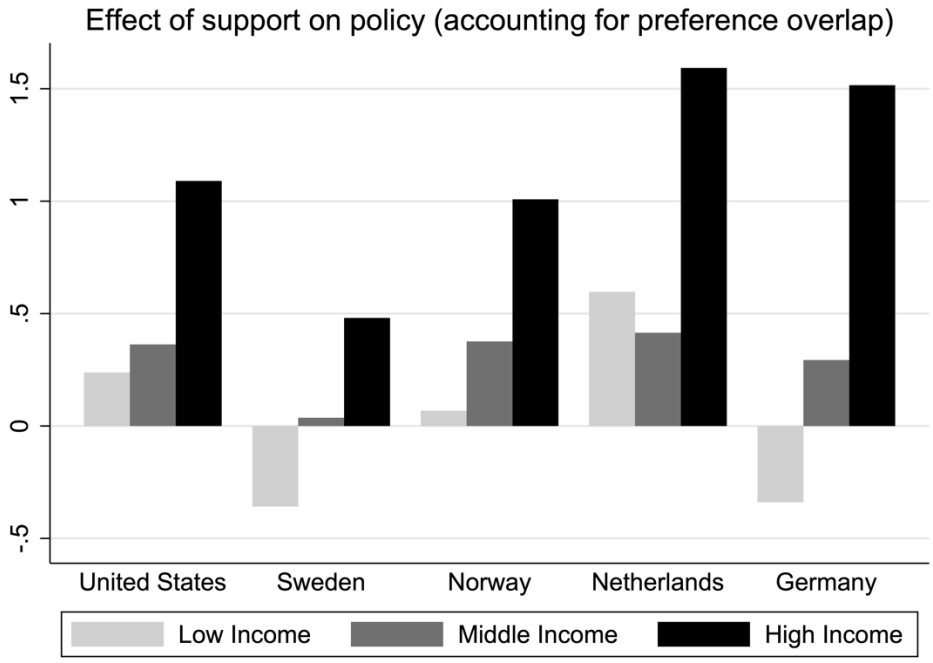
Figure A1: *Average marginal effects of support for policy change by income on the probability of policy change, linear probability models accounting for preference overlap (2-year windows)*


Effect of support on policy (accounting for preference overlap)
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.5
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1.5
United States
Sweden
Norway
Netherlands
Germany
Low Income
Middle Income
High Income