Platforms, Portfolios, Policy:

How Audience Costs Affect Social Welfare Policy in Multiparty Cabinets

Online Appendix

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Section A

The following analysis, which intentionally simplifies the cabinet policy-making process, illustrates the argument formally. Suppose there are two parties in a coalition. Suppose there is a policy dispute between two ministers, who are perfect agents of their parties. For example, a minister of social affairs, denoted as M, prefers more generous social benefits and a minister, whose department is negatively affected by higher social spending, such as a minister of finance, denoted as F.[1] Suppose the finance minister proposes cuts in social spending b_f. How will the policy dispute be resolved between the two ministers?

We assume that parties, and their ministers, have single-peaked and symmetric policy preferences and let $\vartheta_k = \arg\max u_k(\vartheta)$, be ministers' ($k$) ideal point. Their utility function is described by a quadratic loss function (Woon, 2008) and let

[1] We assume that the two ministers are fully backed by their party leaders and the prime minister does not override ministers and other party leaders. In multiparty cabinets typically prime ministers' priority is to keep the government together (Blondel & Muller-Rommel, 1993). If he or she overrides a minister, policy conflict might arise among party leaders.

$u_k(\vartheta_k) = 0$. Parties and their ministers have three goals: to adopt policy close to the party's ideal point, to remain in office and to be re-elected (Muller & Strom, 1999).

First, parties want to minimize the distance between the final policy and their party's ideal policy, ϑ_k, which is a function of party ideology.[2] b_k is the policy proposal by minister k and the final policy outcome if the proposal is accepted, while x_0 is the policy status quo, and reversion point. Second, political parties fear the electoral costs of proposing or accepting a policy that diverges from their electoral promises. Formally, $a \geq 0$ is a parameter that captures the electorate's sensitivity to a policy outcome, also defined as the "cost coefficient" (Leventoglu & Tarar, 2005) for violating a public announcement. The cost for diverging from the party's ideal point, or 'audience costs', is captured by the term $a_k(b_k - \vartheta_k)^2$. The cost increases with the deficit between the parties' ideal point and what they actually implement, and with a higher a. We expect the value of a to be determined by three factors: the saliency of the policy in question for the party's core constituency, the party's electoral pledge regarding the policy and finally the control of the portfolio that controls the policy. Third, political parties value office, so they generally prefer to compromise than to walk away when a policy dispute arises. Every time coalition partners disagree over policy they risk bringing the government down. The term $c_k \geq 0$ denotes a party's

[2] Although electoral pledges can shift parties' ideal policy, we assume that parties have fixed policy preferences. For example, Social Democrats are to the left of liberals with respect to welfare state generosity. This way we distinguish between party policy preferences and party electoral commitments on a policy.

cost of losing office. More office-seeking parties have higher values of c_k [3]than more policy-seeking parties. To summarize, the two ministers' utility functions are:[4]

F's utility function $U_f(b,c,a)$ is

$-\left(b_f-\vartheta_f\right)^2-a_f\left(b_f-\vartheta_f\right)^2$, If Minister accepts

$-(x_0-\vartheta_f)^2-a_f(b_f-\vartheta_f)^2-c_f$, If Minister rejects

M's utility function $U_m(b,c,a)$ is

$-\left(b_f-\vartheta_m\right)^2-a_m\left(b_f-\vartheta_m\right)^2$, if Finance proposes and Minister accepts

$-\left(x_0-\vartheta_m\right)^2-c_m$, if Finance proposes and Minister rejects

To solve the game, we use backward induction. The equilibrium concept is subgame perfect Nash equilibrium. Minister is better off accepting Finance's proposal when his utility is higher from accepting the cuts than from rejecting them. More formally, the minister will accept the proposal if:

$$-(b_f-\vartheta_m)^2-a_m(b_f-\vartheta_m)^2>-(x_0-\vartheta_m)^2-c_m \qquad (1)$$

Solving equation (1) with respect to b_f we derive the region of acceptable policies b_f to the minister. The minister will reject the proposed cuts unless they are within his or her region of acceptance. For $a_m \geq 0$, the acceptance is region is:

[3] In the simulations we vary the values of c_k

[4] One might note the asymmetry in the utility functions of M and F. F makes the proposal so voters will hold his or her party accountable for the proposal. M is expected to block F's proposal if his or her party has pledged to do so and because he or she is the minister in charge of the policy. Since F proposes, voters do not punish M for reverting back the status quo. The main findings are robust to changing the game protocol.

$$b_f \in [x_m - \frac{\sqrt{c_m + (x_0 - x_m)^2}}{1 + a_m},\ x_m + \frac{\sqrt{c_m + (x_0 - x_m)^2}}{1 + a_m}]$$

Let b_m^* be the policy proposal that is acceptable to Minister and assume $\vartheta_m > x_0 > \vartheta_f$.[5] The equilibrium proposal by Finance is:

Proposition 1: If $\vartheta_m > x_0 > \vartheta_f$, then in any subgame perfect Nash equilibrium:

The equilibrium proposal is

$$b_f^* = \vartheta_m - \sqrt{\frac{c_m + (x_0 - \vartheta_m)^2}{1 + a_m}} \text{ , if } U_f(b_f^*) > U_f(x_0)$$

Otherwise, $b_f^{**} = \vartheta_f$

Holding the parties' ideal points fixed, and assuming both parties are moderately office seeking, F's ability to push forward his preferred policy depends on M's electoral cost for diverging from his or her party's electoral promises. Indeed, the equilibrium proposal will be closer to M's ideal point, which is to the right of F's, as her electoral cost increases. This is clearly indicated by the positive partial derivative of the equilibrium proposal with respect to a_m, $\partial b_f^* / \partial a_m = \frac{\sqrt{\frac{c_m + (x_0 - \vartheta_m)^2}{1 + a_m}}}{2(1 + a_m)^2} > 0$.

As the electoral cost for M increases, $a_m(b_f - \vartheta_m)$, the farther away the equilibrium proposal is from F's ideal policy. With the aid of numeric simulations provided below, we find that Finance can move policy closer to his or her ideal policy

[5] Here we only investigate the case when the status quo is in the gridlock interval $x_0 \in [\vartheta_f, \vartheta_m]$, as this is one of the most interesting cases empirically. For a formal discussion see Romer and Rosenthal (1978) and Woon (2008).

when three conditions hold simultaneously: Minister's party has made no electoral pledge, Finance's party has made a strong policy pledge and both parties are moderately office-seeking. In most other cases the model predicts either no policy change or Finance's policy proposal is closer to Minister's ideal policy than to Finance's ideal policy. Importantly, when both parties have made equally strong pledges, and both parties are moderately office-seeking the policy proposal is more favorable for Minister's party. Although this result is counter-intuitive, it is explained by the fact that voters do not punish Minister for Finance's proposal; they only punish her for accepting Finance's proposal.

The higher a_m, the electoral penalty from diverging from the party's promised policy is, the smaller Minister's acceptance region gets. Holding everything else constant, as a_m increases, the less likely it is the minister will accept a policy proposal that moves policy away from the status quo and his ideal policy. In contrast, as Minister's cost of losing office increases, the region of her acceptable policies increases. Therefore, when the minister's party has a low cost of losing office and a high electoral penalty from diverging from promised policies, the less likely she is to accept cuts in her department. Next we turn to the minister of finance.

Since Minister wants to spend more than Finance, $\vartheta_m > \vartheta_f$, Finance knows she can either propose $b_f^* = x_m - \frac{\sqrt{c_m + (x_0 - x_m)^2}}{1 + a_m}$ which is acceptable to Minister, or she can propose her ideal policy $b_f^{**} = \vartheta_f$. If she proposes her party's ideal policy, the proposal will be rejected and a policy dispute arises. Thus, Finance has to decide if she is better off making an acceptable proposal or not. To determine whether Finance

minister will propose an acceptable proposal, the following has to be true:

$$-(b_f^* - \vartheta_f)^2 - a_f(b_f^* - \vartheta_f)^2 > -(x_0 - \vartheta_f)^2 - c_f \qquad (2)$$

Setting numeric values for the ideological position of the two ministers at -2 and 2 for Finance and Minister, respectively and zero for the status quo, and varying the costs of losing office as well as varying a_m and a_f, we predict Finance's equilibrium proposal. Table 1 presents the results from the simulation[6].

[6] Placing the two ministers on either side of the status quo allows us to test for the most interesting variation of the game, where the two ministers have opposing policy preferences and thus the policy conflict is the highest.

Table 1A: Numeric simulations for predicting Finance's policy proposal to Minister

If $\vartheta_f = -2$ $\vartheta_m = 2$ $x_0 = 0$	Cost of losing office for both parties is zero, $c_m = c_f = 0$	Cost of losing office for both parties is moderate, $c_m = c_f = 1$
No electoral pledge $a_m = 0$ $a_f = 0$	$b_f = b_f^* = 0$ Finance proposes an acceptable policy, which is the status quo: no policy change	$b_f = b_f^* = 2 - \sqrt{5} < 0$ **Finance proposes an acceptable policy, which is closer to Finance's ideal point than to Minister's.**
Strong electoral pledge $a_m = 2$ $a_f = 2$	$b_f = b_f^* = 2 - \frac{2}{\sqrt{3}} > 0$ **Finance proposes an acceptable policy, which is closer to Minister's ideal point than to Finance's.**	$b_f = b_f^* = 2 - \sqrt{\frac{5}{3}} > 0$ **Finance proposes an acceptable policy, which is closer to Minister's ideal point than to Finance's.**
Strong electoral pledge by M's party $a_m = 2$ $a_f = 0$	$b_f = b_f^* = 2 - \frac{2}{\sqrt{3}} > 0$ **Finance proposes an acceptable policy, which is closer to Minister's ideal point than to Finance's.**	$b_f = b_f^* = 2 - \sqrt{\frac{5}{3}} > 0$ **Finance proposes an acceptable policy, which is closer to Minister's ideal point than to Finance's.**
Strong electoral pledge by F's party $a_m = 0$ $a_f = 2$	$b_f = b_f^* = 0$ Finance proposes an acceptable policy, which is the status quo: no policy change	$b_f = b_f^* = 2 - \sqrt{5} < 0$ **Finance proposes an acceptable policy, which is closer to Finance's ideal point than to Minister's.**

Table 1 identifies the conditions under which there is no change in the policy status quo, when there is policy change closer to Finance's ideal point and when the change is closer to Minister's ideal point. Assuming both parties have similarly moderate costs of losing office, parties' electoral pledges play a crucial role in the direction of policy change. When Minister's party has made a strong pledge, irrespective of Finance's party pledge, the policy proposal is to the right of the status quo and closer to Minister's ideal policy than to Finance's ideal policy. In contrast, when Minister's party has not made a pledge, and Finance's has, then the policy proposal, which is accepted by Minister, is to the left of the status quo and closer to Finance's ideal point. Finally, when neither party has made a pledge, Finance proposes his ideal policy, which is not accepted by Minister, which leads to a policy dispute. Unlike the previous results, which are somewhat expected, the result that policy dispute is more likely when neither party has made a pledge and both parties are moderately office seeking is counter-intuitive.

Finally, if we assume that neither party values office, or that there is no cost for having a policy dispute- which is possible-, we see two major outcomes: either there is no policy change, when the party of Minister has made no pledge, or Finance proposes a favorable to the Minister policy proposal, when Minister's party has made a strong policy pledge, and irrespective of Finance's party pledge. To sum up, the bargaining model provides the conditions for policy stability and policy change: policy stability is more likely in the absence of electoral pledges and when parties do not value office or when dispute is costless. Policy change is more likely when at least one of the parties has made a strong electoral pledge, and parties are moderately office-seeking or when there is a cost for having a policy dispute.

Section B

Predicting the electoral benefits and costs of social democrats when controlling Social Affairs

Here we seek to demonstrate that Social Democratic voters are attentive of both the promises and policies Social Democrats enact, while being in charge of the portfolio of Social Affairs. Adams (2012) notes that empirical evidence for the population noticing and punishing is scarce, but that it seems that both spatial modelers, in their assumptions, and party elites, in their actions, "believe that rank-and-file voters do perceive and react to parties' policy shifts"(p. 405). While not settled, retrospective economic voting is well established as a determinant of vote choice (see Lewis-Beck and Stegmaier (2015) for a review). To test whether these audience costs actually exist empirically, whether voters punish parties who fail to deliver on promises, we combined our data with data from the Comparative Study of Electoral Systems. We predict the individual level vote choice for 17 elections following a government.[7] In addition to several demographic and other relevant questions, the surveys ask how the voter voted in the most recent election, and how they did in the past election for 14 of the 17 cases. These data were combined with our data regarding the government that had occupied office before the election. Our argument suggests that voters should punish Social Democrats when they make a large pledge, welfare generosity decreases, and they hold the social affairs portfolio.

[7] These election/countries are Austria in 2008; Belgium in 1999; Denmark in 1998, 2001, and 2007; Germany in 1998, 2002, 2005, and 2009; Ireland in 2002 and 2007, the Netherlands in 1998, 2006, and 2010; Norway in 2005 and 2009; and Portugal in 2005

Table 2A: Electoral costs for Social Democrats if they fail to uphold their welfare commitments

	(1)	(2)	(3)	(4)
	All Voters	*All Voters*	*Left Voters e-1*	*Left Voters e-1*
Delta Welfare	0.838***	0.861***	-0.773	-0.652**
	(5.45)	(5.71)	(-1.00)	(-3.00)
Left Pledge	0.0579**	0.0612***	-0.00297	0.00412
	(3.11)	(3.37)	(-0.06)	(0.30)
Left in Government	0.667***	-0.156	0.253	0.947***
	(5.31)	(-1.33)	(0.41)	(5.54)
Left S. Affairs	-0.358**	0.467***	-0.160	-0.552*
	(-3.20)	(3.68)	(-0.42)	(-2.05)
Welfare*Pledge	-0.000441	-0.000542	-0.00410	-0.00558**
	(-0.61)	(-0.76)	(-1.39)	(-2.95)
Welfare*Left Gov.	-1.728***		0.0321	
	(-10.02)		(0.03)	
Ledge*Left Gov	-0.0650***		-0.0310	
	(-3.99)		(-0.37)	
Welfare*Pledge*Left Gov	0.163***		0.160	
	(5.41)		(1.85)	
Pledge*Left S. Affairs		-0.0631***		-0.0639**
		(-3.93)		(-3.21)
Welfare*Left S. Affairs		-1.730***		-0.244
		(-10.05)		(-1.00)
Welfare*Pledge*Left SA		0.159***		0.193***
		(5.35)		(9.24)
Age	0.00773***	0.00773***	0.0219***	0.0218***
	(8.11)	(8.11)	(9.92)	(9.89)
Gender	0.00199	0.00196	0.00934	0.0135
	(0.07)	(0.07)	(0.15)	(0.21)
Education	-0.0799***	-0.0801***	-0.0272	-0.0251
	(-8.17)	(-8.18)	(-1.30)	(-1.21)
Household income	0.00714	0.00722	0.0532*	0.0519*
	(0.62)	(0.62)	(2.11)	(2.07)
Left/Right	-0.317***	-0.317***	-0.192***	-0.194***
	(-43.21)	(-43.21)	(-11.35)	(-11.64)
Unemployed	-0.290***	-0.289***	-0.448**	-0.456**
	(-3.92)	(-3.92)	(-3.03)	(-3.09)
Union member in HH	0.398***	0.397***	0.112	0.100
	(11.81)	(11.78)	(1.59)	(1.44)
Election Year	-0.120***	-0.121***	-0.172***	-0.162***
	(-12.57)	(-12.77)	(-9.44)	(-10.62)
Constant	240.4***	242.3***	344.7***	325.9***
	(12.61)	(12.80)	(9.44)	(10.63)
Observations	28361	28361	5120	5120
t statistics in parentheses				
="* p<0.05	** p<0.01	*** p<0.001"		

In Table 2, change in welfare spending is interacted with the left pledge, and whether they were in the government, or held social affairs. All of the models include a battery of individual level controls: age, gender, level of education, income, whether a household member was in a union, whether the respondent was unemployed and their self-reported left/right position as well as random effects for the country level intercepts. The first two models are for all voters, and the second two are only for those who voted for the left party in the previous election, i.e. the election that the platform of interest was used in. The first and third models show the costs/benefits when the left is in government, and the second and fourth models for when the left party held the social affairs ministry specifically.

The nature of the interactions makes it difficult to interpret any of these coefficients from the table, but one should note that the three way interactions are largely significant. To get a full understanding of these models, one needs to look at the predicted probabilities under the different conditions of interest. The predicted probabilities for these models were generated under two conditions for each model: when the left party had made a strong pledge (one standard deviation above the mean) and had a poor welfare outcome (one standard deviation below the mean). These are the conditions under which one would expect the highest audience costs. The probabilities varied whether the party was in government or controlled social affairs. All of the interactive variables were set to be consistent with the condition and all other variables were held at their means. The first model gives a probability of voting for the left party of 0.051 when the left party is in government and 0.126 when outside of government. *Hence, voters are twice as likely to vote for the left party if they've made a high pledge, there is a bad outcome and they are not in government.* For holding social affairs explicitly, it seems that voters punish the party slightly more.

The probability of voting the left is 0.041 when the left holds social affairs and it is 0.11 when they do not, but are still in government. While there is a slight difference in the numbers, it is not a substantively significant difference. The voters who voted for the left party in the election during which those pledges were made, punished the left party considerably more when they held social affairs. If the left was in government, the probability of voting left again was 0.27 compared to .83 when the left party was not in government. If the left party held social affairs, voters have only a 0.15 probability of voting for the left again, compared to a 0.91 probability of voting left if the party did not hold social affairs.[8] This suggests that voters will defect at a little less than twice the rate when the Social Democrats hold that ministry than when they are merely in the government. *Therefore, while average voters may not punish the left party heavily, core voters do punish considerably left parties that fail to uphold their pro-welfare promises, especially when they control the social affairs portfolio*. Of particular interest to us is that core voters appear to punish left parties more when they hold the portfolio of social affairs than when they are in government.

[8] All of the estimations above can be found in the first section of the log file: log_replication_psrm_ppp_SectionsB_C_log.

Section C
Predicting parties' utility in pledge making

Consider the utility a party receives from making a pledge. One can classify the relevant utilities into two parts, the immediate benefit in votes during the current election, and the potential costs in votes of failing to meet the platform commitment during the next election (whether the party makes it into the government or not). The equation below formalizes all of the potential outcomes.

$$\Delta u = \Delta u_t + g(s\Delta u_{s,t+1} + (1-s)\Delta u_{g,t+1}) + (1-g)\Delta u_{ng,t+1} \qquad (1)$$

Here Δu_t represents the votes the party gains in the current election from making the pledge, g is the probability of the party getting into government, and s is the probability that once in government the party will control the portfolio of social affairs. All the terms referring to the next election, Δu_{t+1}, represent the electoral benefits or costs when welfare spending is cut. Specifically, $\Delta u_{s,t+1}$ refers to future electoral costs when social democrats are in control of the social affairs ministry, $\Delta u_{g,t+1}$ refers to the costs for being in the government but not in control of the ministry and $\Delta u_{ng,t+1}$ for being in opposition. Two things should be immediately apparent, first, that prior to the election, calculating the overall vote difference for a particular pledge given the number of possible outcomes is non-trivial, particularly considering that the pledge is also constrained by other parties' positions, public opinion and contextual factors. Second, all of the terms aside from the benefits in the current election must be discounted by the probability that they will be in that situation. These benefits definitely accrue (assuming the political calculations are correct, as is the case with all of the other outcomes) and do so immediately. However, before the election, parties must consider that any costs are contingent on the party getting into government, the party obtaining social affairs, and failing to meet the commitment. Further, it is common to discount future utility for current utility, the next time the party may be punished for this would be at the next election, something which while proximate while in government, is far off when the platforms are being decided.

$$g(s\Delta u_{s,t+1} + (1-s)\Delta u_{g,t+1}) + (1-g)\Delta u_{ng,t+1} \qquad (2)$$

Returning to just the future potential costs in votes, described in Equation 2 above, we can input estimates about the probabilities that the left party is in government and in the portfolio of social affairs based on our dataset of the 8 European countries over 40 years we use in the paper. According to that sample, the left party was in government 69 percent of the time and it controlled the ministry of social affairs 75 percent of the time it was in government.

$$gs\Delta u_{s,t+1} + g(1-s)\Delta u_{g,t+1} + (1-g)\Delta u_{ng,t+1}$$

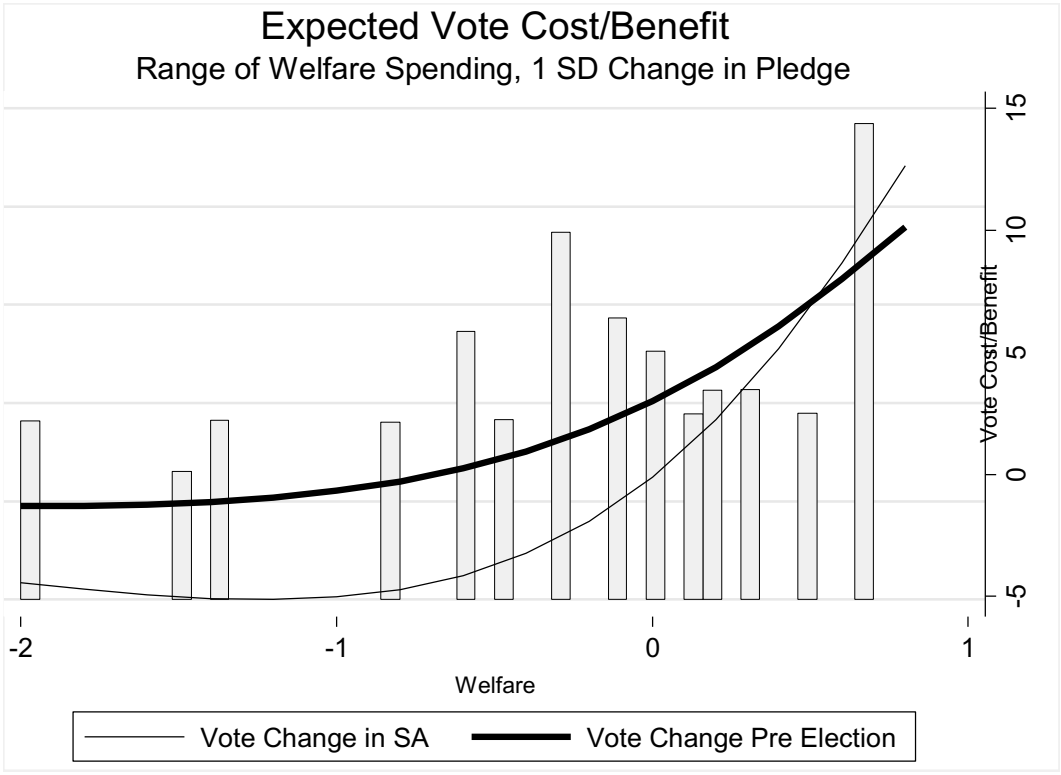
$$(.69)(.75)\Delta u_{s,t+1} + (.69)(1-.75)\Delta u_{g,t+1} + (1-.69)\Delta u_{ng,t+1} \qquad (3)$$

Further, from the vote choice models below, one can estimate the expected vote differences between a left party in each of the situations above that has made either a high or an average pledge. For example, if we consider the difference between a left party that makes an average pledge (the mean, 9.06) and a left party that makes a high pledge (one standard deviation above the mean, 14), and given a drop in welfare generosity (one standard deviation below the mean, -0.238), we would expect the following vote share changes. If the left party holds social affairs we would expect a loss of 4.5 percent of the vote in the next election. This is the situation that gives the left the bargaining power in our main models. If however, the left is in government, but not in that ministry, the model predicts that they would expect to gain 3.2 percent of the vote. If they are outside of government, they are expected to gain 3.5 percent of the vote by making a one standard deviation higher pledge. By inserting these estimates, the expected potential electoral losses for the party are 0.64 percent of the vote.

$$(.69)(.75)(-4.5) + (.69)(1-.75)(3.2) + (1-.69)(3.5) \qquad (4)$$

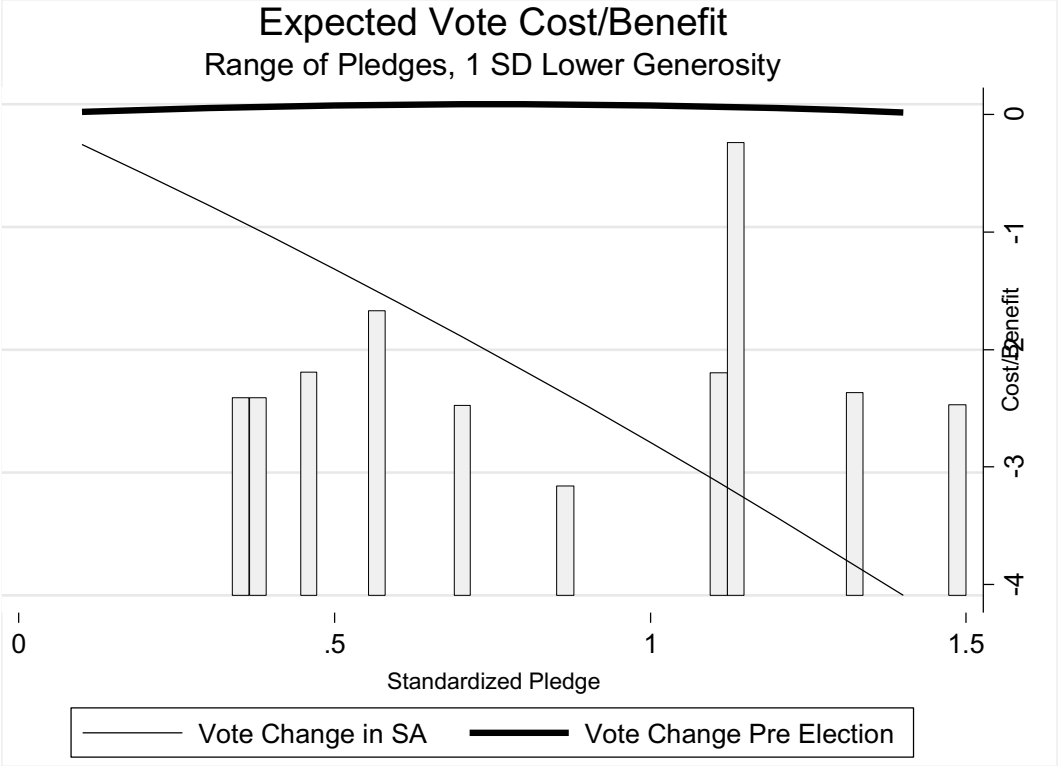
This is before discounting for the fact that these expected costs are generally four to five years in the future. Two graphs provide a more complete view of the range of choices. The first graph holds constant the pledge size increase (from a mean pledge, 9.06, to a pledge one standard deviation above the mean, 14) while varying the welfare spending across its range.

Figure CA1: Expected vote losses/gains at time of pledge formation



The thin line represents the change in vote share by having a high pledge rather than an average one, given that the party is in social affairs. The thick line represents the vote changes as would be calculated when the platform is being decided (discounted by the various probabilities). This graph shows that if a party is considering making a large pledge not knowing what the welfare spending will be, there is no expected vote cost even if the spending generosity is below zero. However, the thin line, the costs when the party controls the ministry, shows that the party needs to at least hold spending even (which is above the mean) to not lose votes by making a large pledge. This is to say that no change in welfare generosity would lead to no expected vote share change in SA, but would lead to gains of about 3 percent by pre-election logic. The mean value of generosity change while in social affairs would cost the party about an expected 2 percent of the vote if in social affairs, compared to a slightly positive expected change given pre-election calculations. The next graph holds constant a cut in welfare spending (one standard deviation below the mean, -0.7) and varies the size of the pledge increase. The x axis reports the change in the pledge and the y axis the change in the electoral vote, reported in standard deviations. The histogram shows the distribution of actual pledges in the sample.

Figure CA2: Expected vote losses/gains at time of pledge formation



Even if the party expects that welfare spending will decrease considerably, given the utility function considered above, the party should be willing to over-promise during the election. At the time platforms are selected (the thick line), the level of the pro-welfare pledge has expected to cost in the next election (leaving aside the benefits from this election). However, once in social affairs, there is a steep decline in electoral benefits and larger pledges are expected to incur serious costs for the party in the next electoral cycle.

Section D
Robustness

In this section we check the robustness of our findings.

1. We replicate Table 1 across different samples of multiparty cabinets (Table 3A). We expect that the results become weaker when we include oversized coalitions that would survive the departure of left parties. This is exactly what we find in Equation 4 of Table 3A.
2. We replicate Table 1 with the additional controls of unemployment and wage bargaining coordination.
3. Table 5A replicates tests the argument with Christian democratic parties and pro-welfare pledges. In line with our expectations, pro-welfare pledges by Christian democrats do not lead to higher welfare generosity due to the lower saliency of welfare policies across party core voters.
4. We present control functions in Tables 6A and 7A.
5. Finally, we provide Figures 1 and 2 that illustrate the conditional effects of Hypotheses H1a and H1b, as directly tested by Equations 1 and 2 respectively in Table 1 of the main document.

Table 3A: Replicating Equation 4 of Table 1 across different types of cabinets

	(1)	(2)	(3)	(4)
	Welfare Generosity	Welfare Generosity	Welfare Generosity	Welfare Generosity
	Sample as in Main Text	*Only Maj. Min. Winning*	*Min. Winning & Minority*	*All Multi-Party*
Generosity Lag	0.9446***	0.9227***	0.9422***	0.9599***
	(0.033)	(0.043)	(0.035)	(0.019)
Econ. Growth	0.0807**	0.2040	0.0833**	0.0661**
	(0.033)	(0.143)	(0.035)	(0.024)
Left cabinet seats %	0.0030	0.0068	0.0028	0.0021
	(0.004)	(0.006)	(0.004)	(0.004)
Ave Cabinet Pledge	-0.0069	0.0017	-0.0078	-0.0063
	(0.021)	(0.018)	(0.023)	(0.020)
Net Pledge	-0.0638**	-0.0896***	-0.0629**	-0.0370
	(0.018)	(0.025)	(0.019)	(0.024)
SD S. Affairs	-0.5437**	-0.7738**	-0.5329**	-0.3966*
	(0.175)	(0.316)	(0.180)	(0.192)
Net Pledge*SD Affairs	**0.1096****	**0.1198****	**0.1082****	**0.0721**
	(0.034)	**(0.046)**	**(0.035)**	**(0.040)**
Constant	1.9071	2.3816	2.0045	1.4214*
	(1.116)	(1.421)	(1.204)	(0.628)
Observations	192	134	184	223
R-squared	0.903	0.862	0.900	0.913
Number of countries	8	8	8	8

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4A: Replicating Table 1 with more controls (unemployment and wage coordination).

	(1)	**(2)**	**(3)**	**(4)**
	Welfare Generosity	Welfare Generosity	Welfare Generosity	Welfare Generosity
Generosity Lag	0.9246***	0.9242***	0.9238***	0.9215***
	(0.039)	(0.038)	(0.040)	(0.034)
Econ. Growth	0.0633	0.0584	0.0656	0.0667
	(0.045)	(0.038)	(0.044)	(0.035)
Unemployment	-0.0705**	-0.0607*	-0.0626*	-0.0575
	(0.029)	(0.032)	(0.030)	(0.035)
Wage Coordination	0.2331	0.1821	0.1941	0.1827**
	(0.132)	(0.098)	(0.112)	(0.065)
Left cabinet seats %	0.0023	0.0022	0.0033	0.0009
	(0.004)	(0.004)	(0.004)	(0.003)
Ave Cabinet Pledge	-0.0113	-0.0168	-0.0132	-0.0132
	(0.013)	(0.015)	(0.014)	(0.014)
Left Pledge	-0.0412	-0.0475**	-0.0393	
	(0.024)	(0.020)	(0.022)	
SD S. Affairs	-0.3126			-0.3401*
	(0.181)			(0.145)
Left Pledge* SD Affairs	**0.0620***			
	(0.031)			
Ave SD Affairs/Finance		-0.4316		
		(0.262)		
Let Pledge* SD Aff/Fin		**0.0920***		
		(0.044)		
Inner Cabinet			-0.5055	
			(0.289)	
Let Pledge* SD Aff/Fin			**0.0736***	
			(0.035)	
Net Pledge				-0.0537***
				(0.014)
Let Pledge* SD Affairs				**0.0917****
				(0.029)
Constant	2.2762*	2.4680**	2.4222*	2.4859**
	(1.031)	(1.021)	(1.088)	(1.042)
Observations	192	192	192	192
R-squared	0.906	0.909	0.906	0.908
Number of countries	8	8	8	8
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

Table 5A: Testing the policy effects of Christian democratic pro-welfare commitments on welfare generosity

	(1)	**(2)**	**(3)**
	Welfare Generosity	Welfare Generosity	Welfare Generosity
	MW coalitions	*Non-Triangular*	*Triangular*
Generosity Lag	0.9244***	0.9079***	0.7413***
	(0.043)	(0.054)	(0.134)
Econ. Growth	0.0603	0.0355	0.0646
	(0.054)	(0.052)	(0.078)
Unemployment	-0.0670**	-0.0703**	-0.0745
	(0.028)	(0.028)	(0.075)
Wage Coordination	0.1746*	0.1175	-0.0779
	(0.089)	(0.070)	(0.119)
Christian cabinet seats %	-0.0510	-0.2092	0.3614
	(0.164)	(0.176)	(0.592)
Ave Cabinet Pledge	0.0014	-0.0027	0.0715
	(0.010)	(0.014)	(0.046)
Chr. Dem S. Affairs	0.1020	-0.0122	0.2274
	(0.131)	(0.163)	(0.199)
Chr. Dem Pledge	0.0014	0.0038	0.0139
	(0.016)	(0.022)	(0.040)
Chr. Pledge*Affairs	**-0.0698**	**-0.0569**	**-0.0510**
	(0.054)	**(0.068)**	**(0.064)**
Constant	2.4361**	3.5766*	8.3956*
	(0.988)	(1.706)	(3.628)
Observations	192	134	58
R-squared	0.906	0.900	0.788
Number of countries	8	8	6
Robust standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

We test the robustness of our main findings in Table 1, by controlling for un-observables that might be driving portfolio allocation, pledge formation and welfare effort. To do that, we follow Wooldridge (2002) who recommends we predict our potentially endogenous variables, i.e pro-welfare pledges and portfolio allocation, save the residuals, or produce the inverse mills ratio in the case of portfolios allocation which is a probit model, and include them in the second stage, policy model. We do exactly that and we present out estimates in Tables 6A and 47A. However, the left pledge in Tables 6 and 7A is the net, left electoral pledge including the pledge of left parties when they are in opposition. Therefore the results in Table 7A are not directly comparable with the results in Table 1 of the main text. Nonetheless, we still find the same, positive interaction effect between left pledges and portfolio control.

Only the residuals that predict the allocation of the portfolio of social affairs positively correlate with welfare generosity, but they are not statistically significant. This indicates that although there might be some un-accounted for variation in parties' welfare effort, it is not significant enough to warrant the estimation of control functions.

Table 6A: Predicting Pledge and Social Affairs for residual/ inverse ratio estimations.

	(1)	(2)
	Left Pledge	**Left affairs**
Lagged Left Pledge	-0.0508	
	(0.060)	
Center-right Pledge:	0.0285	
(Larger party)	(0.064)	
Center-right Pledge:	0.3408***	
(Smaller party)	(0.058)	
Cab Ave. Pledge		-0.0229
		(0.052)
Rile (Left/Right)		-0.0340***
		(0.009)
Left Cab. Seats		0.0612***
		(0.009)
Econ. Growth	-0.0333	0.0413
	(0.124)	(0.051)
Unemployment	0.0144	0.0469
	(0.105)	(0.059)
Coordination	-0.3067	-0.2201**
	(0.340)	(0.094)
Constant	8.5245***	-1.3910**
	(1.634)	(0.666)
Observations	396	212
R-squared	0.098	
No of countries	8	8
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Table 7A: Replicating main models in Table 1 of main text with Control Function Estimators

	(1)
	Welfare Generosity
Generosity Lag	0.9425***
	(0.034)
Pledge Residuals	-0.0464
	(0.080)
Portfolio Residuals	0.0450
	(0.041)
Economic Growth	0.0725
	(0.045)
Cabinet Pledge	0.0002
	(0.025)
SD S. Affairs	-0.1902
	(0.168)
Left Pledge	0.0116
	(0.083)
Pledge*SD Affairs	**0.0322***
	(0.016)
Constant	1.7412*
	(0.772)
Observations	192
R-squared	0.899
Number of countries	8
Robust standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Figure 3A: Testing the 'naïve' Hypothesis H1a (SD S. Affairs*Left Pledge)

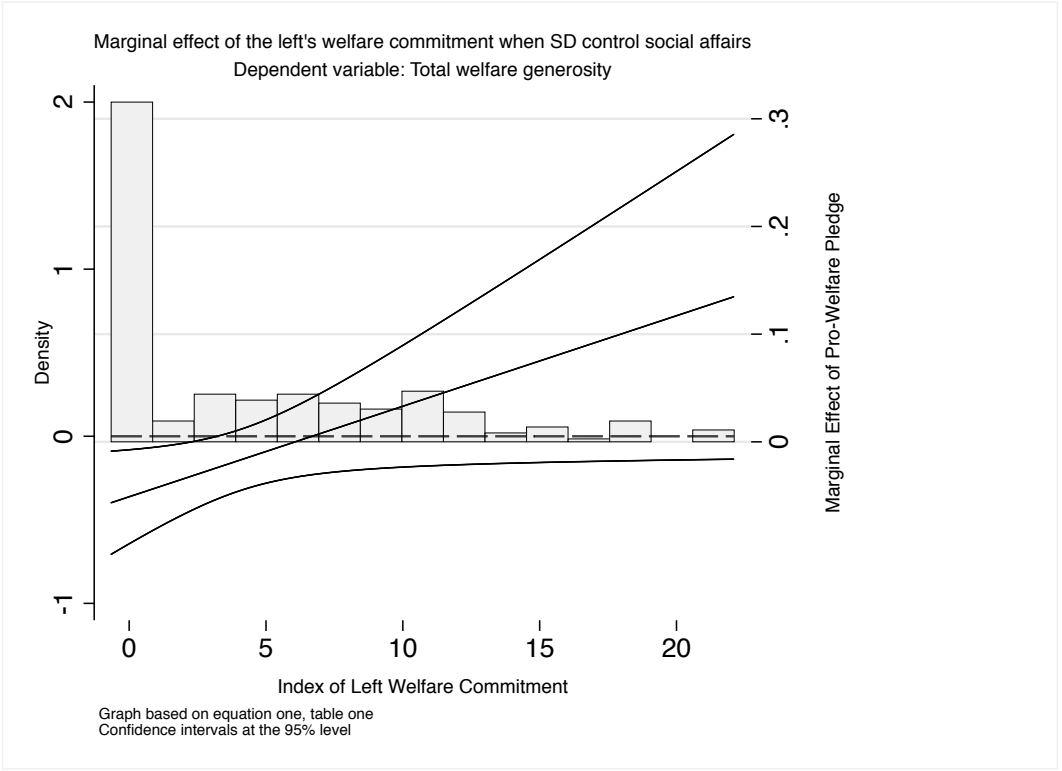
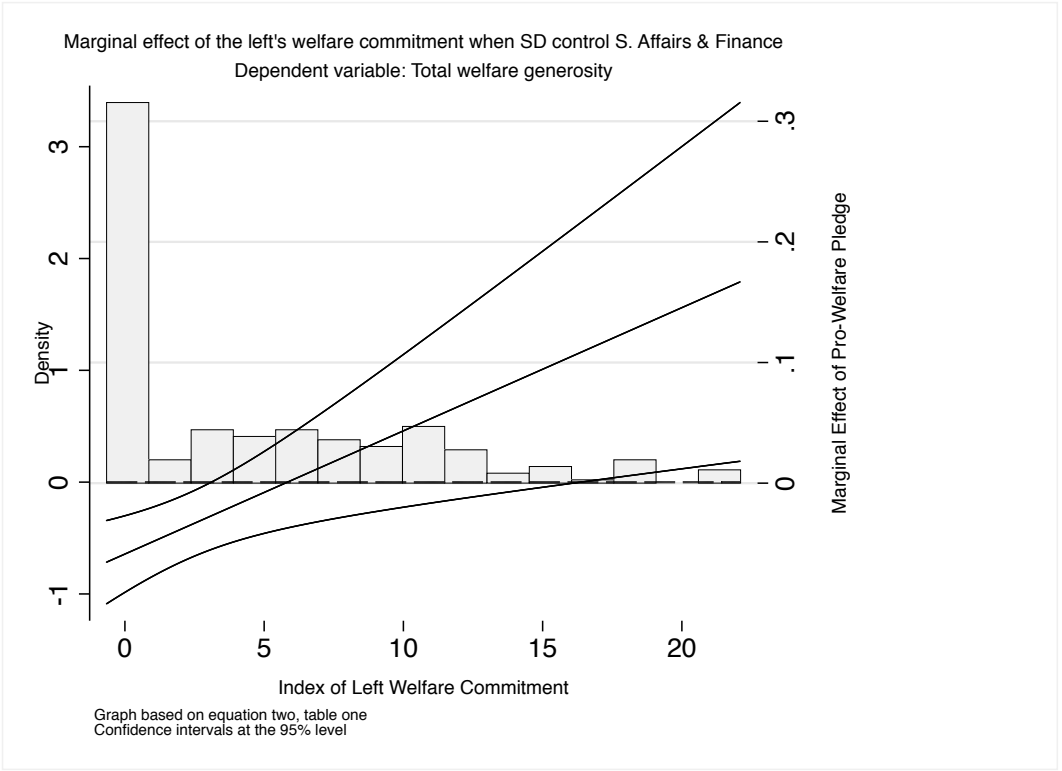


Figure 4A: Testing Hypothesis H1b (SD S. Affairs & Finance*Left Pledge)



References

Blondel, Jean, & Muller-Rommel, Ferdinand (Eds.). (1993). *Governing together: the extent and limits of joint decision-making in Western European Cabinets*. New York: St. Martin's Press.

Leventoglu, Bahar, & Tarar, Ahmer. (2005). Prenegotiation Public Commitment in Domestic International Bargaining. *American Political Science Review, 99*(3), 419-433.

Lewis-Beck, Michael S., & Stegmaier, Mary. (2015). Economic Evaluations and Electoral Consequences. In James D. Wright (Ed.), *International Encyclopedia of the Social and Behavioral Sciences* (2nd ed., Vol. 7, pp. 26-32). Oxford: Elsevier.

Muller, Wolfgang C., & Strom, Kaare. (1999). *Policy, Office or Votes? How Political Parties in Western Europe Make Hard Decisions*. Cambridge: Cambridge University Press.

Romer, Thomas, & Rosenthal, Howard. (1978). Political Resource Allocation, Controlled Agendas, and The Status Quo. *Public Choice, 33*, 27-43.

Wooldridge, Jeffrey M. (2002). *Economic Analysis at Cross Section and Panel Data*. Cambridge, MA: The MIT Press.

Woon, Jonathan. (2008). Bill Sponsorship in Congress: The Moderating Effect of Agenda Positions on Legislative Proposals. *Journal of Politics, 70*(1), 201-216.

Data Appendix

Table 8A: Social Welfare Platform Commitments across Center-Left, and Center-Right Parties (In brackets we provide the Comparative Manifesto Project party family code)

Country	Center-left parties	Smaller center-right parties	Major center-right parties
Austria	SPÖ(3): Social Democratic Party	FPO(4): Freedom Movement	OVP(5): Christian Democrats
Belgium	PSB-BSP(3): Socialists through 1978 SP(3): Flemish Socialists and PS(3): Francophone Socialists averaged after	PLP-PVV(4): Liberals through 1968, PVV(4): Flemish Liberals and PRL(4): Francophone Liberals through 1991, PVV(4): Flemish Liberals and PRL-FDF(4): Liberals - Francophone Democratic Front through 1995, PVV(4): Flemish Liberals and PRL-FDF-MCC(4): Liberals - Democratic Front - Citizens' Movement through 1999, PVV(4): Flemish Liberals and MR(4): Reform Movement after	PSC-CVP(5): Christian Peoples Party through 1965, CVP(5): Flemish Christian Peoples Party and PSC(5): Francophone Christian Social Party after
Germany	SPD(3): Social Democratic Party	FDP(4): Free Democratic Party	CDU/CSU(5): Christian Democratic Union/Social Union
Ireland	LP: Labour Party(3)	Fianna Fail(6)	Fine Gael(5)
Italy	PSI(3): Socialist Party through 1992, DS(2): Democrats of the Left through 2001, Olive tree(3) in 2006, and PD(4): Democratic Party in 2008	PSDI(3): Social Democrats through 1992, none through 2001, and UDC(5): Union for Christian and Center Democrats in 2006 and 2008	PPI-DC(5): Christian Democrats through 1992, FI: Forza Italia(6) through 2006, and PdL(0): People of Freedom in 2008
The Netherlands	PvdA(3): Labour	VVD(4): People's Party for Freedom and Democracy	CDA(5): Christian Democratic Appeal
Norway	DNA(3): Labour Party	SP(8): Centre Party	H(6): Conservatives
Sweden	SdaP(3): Social Democratic Labour	FP(4): Liberals	MSP(5): Moderate Coalition

Table 9A: Summary of the trajectories of the social affairs portfolio

Country	Years
Austria	Ministry of Labour and Social Affairs (1945-2000) Ministry of Social Security & Ministry of Social Affairs (2000-2009), Ministry of Labour, Social Affairs and Consumer Protection (2009-)
Belgium	Ministry to Social Welfare until 1994, then Ministry of Social Affairs (1994-2003) Federal Public Service and Social Security (2003-)
Finland	Ministry of Social Affairs (1945-1968) Ministry of Social Affairs and Health (1968-)
Germany	Ministry of Labour for Labour and Social Affairs (1957-2002) Ministry of Health and Social Security (2002-2005) Ministry for Labour and Social Affairs (2005-)
Ireland	Department of Social Welfare (1948-1997) Department of Social, Community and Family Affaires (1997-2002) Department of Social and Family Affairs (2002-2010) Department of Social Protection (2010-)
Italy	Ministry of Labour and Social Security (1945-2001) Ministry of Labour and Social Policy (2001-2006) Ministry of Labour and Social Security (2006-2008) Ministry of Labour, Health and Social Policy (2008-2009) Ministry of Labour and Social Policy (2009-)
Netherlands	Ministry of Social Affairs and Health (1951-1971) Ministry of Social Affairs (1971-1981) Ministry of Social Affairs and Employment (1981-)
Norway	Ministry of Social Affairs (1945-1993) Ministry of Health and Social Affairs (1993-2003) Ministry of Social Affairs (2002-2004) Ministry of Labour and Social Affairs (2004-2005) Ministry of Labour and Social Inclusion (2005-2010) Ministry of Labour (2010-)
Sweden	Ministry of Health and Social Affairs (1946-)

Table 10A: Legislative Types Across Countries and Years in our Sample

Countries/ Legislative Types						
	A	**B**	**Bstar**	**C**	**D**	**E**
Austria	1972-82		2003-06	1970-71, 1983-02	2007-08	
Belgium					1970-79,	1979-09
Germany		1991-03	1983-90	1970-81, 2003-05	2006-09	
Ireland	1970-72, 1978-80	1981, 1990-01, 2007-08	1982, 1987-90, 2002-06	1973-77, 1983-86		
Italy		1970-83, 1987-91			1984-86 2001-08	1992-01
Netherlands		1990-94		1978-81, 1983-90	1970, 1982, 1999-01, 2003-06	1971-77, 1995-99, 2002, 2007-10
Norway		1974-77, 1982-01	1970-74, 1978-81		2006-09	2002-05
Sweden	1970	1974-82, 2003-06	1971-73, 1983-91, 1995-98		1992-94, 1999-02, 2007-10	

Table 11A: Descriptive Statistics for Legislative Types Across Countries (1970-2010)

Legislative Types	Austria	Belgium	Germany	Ireland	Italy	Netherlands	Norway	Sweden
A	11	0	0	6	0	0	0	1
B	0	0	**12**	**15**	**19**	5	**24**	**13**
B*	4	0	8	**9**	0	0	8	**16**
C	**22**	0	**16**	**9**	0	**11**	0	0
D	2	9	4	0	**11**	9	4	11
E	0	**31**	0	0	9	**16**	4	0
Total	39	40	40	39	39	41	40	41

Table 12A: Summary statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Total Generosity	196	34.76	5.39	22.30	45.80
Growth	249	2.89	2.49	-5.50	11.63
Unemployment	251	6.17	3.84	0.55	17.15
WB Coordination	251	3.80	0.85	1.00	5.00
Left Cabinet %	251	28.20	28.80	0.00	100.00
Ave. Cabinet Pledge	223	6.22	4.43	-3.20	20.03
Left Pledge	238	4.62	5.74	-0.66	22.11
Net Pledge	238	3.90	5.32	-0.66	18.95
SD S Affairs	238	0.47	0.50	0.00	1.00
Ave. SD Affairs/Finance	238	0.38	0.42	0.00	1.00
Inner Cabinet	238	0.39	0.42	0.00	1.00
Christian Democratic Cabinet	251	0.40	0.49	0.00	1.00
Chr. S. Affairs	238	0.34	0.47	0.00	1.00
Christian Democratic Pledge	238	2.84	4.71	-0.80	22.29

Table 13A: Descriptive statistics across legislative types

Legislative Types	Left Pledge when in Government	Left Electoral Pledge	Left PM	Left Social Affairs	% of left cabinet seats
A	1.08	4.30	0.00	0.00	3.70
B	3.23	7.37	0.16	0.32	21.44
B*	0.33	6.37	0.05	0.05	1.11
C	7.49	9.07	0.48	0.70	40.91
D	3.90	8.48	0.29	0.38	27.99
E	4.59	7.16	0.16	0.60	32.03
		If Left Controls Premiership			
B	4.97	4.97	1.00	1.00	59.97
B*	6.20	6.20	1.00	1.00	21.10
C	8.97	8.97	1.00	1.00	65.79
D	10.59	10.59	1.00	1.00	52.82
E	5.09	5.09	1.00	1.00	36.71

Table 14A: Summary statistics for discussion of main results in Table 1

	Obs.	Mean
When Left is in government		
Left social affairs	129	0.81
Left finance	129	0.51
Left affairs when finance is left	66	0.89
Average Left & Cabinet Pledge when left in government		
Left Pledge	129	6.6
Cabinet Pledge	132	6.7
When left pledge is higher than cabinet pledge		
Left Pledge	76	9.1
Cabinet Pledge	79	6.4
When left pledge equals or lower than cabinet pledge		
Left Pledge	53	3.05
Cabinet Pledge	53	7.13

Figure 5A: Negative Pledges by Right Parties that Controlled Finance

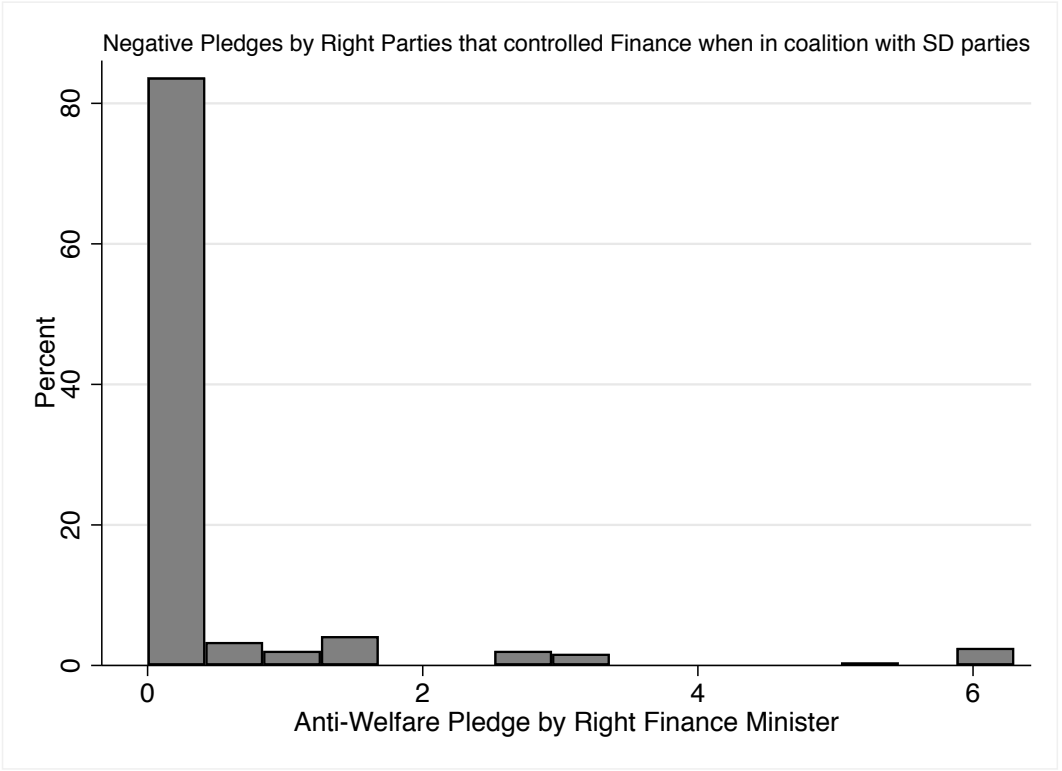


Figure 6A: Pro-welfare Pledges by Social Democratic Parties that Controlled S. Affairs

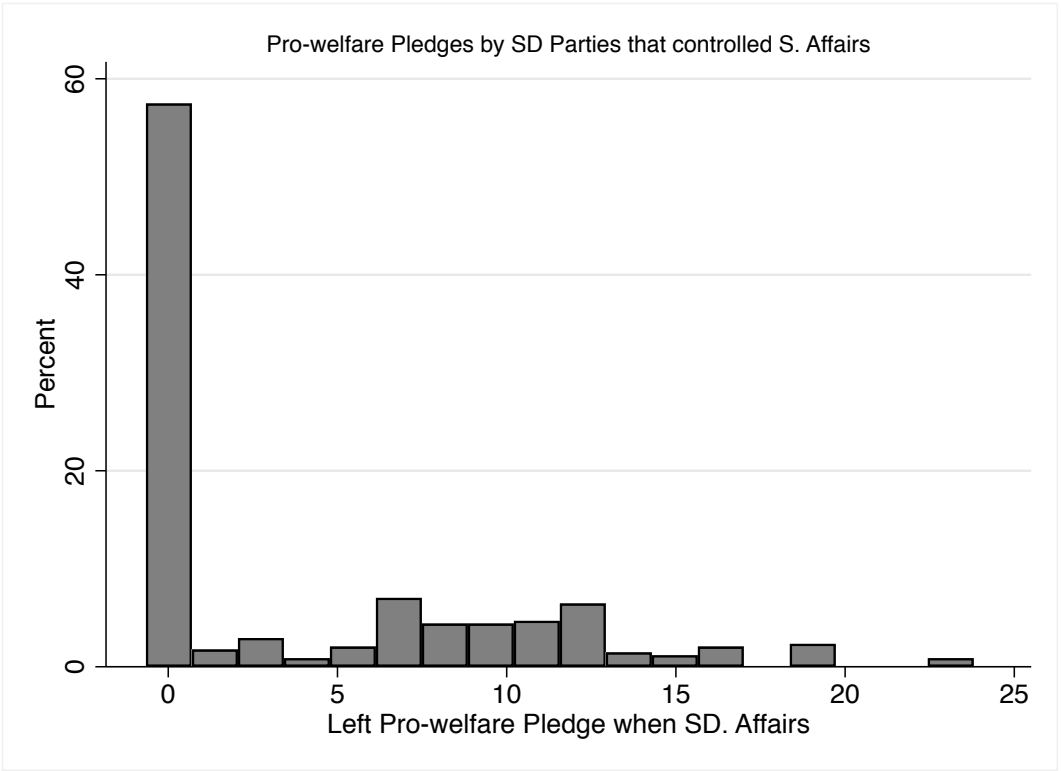


Figure 7A: Pro-welfare commitments in Austria and Ireland over time

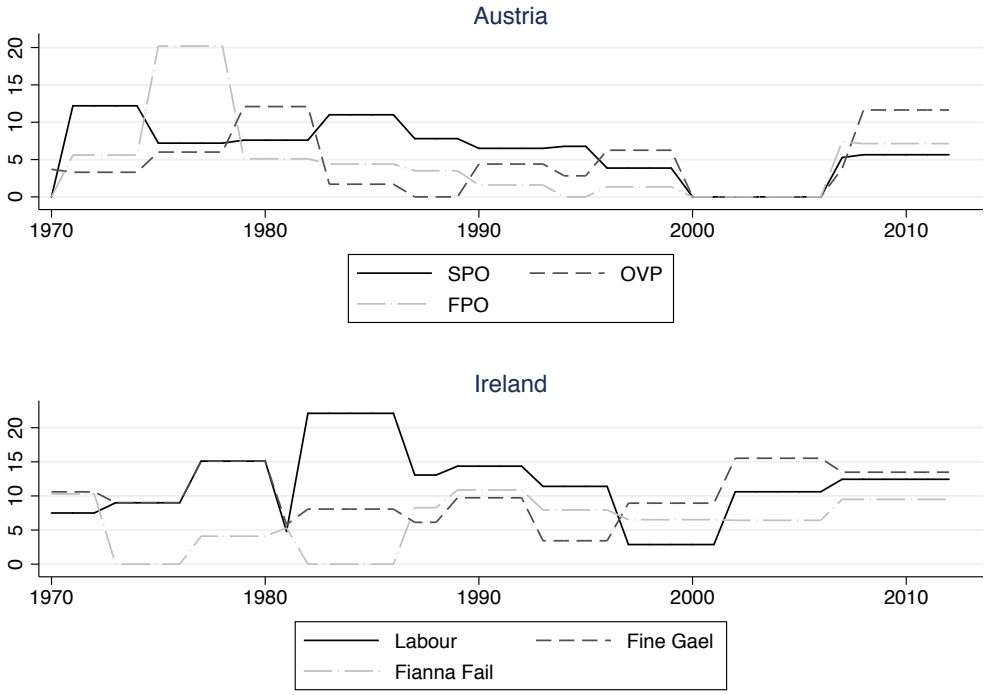


Figure 8A: Pro-welfare commitments in Germany and the Netherlands over time