

ONLINE APPENDIX

“Representing the Compromise: How Institutions Serve Government Support Coalitions in European Union Policy-Making”

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1) Formal model

Model set-up

We model a game between a government party A proposing a policy position to another government party B and an opposition party C with ideal points x_i in a unidimensional policy space $X \in \mathbb{R}$, where $i = a, b, c$, denoting the parties. We assume $x_c > x_b > x_a = 0$. The quadratic utility function of party A is $U_a = -\dot{p}^2 - k$, where \dot{p} is the final policy position and the opportunity cost $k > 0$ if its proposal is overturned. The quadratic utility function of parties B and C is $U_i = -(x_i - \dot{p})^2 - w_i$, for $i = b, c$, where $w_c > w_b > 0$ if they challenge a proposal. The sequence of moves is explained in the main text. If a proposal is not challenged, the final position is party A's initial proposal $\dot{p} = \widehat{p}_a$. If a proposal is challenged, the ensuing bargaining process leads to a full compromise $\bar{p} = \frac{\sum_i x_i}{m+1}$, where $i = b, c$ denotes the parties proposing amendments and m is the number of such parties. Parties are fully informed.

Strategies and Equilibrium in Majority Governments

We employ backward induction. In majority governments, a challenge from the opposition party C has no effect over outcomes. The final policy position is $\dot{p} = \widehat{p}_a$ if there is no challenge from government party B; it is $\dot{p} = \frac{x_b}{2}$ if there is a challenge. In both cases, party C challenges a proposal if and only if $-(x_c - \dot{p})^2 - w_c > -(x_c - \widehat{p}_a)^2$. That is, if $w_c < 0$. This inequality never holds, so party C never challenges.

A challenge of government party B modifies the final position. Party B challenges a proposal if and only if $-\frac{x_b^2}{4} - w_b > -(x_b - \widehat{p}_a)^2$. That is, if $\widehat{p}_a < x_b - \sqrt{w_b + \frac{x_b^2}{4}}$. A proposal is over-

turned if it is below this threshold. To simplify notation, we use the function $\psi(w_b, x_b) \equiv$

$$\sqrt{w_b + \frac{x_b^2}{4}}.$$

Moving back to party A, consider first a proposal $\widehat{p}_a = 0$ which represents ministerial autonomy. This is the dominant strategy as long as $w_b > \frac{3x_b^2}{4}$, because the proposal remains unchallenged. Otherwise, the proposal is challenged and the best choice is $\widehat{p}_a = x_b - \psi(w_b, x_b)$ to avoid paying the opportunity cost associated with overturning.

A unique subgame-perfect equilibrium in majority governments is

Party A: If $w_b > \frac{3x_b^2}{4}$, propose $\widehat{p}_a = 0$. Otherwise, propose $\widehat{p}_a = x_b - \psi(w_b, x_b)$.

Party B: If $\widehat{p}_a \geq x_b - \psi(w_b, x_b)$, accept \widehat{p}_a . Otherwise, challenge and amend \widehat{p}_a .

Party C: Accept \widehat{p}_a .

The outcome is $\dot{p} = 0$ (ministerial autonomy) if $w_b > \frac{3x_b^2}{4}$, otherwise $\dot{p} = x_b - \psi(w_b, x_b)$.

Party A proposes a partial compromise between its ideal policy and $\frac{x_b}{2}$. Party A only proposes the full compromise $\frac{x_b}{2}$ when $w_b = 0$, that is, when challenging is costless.

Digression: Strategies and Equilibrium in Majority Governments with Seat-Weighted Full Compromise

We relax the assumption that parties are equally influential in determining the full compromise. Let s_i be the share of seats that party i contributes to the government support coalition. If a proposal is challenged, the ensuing bargaining process leads to the full compromise $\bar{p} = \sum_i s_i x_i$. A challenge from the opposition party C has still no effect over outcomes, instead if party B challenges, the final policy position $\dot{p} = s_b x_b$.

Let $\psi(w_b, x_b) \equiv \sqrt{w_b + (1 - s_b)^2 x_b^2}$, a unique subgame-perfect equilibrium is

Party A: If $w_b > (2 - s_b)s_b x_b^2$, propose $\widehat{p}_a = 0$. Otherwise, propose $\widehat{p}_a = x_b - \psi(w_b, x_b)$.

Party B: If $\widehat{p}_a \geq x_b - \psi(w_b, x_b)$, accept \widehat{p}_a . Otherwise, challenge and amend \widehat{p}_a .

Party C: Accept \widehat{p}_a .

The outcome is $\dot{p} = 0$ (ministerial autonomy) if $w_b > (2 - s_b)s_b x_b^2$, otherwise $\dot{p} = x_b - \psi(w_b, x_b)$. Party A proposes a partial compromise between its ideal policy and $s_b x_b$. Party A only proposes the full compromise $s_b x_b$ when $w_b = 0$, that is, when challenging is costless. In other words, the inclusion of s_i does not modify our key expectations in a meaningful way.

Strategies and Equilibrium in Minority Governments

In minority governments, a challenge from the opposition party C modifies the final outcome. Let \widehat{p}_b be the proposal that comes out of the government decision-making process. It takes the value $\frac{x_b}{2}$ if party B has challenged A's proposal, or \widehat{p}_a if B has not challenged. Party C challenges if and only if $-(x_c - \bar{p})^2 - w_c > -(x_c - \widehat{p}_b)^2$. That is, when $\widehat{p}_b = \widehat{p}_a$, if $\widehat{p}_a < x_c - \sqrt{w_c + \frac{x_c^2}{4}}$; and when $\widehat{p}_b = \frac{x_b}{2}$, if $w_c < (x_c - \frac{x_b}{2})^2 - (\frac{2x_c - x_b}{3})^2$ (recall that \bar{p} is the full compromise).

Let $\psi(w_c, x_c) \equiv \sqrt{w_c + \frac{x_c^2}{4}}$, $\psi(w_b, x_b, x_c) \equiv \sqrt{w_b + (\frac{2x_b - x_c}{3})^2}$, and $\psi(x_b, x_c) \equiv (x_c - \frac{x_b}{2})^2 - (\frac{2x_c - x_b}{3})^2$. At its decision node, party B considers four scenarios.

Scenario 1: $\widehat{p}_a > x_c - \psi(w_c, x_c)$ and $w_c > \psi(x_b, x_c)$. Regardless of B's decision, C will not challenge. Hence, B challenges if and only if $-\frac{x_b^2}{4} - w_b > -(x_b - \widehat{p}_a)^2$. That is, if $\widehat{p}_a < x_b - \psi(w_b, x_b)$, as in the case of a majority government.

Scenario 2: $\widehat{p}_a > x_c - \psi(w_c, x_c)$ and $w_c < \psi(x_b, x_c)$. C challenges only if B challenges. B challenges if and only if $-\left(\frac{2x_b - x_c}{3}\right)^2 - w_b > -(x_b - \widehat{p}_a)^2$. That is, if $\widehat{p}_a < x_b - \psi(w_b, x_b, x_c)$.

Scenario 3: $\widehat{p}_a < x_c - \psi(w_c, x_c)$ and $w_c > \psi(x_b, x_c)$. C challenges only if B does not challenge. B challenges if and only if $-\frac{x_b^2}{4} - w_b > -(x_b - \frac{x_c}{2})^2$. That is, if $w_b < (x_b - \frac{x_c}{2})^2 - \frac{x_b^2}{4}$.¹

Scenario 4: $\widehat{p}_a < x_c - \psi(w_c, x_c)$ and $w_c < \psi(x_b, x_c)$. Regardless of B's decision, C challenges. B challenges if and only if $-\left(\frac{2x_b - x_c}{3}\right)^2 - w_b > -(x_b - \frac{x_c}{2})^2$. That is, $w_b < (x_b - \frac{x_c}{2})^2 - \left(\frac{2x_b - x_c}{3}\right)^2$.²

Moving back to the first decision node, we limit our attention to the conditions that lead party A to propose a compromise, that is when $\widehat{p}_a > 0$, leaving aside which full or partial compromise will emerge.³ In scenario 1, party A follows the same strategy as in the case of majority government. In scenario 2, it proposes $\widehat{p}_a = 0$ if $w_b > x_b^2 - \left(\frac{2x_b - x_c}{3}\right)^2$. Otherwise, it proposes a compromise. In both scenarios 3 and 4, party A proposes a compromise.

A unique subgame-perfect equilibrium in minority government is

¹ The right-hand side of this inequality is negative for $x_b < x_c < 3x_b$. If C is relatively close to B, B does not challenge and free rides on C's challenge.

² If $x_c = 2x_b$, B never challenges because the compromise becomes x_b after C's challenge, while it may challenge as party C moves away from this value.

³ We can derive more detailed equilibriums, but the measurement of the specific compromise positions, whether partial or full, is hardly accurate and these more fine-tuned expectations are therefore very hard to test empirically.

Party A: If $w_b > \frac{3x_b^2}{4}$ and $w_c > \max[\psi(x_b, x_c); \frac{3x_c^2}{4}]$, propose $\widehat{p}_a = 0$. If $w_b > x_b^2 - (\frac{2x_b - x_c}{3})^2$ and $\psi(x_b, x_c) > w_c > \frac{3x_c^2}{4}$, propose $\widehat{p}_a = 0$. Otherwise, propose a compromise.

Party B: If $\widehat{p}_a \geq \max[x_b - \psi(w_b, x_b); x_c - \psi(w_c, x_c)]$ and $w_c \geq \psi(x_b, x_c)$, accept \widehat{p}_a . If $\widehat{p}_a \geq \max[x_b - \psi(w_b, x_b, x_c); x_c - \psi(w_c, x_c)]$ and $w_c \leq \psi(x_b, x_c)$, accept \widehat{p}_a . If $\widehat{p}_a \leq x_c - \psi(w_c, x_c)$, $w_b \geq (x_b - \frac{x_c}{2})^2 - \frac{x_b^2}{4}$ and $w_c \geq \psi(x_b, x_c)$, accept \widehat{p}_a . If $\widehat{p}_a \leq x_c - \psi(w_c, x_c)$, $w_b \geq (x_b - \frac{x_c}{2})^2 - (\frac{2x_b - x_c}{3})^2$ and $w_c \leq \psi(x_b, x_c)$, accept \widehat{p}_a . Otherwise, challenge and amend \widehat{p}_a .

Party C: When $\widehat{p}_b = \widehat{p}_a$, if $\widehat{p}_a \geq x_c - \psi(w_c, x_c)$ accept \widehat{p}_b . When $\widehat{p}_b = \frac{x_b}{2}$, if $w_c \geq \psi(x_b, x_c)$ accept \widehat{p}_b . Otherwise, challenge and amend \widehat{p}_b .

The outcome is a compromise, that is $\check{p} > 0$, if

- $w_b < \frac{3x_b^2}{4}$ and $w_c > \max[\psi(x_b, x_c); \frac{3x_c^2}{4}]$
- $w_b < x_b^2 - (\frac{2x_b - x_c}{3})^2$ and $\psi(x_b, x_c) > w_c > \frac{3x_c^2}{4}$
- $\frac{3x_c^2}{4} > w_c > \psi(x_b, x_c)$
- $w_c < \min[\psi(x_b, x_c); \frac{3x_c^2}{4}]$

Since $\frac{3x_c^2}{4} > \psi(x_b, x_c)$ for $x_c > x_b$, these inequalities can be simplified and the outcome is a compromise if

- $w_b < \frac{3x_b^2}{4}$ and $w_c > \frac{3x_c^2}{4}$
- $w_c < \frac{3x_c^2}{4}$

In the following, we discuss whether our results from the formal model of coalition policy-making in parliamentary systems hold in cases of coalitions with more than two parties and a

centrist proposing party. We also discuss the implications of nesting the game within the Council of the European Union.

Majority government coalitions of more than two parties

Consider a majority government composed of three parties A, B, and C. The initial proposal comes from party A and the other two parties can simultaneously propose an amendment. *Table A1* below summarises the payoffs for parties B and C.

Table A1: Payoffs for parties B and C

		Party B	
		Do not amend	Amend
Party C	Do not amend	$-x_b^2; -x_c^2$	$-\left(\frac{x_b}{2}\right)^2 - w_b;$ $-\left(x_c - \frac{x_b}{2}\right)^2$
	Amend	$-\left(x_b - \frac{x_c}{2}\right)^2;$ $-\left(\frac{x_c}{2}\right)^2 - w_b$	$-\left(x_b - \frac{x_b + x_c}{3}\right)^2 - w_b;$ $-\left(x_c - \frac{x_b + x_c}{3}\right)^2 - w_b$

Notes: First payoff of party B, second payoff of party C. We disregard the case of $x_c = x_b$.

Consider first the case of a non-centrist proposer, that is $x_c > x_b > x_a = 0$. We start with the situation where neither party amends – the upper left quadrant in Table A1. This is a Nash equilibrium if $w_b > \frac{3x_c^2}{4}$ since neither party has an incentive to change strategy unilaterally. If $w_b < \frac{3x_c^2}{4}$, party C amends. Party B then amends if and only if $w_b < (x_b - \frac{x_c}{2})^2 - (x_b - \frac{x_b+x_c}{3})^2 \equiv \theta(x_b, x_c)$. Note also that, since $\frac{3x_c^2}{4} > \frac{3x_b^2}{4}$, party B will never amend first. Let $\psi(w_b, x_c) \equiv \sqrt{w_b + \frac{x_c^2}{4}}$ and $\psi(w_b, x_b, x_c) \equiv \sqrt{w_b + (\frac{2x_b - x_c}{3})^2}$.

The best reply of party A is: if $w_b > \frac{3x_c^2}{4}$, propose $\widehat{p}_a = 0$; if $\theta(x_b, x_c) < w_b < \frac{3x_c^2}{4}$, propose $\widehat{p}_a = x_c - \psi(w_b, x_c)$; otherwise, propose $\widehat{p}_a = x_b + x_c - \psi(w_b, x_b, x_c)$.

The outcome is $\dot{p} = x_b + x_c - \psi(w_b, x_b, x_c)$ if $w_b < \theta(x_b, x_c)$, $\dot{p} = x_c - \psi(w_b, x_c)$ if $\theta(x_b, x_c) < w_b < \frac{3x_c^2}{4}$, otherwise $\dot{p} = 0$. Note that party B matters only with regard to which compromise position will be adopted, but it is irrelevant as to whether a compromise, that is $\dot{p} \neq 0$, will be adopted. The circumstances under which party B amends are a subset of the circumstances under which party C does. The conclusion presented in the main text holds: We should expect compromise positions in case of more heterogeneous coalition governments (as x_c increases in this three-party majority coalition), and when there are lower costs of challenging a proposal (as w_b decreases).

Consider now the case of a centrist proposer $x_c > x_a = 0 > x_b$. Party A's ideal policy is now located between those of the other two parties. It is in itself already more of a compromise than the positions of the other two parties. Nevertheless, we analyse when the outcome differs from A's position, representing therefore even more of a compromise. If $\frac{3x_c^2}{4} > \frac{3x_b^2}{4}$, party C again amends first and party B follows under that same circumstances analysed above. If $\frac{3x_c^2}{4} <$

$\frac{3x_b^2}{4}$, the two parties simply switch roles. Results therefore hold and they can be easily extended to larger coalitions, since the party that is located farthest away from the proposer drives the results.

A centrist agenda-setter in minority governments

Consider now the same configuration, that is $x_b > x_a = 0 > x_c$, but in the case of a minority government. In other words, the opposition party C is closer to the proposer party A than to the other government party B. Again, we can produce expectations about when the outcome differs from A's position.

The strategies of the three parties are the same as those described above. The only difference is that Party C's ideal policy now takes negative values, $x_c < 0$. Recall that $\psi(x_b, x_c) \equiv (x_c - \frac{x_b}{2})^2 - (\frac{2x_c - x_b}{3})^2$. The outcome is (more of) a compromise position, that is $\hat{p} \neq 0$, if

- $w_b < \frac{3x_b^2}{4}$ and $w_c > \max[\psi(x_b, x_c); \frac{3x_c^2}{4}]$
- $w_b < x_b^2 - (\frac{2x_b - x_c}{3})^2$ and $\psi(x_b, x_c) > w_c > \frac{3x_c^2}{4}$
- $\frac{3x_c^2}{4} > w_c > \psi(x_b, x_c)$
- $w_c < \min[\psi(x_b, x_c); \frac{3x_c^2}{4}]$

We have to consider two cases. In the first case, $x_c < -3x_b$ and $\psi(x_b, x_c) < \frac{3x_c^2}{4}$. In this circumstance, the outcome differs from A's ideal policy if

- $w_b < \frac{3x_b^2}{4}$ and $w_c > \frac{3x_c^2}{4}$
- $w_c < \frac{3x_c^2}{4}$

There is no difference from the equilibriums analysed in the article. We are however considering an opposition party C which is located quite far away from the two parties. Its distance from A is three times the government range.

In the second case, $x_c > -3x_b$ and $\psi(x_b, x_c) > \frac{3x_c^2}{4}$. In this circumstance, the outcome differs from A's ideal policy if

- $w_b < \frac{3x_b^2}{4}$ and $w_c > \psi(x_b, x_c)$
- $w_b < x_b^2 - \left(\frac{2x_b - x_c}{3}\right)^2$ and $\psi(x_b, x_c) > w_c > \frac{3x_c^2}{4}$
- $w_c < \frac{3x_c^2}{4}$

In the first set of inequalities, in the case of an ideologically homogeneous support coalition (as x_c approaches zero - x_a) or weaker parliamentary oversight (as w_c increases), we should expect a compromise position that differs from zero under the same conditions as those under majority governments. The second set of inequalities represents a situation of intermediate levels of ideological homogeneity and oversight. Nevertheless, as the parliamentary support coalition becomes more homogeneous (as x_c approaches zero - x_a) or parliamentary oversight weaker (as w_c increases), it approaches the same conditions as those under majority government. Otherwise, it approaches the first case of minority government. The third inequality is the same as in the first case of a minority government.

The conditions that lead to an amendment of party A's proposal are unaltered, but because now A's proposal is more centrist, the substantive impact of these factors is lower. In other words, any given compromise is naturally closer to A's ideal policy if $x_b > x_a > x_c$ than if $x_c > x_b > x_a$. So, say, the same increase in the divisiveness of the parliamentary support coalition should increase the likelihood of having a compromise position in both cases, but the size of the effect would be smaller when the proposer is centrally located.

Nesting the game within the Council of the European Union

The empirical test of our model evaluates whether the degree to which the compromise position is reflected in the policy positions of the ministers of the Council varies with the ideological divisiveness in the government's support coalition as well as executive and legislative institutions. This approach has several benefits. However, these positions are formulated on the basis of a bill proposed by the Commission and, maybe, amended by the European Parliament. We consider here whether this context has implications for our model.

The DEU dataset records the governments' negotiation positions at the earliest possible stage of the legislative process, when information about other governments' positions is most scarce. The key issue for data quality is whether governments have strong incentives to misrepresent their positions before the Council and the experts interviewed by the DEU team. Accordingly, we evaluate whether models of legislative bargaining with incomplete information have implications that must be taken into account in our analysis. Most of these models are centred on an uninformed proposer, which can be the Commission, making an offer to a receiver. For our discussion, it is useful to consider two types of receivers: conservatives who prefer a small policy change, and reformists who prefer a large change. The proposer belongs to the latter group.

Consider the standard Nash bargaining solution where a proposer makes to a receiver a take-it-or-leave-it offer for dividing a pie. The receiver can either have a low disagreement value (a reformist) or a high disagreement value (a conservative). The proposer is more likely to make a conservative offer if the probability of a reformist type is low and the difference, in terms of proposer utility, between a conservative and a reformist offer is small (McCarty & Meirowitz, 2007). This result indicates that a reformist could be better off if she can manipulate the proposer's belief about her type. Whether this is possible is far from certain, however.

In an important model on veto threats where the receiver sends a costless signal to the proposer (Matthews, 1989; McCarty & Meirowitz, 2007), the baseline outcome is an uninformative

babbling equilibrium where each type of receiver adopts the same mixed strategy over the set of possible signals. A separating equilibrium, where each type sends a distinct signal, does not exist. The most informative equilibrium consists of only the most reformist receivers – those even more reformists than the proposer – signalling their support and conservative receivers issuing a veto threat and gaining concessions. The implication of this model for our context is that only the governments which want a more radical reform than the Commission have incentives to distinguish themselves from the others. Additionally, a risk of negotiation failure makes a reformist receiver even more likely to compromise than a conservative (McCarty & Meirowitz, 2007). On the other hand, McCarty (1997) shows how a reformist receiver may instead reject a first-period proposal to build a reputation as conservative and obtain a better outcome from a second-period proposal (the positions of the reformist receiver and the proposer must be sufficiently different for this dynamic to hold).

In sum, these models do not offer obvious implications to take into account in our analysis. A reformist government may have an incentive to manipulate the proposer's belief about her type when reputation is important. In other words, it may report a more conservative position. However, this pooling may not survive if there is a risk of failure (i.e. the bill is not adopted) or for strongly reformist governments.

Moreover, these incentives are rooted in the take-it-or-leave-it nature of the proposer's offer of these models. This setup confers a significant power to the proposer and, therefore, strong incentives for the receiver to manipulate him. In the Council, any government can propose amendments and decisions require supermajority, if not unanimous consent. The EP is another veto player in the ordinary legislative procedure. Open rule, supermajority, and parliamentary involvement make voting (veto) power more important than proposal power. Under these circumstances, a proposer has limited opportunities to shape outcomes and a receiver has weak

incentives to misrepresent her views. Accordingly, a minister should have weak incentives to misrepresent her initial negotiation position before the Council.

2) Summary statistics

Table A2 provides summary statistics of all variables on the basis of our estimation sample.

Table A2: Summary statistics of estimation sample

	Mean	SD	Min	Max
Economic left-right position	51.25	45.62	0	100
Compromise position	-2.46	11.30	-20.53	29.12
Ideological divisiveness	21.61	12.76	2.71	67.63
Executive coordination	0.50	0.50	0	1
Parliamentary oversight	1.02	0.42	0.29	1.75
Minority government	0.20	0.40	0	1
Left-right public opinion	5.35	0.34	4.53	6.46
Net receipts from EU budget	0.07	0.87	-0.95	3.86
Unemployment rate	7.18	3.02	2.30	18.10
Inflation rate	2.42	1.61	0.19	12.35
Economic freedom	7.26	0.62	5.15	8.60
Population	19.00	25.82	0.49	82.00
N	1,694			

Table A3 displays the split of observations in our estimation sample by country.

Table A3: Observations by country

	Observations	%	Cum.%
Netherlands	142	8.38	8.38
Germany	140	8.26	16.65
Denmark	137	8.09	24.73
Belgium	135	7.97	32.70
Finland	130	7.67	40.38
France	130	7.67	48.05
Ireland	129	7.62	55.67
Austria	121	7.14	62.81
Luxembourg	110	6.49	69.30
Lithuania	60	3.54	72.85
Estonia	56	3.31	76.15
Slovakia	54	3.19	79.34
Slovenia	53	3.13	82.47
Czech Republic	51	3.01	85.48
Hungary	49	2.89	88.37
Cyprus	48	2.83	91.20
Latvia	39	2.30	93.51
Italy	36	2.13	95.63
Poland	28	1.65	97.28
Sweden	25	1.48	98.76
Bulgaria	13	0.77	99.53
Portugal	8	0.47	100
TOTAL	1,694	100	

Table A4 reports sample mean values for the key independent variables of interest by country.

Table A4: Country means of key independent variables

	Ideological divi- siveness	Executive co- ordination	Parliamentary oversight	Minority gov- ernment
Austria	19.78	0	0.99	0.29
Belgium	27.18	0	0.50	0.07
Bulgaria	21.10	0	1	0
Cyprus	29.67	0	0.29	0
Czech Republic	22.85	1	1.36	0.29
Germany	23.04	0	1.25	0
Denmark	24.43	1	1.42	1
Estonia	6.61	0	1.25	0
Finland	31.57	1	1.75	0
France	17.75	1	0.91	0
Hungary	9.84	0	1.11	0
Ireland	13.03	1	0.59	0.43
Italy	58.76	0	0.62	0.92
Lithuania	24.28	1	1.75	0.38
Luxembourg	6.74	1	0.43	0
Latvia	13.09	1	1.36	0.44
Netherlands	24.70	0	0.78	0.13
Poland	11.03	1	1.11	0
Portugal	15.04	1	0.48	0
Sweden	19.00	1	0.96	0
Slovenia	20.73	0	1.11	0
Slovakia	33.81	0	1.36	0.04
TOTAL	21.61	0.5	1.02	0.20

3) Variable definitions and sources

Table A5 provides an overview of all main variables used in the article, their definition, and source as well as the extent of missing values.

Table A5: Overview of variable sources and definitions

Variable	Source / Definition	Missing values
Economic left-right position	DEU ⁴ , linearly rescaled	147*
Compromise position	CMP ⁵ (RILE), simple average of the seat-weighted RILE average of the coalition parties and the seat-weighted RILE average of the supporting parties (<i>where applicable</i>)	70
Ideological divisiveness	CMP (RILE), absolute RILE distance between most “left” and most “right” party in the support coalition	133
Executive coordination	Kassim (2013), “1” for coordinated executive, “0” for uncoordinated executive	0
Parliamentary oversight	Winzen (2013), composite measure of indicators of parliamentary control in EU affairs (information, processing, enforcement), yearly	14
Minority government	“1” if cabinet parties hold ≤ 50% of parliamentary seats, “0” if cabinet parties hold > 50% of seats	0
Left-right opinion	Eurobarometer (left-right self-placement), average by country applying sampling weights, linearly interpolated on the day level, six-month lag from proposal date	0
Net receipts from EU budget	www.money-go-round.eu , net receipts from EU budget (receipts – payments) in % of GDP	0
Unemployment	World Bank (ILO definition), yearly rate in %	0
Inflation	World Bank (change in consumer prices), yearly rate in %	0
Economic freedom	Fraser Institute (Economic Freedom of the World, area “Regulation”) ⁶ , yearly and linearly interpolated where necessary	0
Population	Eurostat, population in million as of 1 st of January 2009	0

Notes: * Due to rescaling of positions between 0-100.

⁴ Thomson et al. (2012, 2006).

⁵ Lehmann, Matthieß, Merz, Regel, & Werner (2015). Parties in the support coalition were identified with the help of the ParlGov database (see Döring & Manow 2012) as well as *The Political Data Yearbook* reports.

⁶ Gwartney, Lawson, & Hall (2013).

Governments' policy positions

The measure of government's policy positions on economic left-right issues is taken from the DEU dataset directly (Thomson et al. 2006, 2012; March 2012 version). An original coding scheme was developed in order to classify all DEU issues with regard to major substantive dimensions of political competition in domestic and EU politics (see also Wratil, 2018). This coding scheme consists of 13 categories. Six of them (1-6) relate to substantive *economic left-right* conflicts, two to *left-libertarian/ right-authoritarian* conflicts (7-8), and four to conflicts over *pro-anti integration* (9-12). Issues could be coded into several of these categories. The thirteenth category (UNCLASSIFIED) was reserved for DEU issues that did not relate to any of the other categories.

Table A6 provides an overview of the category scheme and the number of DEU issues classified in each category (as "primary category"). The full coding scheme is in the replication files. Importantly, with regard to the underlying conceptual meaning the coding scheme neatly maps onto the 26 constitutive CMP codes of RILE (labelled by the manifesto research group as 'perXXX'). In particular, our scheme reflects key contrasts of RILE, such as 'Market Regulation (per401)' vs. 'Free Enterprise (per403)' reflected in categories 1, 2 and 3 of our scheme; as well as 'Controlled Economy (per412)' vs. 'Economic Orthodoxy (per414)' reflected in category 3; 'Labour Groups: Positive (per701)' reflected in category 4; or 'Protectionism: Negative/Positive (per406/per407)' reflected in category 5. But it also reflects single CMP codes such as 'Education Expansion (per506)' in category 6.

Table A6: Overview of DEU category scheme

Dimension	Category	Description	Number of issues
<i>Economic left-right</i>	1: Consumer Protection vs. Freedom of Businesses	Defining new or redefining existing rights and obligations between consumer and producer of a good or service (e.g., warranty, repairs); Prohibiting or legalizing the sale of potentially harmful products or the use of potentially harmful substances and components ...	45 (13.6%)
	2: Environmental Protection vs. Freedom of Businesses	Increasing or decreasing product or processing standards that are intended to protect the environment (e.g., water use, air pollution, climate, waste management); Defining or re-defining rules that impact on the protection of wild life animals or breeding animals ...	57 (17.2%)
	3: Economic Regulation vs. Freedom of Businesses	Regulating or intervening in markets by discouraging or prohibiting certain activities (e.g., in order to make businesses work better, restructure competition, fight monopoly/cartel power) or deviating from free market principles (e.g., price competition, freedom of mergers & acquisitions) ...	19 (5.74%)
	4: Employees' Rights vs. Other Interests	Defining or re-defining standards for the organization of work (e.g., wage, hours, safety); Entitling or disentitling employees of rights or benefits (e.g., unionization, social security rights) ...	9 (2.72%)
	5: Protectionism vs. Free Trade	Opening up or closing markets to European or international competitors ...	13 (3.93%)
	6: Equality vs. Acceptance of Inequality	Affirming or undermining equal rights for all individuals irrespective of social class, gender, race, ethnicity, religion, ability, or sexual orientation; Increasing or decreasing spending to reduce inequalities (e.g., spending on education, social welfare of the weak) ...	10 (3.02%)
<i>Left-libertarian / Right-authoritarian</i>	7: Immigration vs. Fortress Europe	Changing the status of foreign nationals from outside the EU; Relaxing or tightening visa requirements and procedures for foreign nationals from outside the EU (e.g., visa requirement, information collection about visa applicants, ...) ...	10 (3.02%)

	8: Civil and Human Rights vs. Fight against Crime	Defining and redefining rules concerning the collection, storage, and use of privacy data of individuals (e.g., private communications data, personal information); Defining and redefining rules concerning the public access of government documents and information ...	17 (5.14%)
<i>Pro-anti integration</i>	9: Harmonization vs. National Standards	Harmonizing or retaining national standards and rules; Defining or not defining EU-wide minimum standards or targets; Allowing or prohibiting deviations / derogations from EU rules and benchmarks ...	29 (8.76%)
	10: Wide vs. Narrow Scope	Including previously unaffected areas (e.g., substance area not covered so far), objects (e.g., particular goods not covered) or subjects (e.g., previously unaffected group of businesses, people, ...) in the application of EU legislation, rules, or practices ...	18 (5.44%)
	11: EU vs. Member State Authority	Extending or restricting the rights (e.g., decision-making, monitoring, sanctioning) of the European Commission vis-à-vis the member states (incl. the European Council); Increasing or decreasing the visibility of the EU and its institutions ...	25 (7.55%)
	12: Speeding Up vs. Blocking of EU Legislation	Speeding up, subjecting to conditions (e.g., awaiting other outcomes), or postponing legislation's entry into force or its implementation in an area where the EU has not been active (e.g., new proposal) ...	6 (1.81%)
	UNCLASSIFIED	Relates to none of the other categories (e.g., relates to geographical cleavages, inter-institutional issues, entirely technical issues, conflicts of interest between businesses)	73 (22.05%)
	TOTAL		331 (100%)

If an issue was coded into *any* category between 1 and 6, it was in principle included in our analyses (170 issues).⁷ Inter-coder reliability of the binary decision as to whether an issue related to any economic left-right category or not was assessed with the help of Krippendorff's alpha that is 0.91. However, we excluded any policy issue for which the experts interviewed were not able to report at least one third of national governments' policy positions.⁸ Such very high levels of missingness indicate that experts found it difficult to reconstruct positions and may have used cues instead of actual knowledge of positions in their assessments. In some cases, it might also indicate that the identification of the legislative issue as "key controversy" was inappropriate in the first place. Importantly, only 16 issues were excluded because of high missingness. Wherever necessary we linearly rescaled the pre-defined DEU policy scales of 0-100 so as to ensure that 0 represented the most "left" option and 100 the most "right" option adopted by any government in our sample. Rescaling removes 9 further issues on which all coalition governments in our sample adopted the exact same position, and variation in positions stemmed from single party governments or the European institutions (European Commission, European Parliament) that adopted diverging positions but were not part of our sample.⁹ This leaves us with observations on 145 economic left-right issues.

⁷ Categories 7 and 8 do not relate to economic but rather to left-libertarian vs. right-authoritarian conflicts and were therefore excluded.

⁸ However, our results are almost identical (with some weaker finding on executive coordination) if we include all policy issues independent of the degree of missing data.

⁹ The value of the common position of governments on such issues (say, 50) has no meaningful interpretation in these cases, as it is referenced against actors outside the model.

Compromise position

We measure the ideological compromise position of the government’s supporting parties from the CMP’s¹⁰ coding of election manifestos (Lehmann et al., 2015). As we note in the article, using the CMP instead of expert survey measures has several advantages in our particular application. In addition to the points mentioned, we would also like to stress that the construct validity of scales constructed from the CMP can be more accurately assessed. While CMP scales are transformations of category counts with a substantive meaning described in the codebook, we usually do not know on what particular conception of “left-right” experts base their judgment when answering party expert surveys (Budge, 2000). For our analysis specifically, this issue is pertinent to guarantee a good substantive matching between the left-right party positions and our categorised and re-scaled DEU issue positions. Moreover, the CMP is most likely to provide measurements that are comparable across countries and time (McDonald, Mendes, & Kim, 2007). This is due to its universal coding criteria, whereas expert surveys may suffer from differential item functioning (Bakker, Jolly, Polk, & Poole, 2014; King, Murray, Salomon, & Tandon, 2004) – the different perception of terms like “left” or “right” by experts in different countries – as well as from limited time variation, as experts use parties’ “ideological reputation” as a cue.

Our measure of the compromise position is the simple average between the seat-weighted RILE of the government parties and the seat-weighted RILE of the supporting party (or all opposition parties, in cases of unclear or varying support):

$$\begin{aligned} & \textit{Compromise position}_{\textit{Majority government}} \\ &= \sum_{i=1}^{N_i} [[(\textit{per104}_i + \dots + \textit{per606}_i) - (\textit{per103}_i + \dots + \textit{per701}_i)] * \frac{S_i}{S_I}] \end{aligned}$$

¹⁰ All CMP-based measures are derived using the “2015a” version of the database.

*Compromise position*_{Minority government}

$$= \frac{1}{2} \sum_{i=1}^{N_i} [(per104_i + \dots + per606_i) - (per103_i + \dots + per701_i)] * \frac{S_i}{S_I} \\ + \frac{1}{2} \sum_{j=1}^{N_j} [(per104_j + \dots + per606_j) - (per103_j + \dots + per701_j)] * \frac{S_j}{S_J}$$

Where i denotes the respective government party, j the respective (supporting) opposition party, N_i is the number of government parties, N_j the number of (supporting) opposition parties, $S_{i,j}$ is the number of seats of party i / j , and $S_{I,J}$ the total number of government and supporting opposition seats. The measure is based on the party manifesto issued at the last elections preceding the date on which the proposal was submitted to the Council.

Executive coordination

We operationalise the distinction between coordinated and uncoordinated executives by relying on the classification of Kassim (2013) and use a dummy variable that is “1” in case of coordination and “0” in case of no coordination. Note that Kassim uses a different terminology and calls coordinated executives “centralized” and uncoordinated executives “decentralized”. Note also that we do not consider the extent of coordination (comprehensive vs. selective) as most countries with coordination also display comprehensive coordination. In addition, selective (policy-specific) coordination may just be sufficient to bring national ministers in line with the coalition’s compromise where they have an incentive to deviate from it.

Parliamentary oversight

We take the composite measure of parliamentary oversight in EU affairs from Winzen (2013). At the time of writing, this is the most recent version of the data. Values for Romania in 2007

and 2008 are missing, which is why the country is not included in our main models in the article. However, in the section on robustness checks (see below), we show that re-estimating our main model with multiple imputations of these values leads to exactly the same results as on the restricted sample in the article.

Minority government

We identify minority governments by using the ParlGov database (Döring & Manow, 2016) on government composition. However, we corrected the information from this database in several cases after cross-checking it with information from *The Political Data Yearbook*. In particular, we discovered some governments that lost their majority late in their legislative term and acted as minority quasi-caretakers up to their replacement.

Left-right public opinion

We measure public opinion on left-right conflicts from the respondent's ideological self-placement in the biannual Standard Eurobarometer survey series of the European Commission. The exact wording of the question is:

"In political matters people talk of 'the left' and 'the right'. How would you place your views on this scale?"

We assign the following codes to the response options:

Left = 1

2

3

4

5

6

7

8

9

Right = 10

DK / Refused / etc. = .

The measure of opinion is the average of all valid responses by country using sampling weights. We assign this measure to the day on which fieldwork for the survey started, and linearly interpolate values between surveys. To represent the causal relationship, in which opinion influences governments' policy positions, we use opinion six month prior to the date on which the legislative proposal was submitted to the Council (see Hagemann, Hobolt, & Wratil, 2017; Wratil, 2018).

4) Missing data information

We use the ParlGov database (Döring & Manow, 2016) to ascertain which parties entered parliament and government. While the ParlGov database provides direct links to the CMP, these links often result in a high degree of missing values on the CMP, for example, when parties do not issue own manifestos, change parliamentary fractions, split, or unite during the legislative term. In order to recover the party positions in such instances, we employ a number of strategies: In the case of party splits, we assigned the new party/fraction the CMP measures of its “mother” as long as no own manifesto is available. In the case of electoral alliances issuing a common manifesto, we assigned all parties the relating CMP measures. In case of party/fraction

mergers, we assigned the CMP measures of the largest party to all parties from the recording date of mergers in the ParlGov dataset. In the case of marginal parties, we researched whether they sat together with a larger party or supported this party throughout their history. If this was the case, we assigned the CMP measure of the larger party. We also added several links between ParlGov and CMP that have been missed by the ParlGov team (e.g. manifesto was coded by CMP but CMP code was missing in ParlGov database).

For majority governments we are able to recover the positions of all cabinet parties for 91% of the observations in our sample. The remaining 9% are split as follows: First, for 3.6% of the cases (some observations from France and Italy) we lack the CMP measures of at least one cabinet party and we exclude these observations from the main analyses in the article, as any measurement of the coalition's ideological divisiveness (and to a much lesser extent, the compromise position) would be unreliable. Second, for three majority governments from Italy (Berlusconi II + III, Prodi I) representing 4.3% of the observations, we face the problem that the government parties issued a common manifesto. Hence, while this manifesto is arguably an adequate measurement of the compromise position of these parties, we again lack information on the ideological range of the coalition and exclude these cases. Moreover, we also lack CMP measures from the Latvian elections 2006, which leads to the exclusion of the remaining 1.2% of observations from majority governments.

For minority governments that rely on stable support of a single party, we always have full CMP measures for all parties. For minority governments relying on changing support, we use the seat-weighted average opposition party as a proxy.¹¹ While some opposition parties and factions

¹¹ For the alternative calculation of the compromise in “Model 2” in the next section (see Table A7), we use the opposition parties closest to the PM. For this calculation we do likewise not consider parties with missing CMP values.

are not covered by the CMP, the dataset always provides measures for more than 90% of non-governmental seats. Hence, we assume that the average opposition party's position is always sufficiently precisely measured by the CMP and do not exclude any observations from minority governments.

In total we are facing 133 missing values on the ideological divisiveness (7.2%) and 70 on the compromise position (3.8%). Importantly, in the robustness checks (see below) we demonstrate that our results are robust to using multiple imputations for these missing CMP measures.

5) Monte Carlo simulations to validate empirical strategy

While our formal model focuses on distances in an ideological policy space between the compromise position of the government support coalition and the minister's proposed policy position, we cannot directly measure this distance empirically, because the compromise position from the CMP and the policy position from DEU are measured on different scales. Instead, we explain the minister's policy position from DEU with the compromise position from the CMP in a regression model and argue that the compromise position should be a stronger predictor of DEU positions when governments strike more compromises. In this section, we present Monte Carlo simulations that demonstrate that this intuition is correct, i.e. that larger implied coefficients on the compromise position can be interpreted as evidence in favour of the compromise model.

To simplify simulations, we assume that all government support coalitions consist of two parties. To closely represent our actual dataset, we simulate data from 25 countries with 4 cabinets each and 80 policy issues balanced across cabinets, yielding 2,000 observations. For each cabinet, we draw the RILE positions of the two parties independently from a normal distribution $x_{a,b} \sim N(0, 10)$, where the standard deviation of 10 is around the empirical standard deviation of

government support parties in the CMP. We then draw the fraction of governmental seats in parliament held by each of the two parties from a uniform distribution between 0.1 and 0.9.

Next, we draw which party's minister will make the policy proposal at the EU level using a binomial distribution with the success probabilities equal to the seat shares of the parties, so that the larger party is more likely to make the proposal (i.e. control the portfolio). Having determined the party of the proposing minister, we draw an auxiliary parameter α from a uniform distribution between 0 and 1 that indicates whether she will propose her party's position (0), a partial compromise (values between 0 and 1), or the full compromise (1). In the RILE space, the final policy \hat{p} proposed at the EU level is then a weighted average of the minister's party position and the full compromise position: $\hat{p} = (1 - \alpha) * x_i + \alpha * \bar{p}$, where i denotes the proposing party.

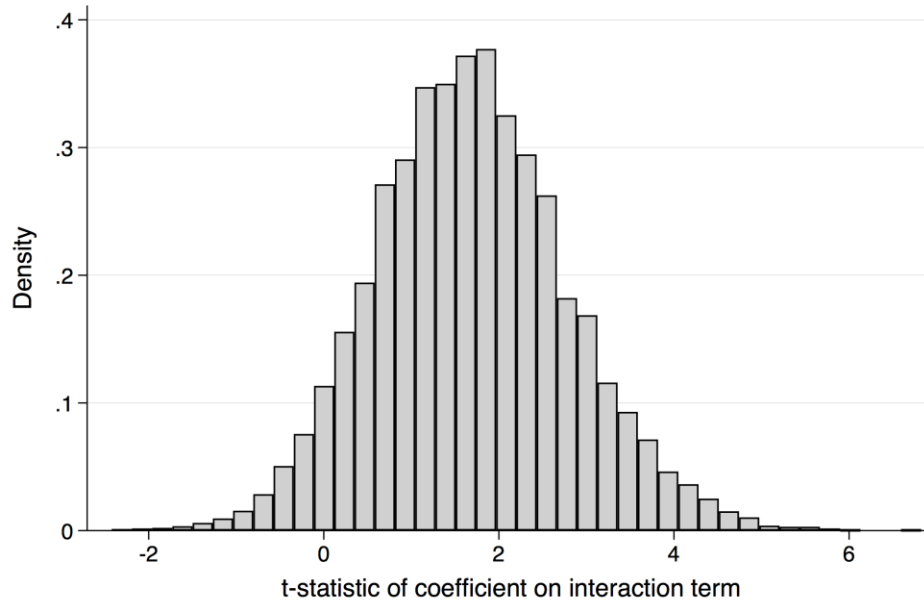
Last, we have to map the RILE space into the DEU space. For this purpose, we take the following steps. First, we assume that the most left-/right-wing policy position \hat{p} in the RILE space corresponds to the most left-/right-wing position of 0 versus 100 in the DEU space. We linearly rescale all positions in between these extreme positions. While this adjusts the RILE scale ends to those of the DEU scale, it does not take care of the fact that most DEU issue scales have only two or three positions defined and are not directly comparable to the CMP scale (e.g. a "30" on a DEU issue may correspond to a "-10" on the RILE in one case and to "-20" in another). To simulate this, we randomly draw two cut-points per policy issue from a uniform distribution between 25 and 75. We then coarsen positions to either "0", "50" or "100" depending on whether they fall below, in-between or above both cut-points.

Mirroring our identification strategy in the article, our quantity of interest is the coefficient on an interaction term between the RILE compromise position and a variable that indicates whether we expect more compromises to occur (e.g. executive coordination, parliamentary oversight, majority status of the government). For simplicity, we use a dummy variable that we set to "1" if

α is greater 0.5, i.e. if \hat{p} is closer to the full compromise than to the minister's party position. As in the article, we run linear regressions with fixed effects for issues using standard errors clustered at the country level. Our dependent variable is the simulated DEU position and we regress it on the interaction term between the dummy variable and the simulated RILE compromise position. We obtain 10,000 simulations of the coefficient and the standard error on the interaction term. The distribution of t-statistics for the interaction term is plotted in *Figure A1*.

This reveals that in 94% of the simulations, the coefficient is positive, and in 37% the t-statistic is larger than +2 and hence the coefficient significant at the 5% level. This demonstrates that we can interpret a positive coefficient on the interaction term between the compromise position and our moderating variables as evidence for more compromising behaviour.

Figure A1: Monte Carlo simulation results for interaction term



6) Robustness checks

We perform various robustness checks to provide more confidence in our main results by re-estimating variations of our baseline model from Table 1 in the article. The results of these robustness checks are reported in *Table A7*.

First, we address four different measurement concerns. As our results may partly hinge on the operationalization of the compromise position, Models 1 and 2 re-estimate our baseline model with alternative measures. In Model 1, we ascertain the influence of seat-weighting and calculate the compromise as the simple average of all supporting parties (irrespective of cabinet representation). In Model 2, we challenge the assumption that opposition support under minority governments with no fixed supporting parties is best characterised by the average opposition party, and instead select the opposition parties ideologically closest to the prime minister (PM)'s party. This reflects the idea that the PM is the effective *formateur*, or alternatively, that this role is played by the responsible minister, who, in most cases, will be from the PM's party. We seat-weight among cabinet and opposition parties identified according to this criterion. In both cases, the results are substantively identical to those from our main specification, with one notable variation in the significance level: in Model 1, the interaction between ideological divisiveness and the compromise drops below the 5% significance level with a p-value of 0.072.

Regarding ideological divisiveness, we test two alternatives to the range. Importantly, the range may overstate divisiveness in support coalitions with $i > 2$ parties, if the largest party (holding most ministerial posts) is centrally located. In such cases, the distance between the largest party as the predominant proposer and the party located furthest from it in the coalition may be a better measure of divisiveness. We test this measure in Model 3 and largely confirm our results with the interaction on minority governments dropping to a p-value of 0.071. Moreover, the range is not sensitive to the number of parties in the coalition. If each coalition partner can call and enforce compromise negotiations and does so with a certain probability that increases

with ideological distance, it is not only the ideological range that matters for the joint probability of compromise negotiations but also the sheer number of parties in the coalition. In fact, the more parties are located further from the central proposer, the more likely the compromise should become. We therefore construct a measure of the summed ideological distance of all parties in the coalition to the largest party as predominant proposer. The results in Model 4 mostly confirm our findings. The divisiveness effect appears even more significant compared to our baseline results (1% level), while the interaction on minority governments is a borderline case for significance at the 5% level with a p-value of 0.05.

One further measurement concern pertains to the cross-national comparability of left-right ideology. While we argue that the CMP is the best approach to measure a universal left-right concept, research has shown that parties that are left or right according to the CMP (and, indeed, popular perception) sometimes implement diametric policies in post-communist and Western Europe (Tavits & Letki, 2009). In addition, some research indicates that for parties in post-communist countries some “left” RILE categories correlate more strongly with “right” RILE categories than within the set of “left” categories – and vice versa (Mölder, 2013). From our perspective, this may suggest that the RILE concept of economic left-right is not a major structuring factor in party competition in Eastern Europe.

But this actually does not demonstrate that the RILE index lacks any construct validity when used for Eastern European parties. Instead, it may simply indicate that many parties in post-communist societies have ambiguous stances on this dimension, which result in rather centrist and less dispersed positions. This is exactly what we see in our sample, where dispersion of the compromise position is much larger in Western than in Eastern Europe. In order to address

remaining doubts, Model 5 re-estimates our main model excluding post-communist countries.¹² Our findings substantively hold in this restricted sample, with the interaction on ideological divisiveness dropping in significance to a p-value of 0.07.

¹² As our sample is reduced to 13 countries, we do not report country-clustered robust standard errors, as they are asymptotic in the number of clusters. Instead, we report policy issue-clustered robust standard errors assuming that our set of control variables sufficiently minimises concerns about clustering in this restricted sample of countries.

Table A7: Robustness checks on model of coalition policy-making

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Compromise position	-0.312 (0.325)	-0.121 (0.325)	-0.244 (0.340)	-0.050 (0.274)	-0.555 (0.423)	-0.019 (0.019)	0.005 (0.300)
Ideological divisiveness	-0.020 (0.122)	-0.044 (0.120)	0.042 (0.158)	-0.029 (0.090)	0.023 (0.114)	-0.008 (0.007)	-0.115 (0.107)
Ideological divisiveness x Compromise position	0.030 (0.016)*	0.032 (0.013)**	0.040 (0.018)**	0.022 (0.006)***	0.031 (0.017)*	0.002 (0.001)**	0.042 (0.016)**
Executive coordination	-4.871 (3.255)	-6.588 (3.732)*	-6.017 (3.739)	-7.692 (3.545)**	-2.485 (3.957)	-0.224 (0.232)	-5.855 (3.682)
Executive coordination x Compromise position	0.526 (0.225)**	0.447 (0.211)**	0.567 (0.247)**	0.500 (0.217)**	0.841 (0.309)***	0.044 (0.016)***	0.542 (0.234)**
Minority govt	-3.200 (11.915)	-5.069 (12.342)	-11.768 (10.121)	-11.485 (9.631)	3.036 (9.268)	-0.351 (0.524)	-10.326 (8.985)
Parl. oversight	0.513 (4.232)	-0.849 (4.008)	-1.182 (4.386)	-2.446 (4.008)	5.693 (7.532)	0.002 (0.258)	-4.666 (4.061)
Minority govt x Parl. oversight	-4.390 (11.573)	3.503 (11.101)	1.907 (9.249)	2.857 (8.840)	-16.400 (8.345)*	-0.101 (0.505)	3.292 (8.651)
Minority govt x Compromise position	-3.304 (1.151)***	-3.725 (0.930)***	-3.523 (1.855)*	-3.587 (1.729)*	-3.972 (1.515)***	-0.248 (0.097)**	-4.214 (1.591)**
Parl. oversight x Compromise position	-0.259 (0.288)	-0.548 (0.287)*	-0.613 (0.365)	-0.601 (0.267)**	-0.311 (0.433)	-0.030 (0.024)	-0.882 (0.401)**
Minority govt x Parl. oversight x Compromise position	2.491 (1.048)**	2.656 (0.758)***	3.028 (1.298)**	3.058 (1.192)**	3.320 (1.159)***	0.203 (0.070)***	3.488 (1.207)***
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Policy issues	Policy issues	Policy issues	Policy issues	Policy issues	Policy issues	Policy issues
Number of policy issues	145	145	145	145	145	145	145
Number of countries	22	22	22	22	13	22	23
N	1,694	1,694	1,694	1,694	1,291	1,694	1,841

Robustness check	No seat-weighting	Opposition party close to PM	Max distance to largest party	Sum distance to largest party	Western Europe only	Binary DV	Multiple imputations
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Notes: All are fixed effects regressions, except for “Model 6”, which is a fixed effects logistic regression; No observations for countries without coalition governments; Country-clustered robust standard errors in parentheses, except for “Model 5” with policy issue-clustered robust standard errors; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

A last concern about measurement is that we treat the CMP estimates as if they had no uncertainty. Benoit, Laver, and Mikheylov (2009) have argued that positions expressed in a 100-page manifesto are arguably measured with much more precision by the CMP than those expressed in a 10-page manifesto. We follow the authors' proposed remedy and obtain standard errors of the RILE scores of all parties by bootstrapping from the coded quasi-sentences.¹³ We then use the SIMEX (simulation and extrapolation) algorithm to see how our results would change at different levels of measurement error. For our four main interaction coefficients this exercise is displayed in *Figure A2-a + b + c + d*. They clearly show that as λ – the extent of measurement error we add to our data – increases, our results become weaker. Hence, any presence of measurement error in the CMP does not drive our results. Quite the opposite: if we faced no measurement error ($\lambda = -1$), we would have even stronger results than those reported.¹⁴

¹³ We obtain standard errors of a support coalition's compromise position and its ideological range by analytical derivation from the bootstrapped standard error estimates for each individual party:

$$\text{Compromise } SE_{\text{Majority gov}} = \sqrt{\sum_{i=0}^n \left(\text{Bootstrapped } SE_i * \frac{S_i}{S_i} \right)^2}$$

$$\text{Compromise } SE_{\text{Minority gov}} = \sqrt{\left(\sqrt{\sum_{i=0}^n \left(\text{Bootstrapped } SE_i * \frac{S_i}{S_i} \right)^2} * \frac{1}{2} \right)^2 + \left(\sqrt{\sum_{j=0}^n \left(\text{Bootstrapped } SE_j * \frac{S_j}{S_j} \right)^2} * \frac{1}{2} \right)^2}$$

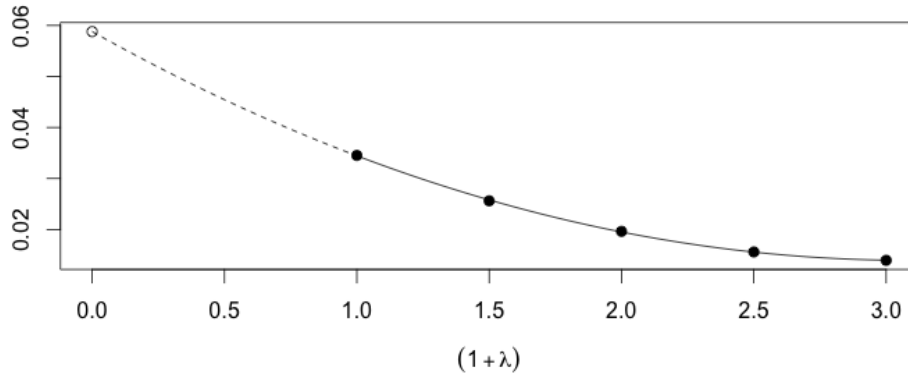
$$\text{Range } SE_{\text{Majority/Minority}} = \sqrt{\sum_{i=0}^n \left(\text{Bootstrapped } SE_{\text{party most } \textit{left}} \right)^2 + \left(\text{Bootstrapped } SE_{\text{party most } \textit{right}} \right)^2}$$

Where i denotes cabinet parties, j supporting parties, $S_{i,j}$ is the number of seats of party i / j , and $S_{I,J}$ the total number of government and supporting opposition seats.

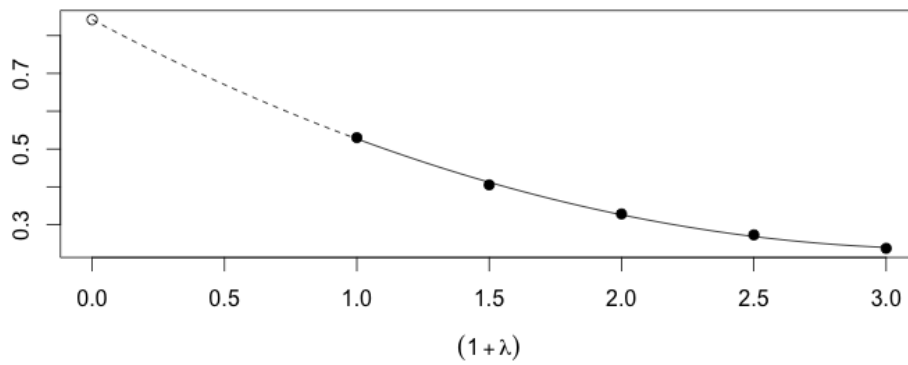
¹⁴ For technical reasons we have to implement the SIMEX analysis using issue dummies for the fixed effects and without any adjustment of standard errors for country-level clustering. But this does not influence the directional impact of the measurement error.

Figure A2: SIMEX coefficient estimates of interaction terms

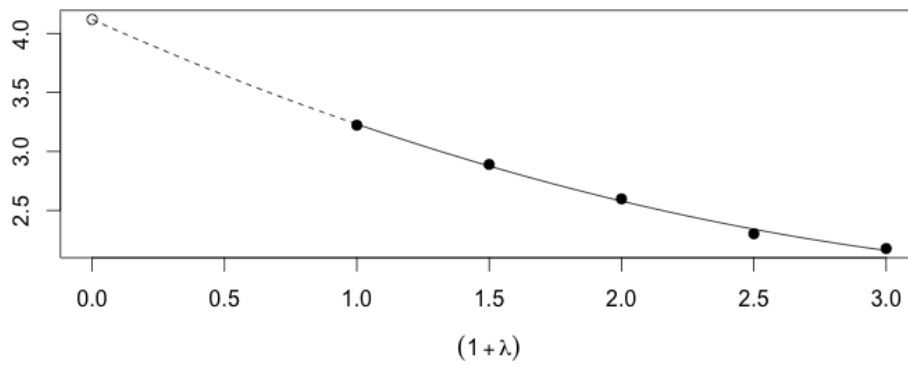
A2-a: Ideological divisiveness * Compromise position



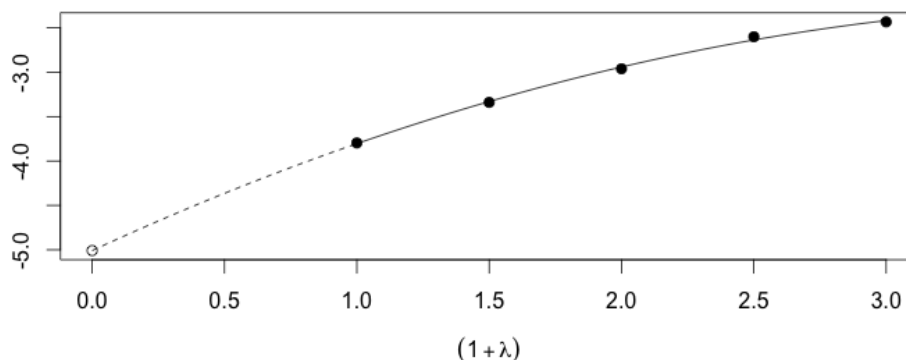
A2-b: Executive coordination * Compromise position



A2-c: Minority govt * Parl. Oversight * Compromise position



A2-d: Minority govt * Compromise position



Notes: SIMEX estimates with 500 iterations per λ ; Detailed results are available from the authors upon request.

Next, we address one concern regarding model specification: the fact that a significant fraction of the DEU policy scales are binary, i.e. the legislative conflict only offered two options. This renders the distribution of our dependent variable rather skewed at both tails. While we use linear regression in the article to preserve maximum variation in the data, we now create a second, dichotomised version of the dependent variable in order to see whether our non-normal dependent variable drives any results. If governments took more leftist positions between 0 and 49, we code this as “0” and more rightist positions between 50 and 100 as “1”. Model 6 re-estimates our final model with this dependent variable using logistic regression with fixed effects for policy issues and cluster-robust standard errors at the country level. Again, this different specification yields qualitatively identical results, indicating that the compromise position is a stronger predictor of whether governments adopt leftist or rightist positions in the Council under the factors we hypothesised.

Last, we address the problem of missing data from the CMP and the Winzen (2013) dataset on parliamentary oversight (for Romania). In all baseline estimations, we had to list-wise delete a total of 8% of the observations due to these sources (see above). In order to ascertain whether this causes any potential bias of our results, we build a multiple imputation (MI) model using

regression imputation with chained equations for the missing values (and their interactions with other variables treating interactions as “just another variable”). We use 10 multiple imputed datasets with all remaining covariates, policy issue dummies, and the dependent variable as predictors. Additionally, we also include a variable indicating the number of party families represented in the support coalition, which should be beneficial for imputing the ideological divisiveness of the coalition (we take this from ParlGov). The MI results from Model 7 show that all our results firmly hold, now with Romania included, even across 23 EU countries.¹⁵

7) Comparison to results of Martin and Vanberg (2011)

An important feature of our main results is that we find no evidence that parliamentary oversight strengthens the relevance of the coalition compromise under majority rule, as Martin and Vanberg (2004, 2011) have found for coalition policy-making in domestic affairs. In fact, if anything, the results in Table 1 in the article suggest that legislative institutions have a negative influence on the compromise under majority rule (negative coefficient on interaction between parliamentary oversight and the compromise position). However, this effect is not statistically significant and from a theoretical perspective – it seems to us – there is little reason to expect any negative impact of legislative institutions.

While we think that these differences in results may be mainly due to the fact that Martin and Vanberg investigate coalition policy-making in domestic affairs, whereas we focus on EU affairs,

¹⁵ Using multiple imputations (as well as in “Model 4” with the alternative measure of ideological divisiveness) we even find evidence that the effect of parliamentary oversight on the compromise is negative under majority governments (the opposite of Martin and Vanberg's (2011) argument). Importantly, unreported analyses confirm that the marginal effect of oversight on the compromise under minority governments is still significantly positive.

where parliaments have been traditionally viewed to be weak (e.g. Andersen & Burns, 1996; Raunio, 1999), we here provide some more detailed analysis of the matter. Specifically, we investigate whether the different results on legislative institutions may be driven by the larger sample of countries investigated by us compared to the sample of five countries in Martin and Vanberg's (2011) seminal book (M&V). For this purpose, we re-estimate our baseline model allowing the effect of parliamentary institutions to vary between the countries included in M&V and those countries not included in their analysis, constructing a simple dummy that is “1” for the countries included (these are Denmark, Germany, the Netherlands, France, and Ireland) and “0” otherwise.

In order to avoid four-way interactions and following M&V's argument about the general benefit of legislative institutions, we do not consider the differential effect of parliamentary oversight under minority versus majority rule here. Instead, we simply use a three-way interaction between the M&V countries dummy, parliamentary oversight, and the compromise position. Except for this difference we re-estimate our baseline model from Table 1 in the article.

The results are reported as Model MV in *Table A7*. The expectations on the ideological range and executive coordination hold as expected. Interestingly however, the coefficient on the interaction term between parliamentary oversight and the compromise position is negative and statistically insignificant, but the three-way interaction indicating the additional effect for the countries in the M&V sample is strongly positive and highly significant. To investigate this further, we plot marginal effects of the compromise position depending on parliamentary oversight and separately for the M&V countries as well as for all other countries in *Figure A3*.

Table A8: Analysis with M&V dummy

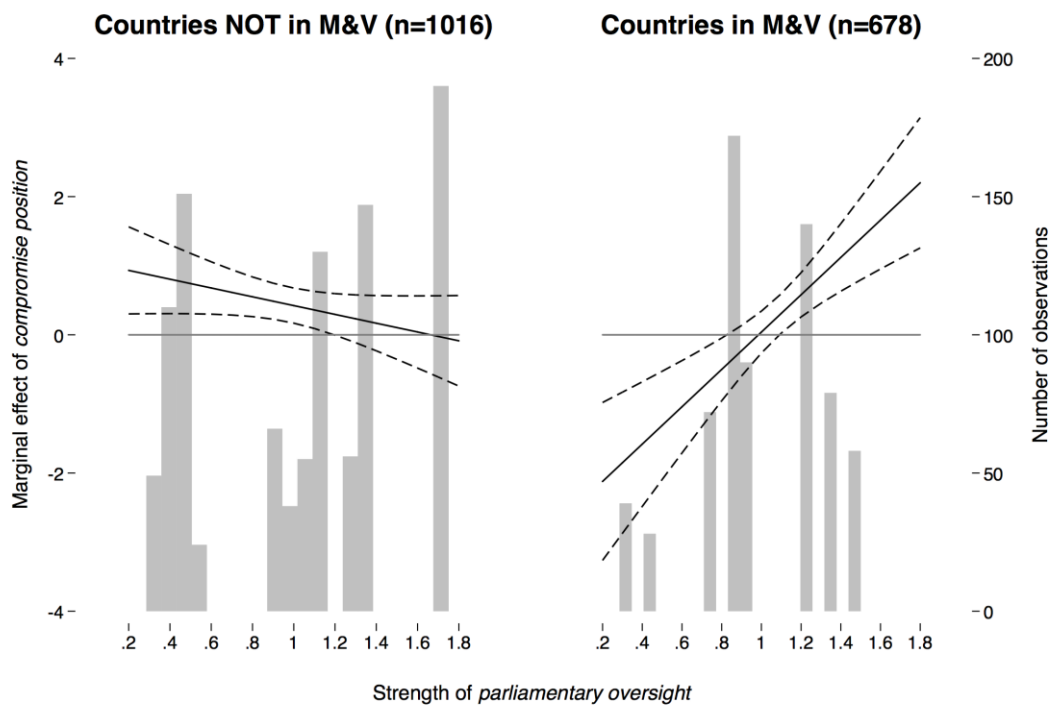
	Model MV
Compromise position	-0.214 (0.223)
Ideological divisiveness	-0.089 (0.102)
Ideological divisiveness x Compromise position	0.042 (0.017)**
Executive coordination	-6.432 (3.582)*
Executive coordination x Compromise position	0.720 (0.211)***
Sample M&V	8.496 (6.323)
Parliamentary oversight	2.178 (3.601)
Sample M&V x Parliamentary oversight	-18.321 (5.543)***
Sample M&V x Compromise position	-3.723 (0.748)***
Parliamentary oversight x Compromise position	-0.637 (0.377)
Sample M&V x Parliamentary oversight x Compromise position	3.339 (0.665)***
Control variables	Yes
Fixed effects	Policy issues
Number of policy issues	145
Number of countries	22
N	1,694
R ²	0.30

Notes: Both are fixed effects regressions; No observations for countries without coalition governments; Country-clustered robust standard errors in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

This illustrates nicely that, for the sample of five countries covered in M&V, we find a positive relationship between parliamentary oversight and the compromise position. This replicates M&V's finding from coalition policy-making in domestic affairs for EU affairs, i.e. that strong parliaments help to police the compromise and make it more predictive of policy positions, at least in the five countries covered by the authors. But for the 17 countries we can add with our empirical approach, the opposite, negative relationship between parliamentary oversight and the

compromise position emerges. Hence, we have remaining uncertainty about whether the low effectiveness of legislative institutions in incentivizing compromises in our analyses is mainly due to the fact that we investigate policy-making in EU affairs as opposed to domestic affairs, or whether the result by M&V is more generally confined to the small sample of countries these authors investigate. However, since we have no obvious explanation how the 17 countries we add in our analyses differ from those covered in M&V, we still consider it most likely that the role of parliaments in EU affairs policy-making is simply more limited than in domestic affairs.

Figure A3: Compromise position, parliamentary oversight, and M&V sample



Notes: 95% confidence intervals as dashed lines; Histogram of observations as shaded areas.

8) Testing the alternatives: median legislative party and PM party

Our data from the Council allowed us to test the extent to which the coalition compromise underpins governments' adopted policy positions. Regrettably, our test with EU policy-making does not enable us to test directly whether ministerial government prevails when the conditions for the compromise model are not given. This is due to the fact that it is often impossible to ascertain which national minister is responsible for dealing with an EU legislative proposal. Information on this is not generally reported and strategies to collect this information are not reliable.¹⁶ However, what we are able to do here is test the predictive power of the compromise position against two other prominent alternatives that do not feature in our model: the median legislative party (see Baron, 1991; Morelli, 1999; Schofield & Laver, 1990) and the PM party (e.g. Dewan & Hortala-Vallve, 2011). If our model provides a sufficient description of coalition policy-making as a game between compromises and ministerial discretion, the positions of the median and the PM parties should have little positive relationship with policy positions.

One complication in testing this claim is that the median legislative party's position in particular, but also the PM party's position, is often highly correlated with compromise positions as well as with the average minister's position (e.g. if the PM party also fills most portfolios). This may cause spurious correlations between policy positions and these party positions. Controlling for the compromise position can ameliorate this problem, but potentially introduces concerns about

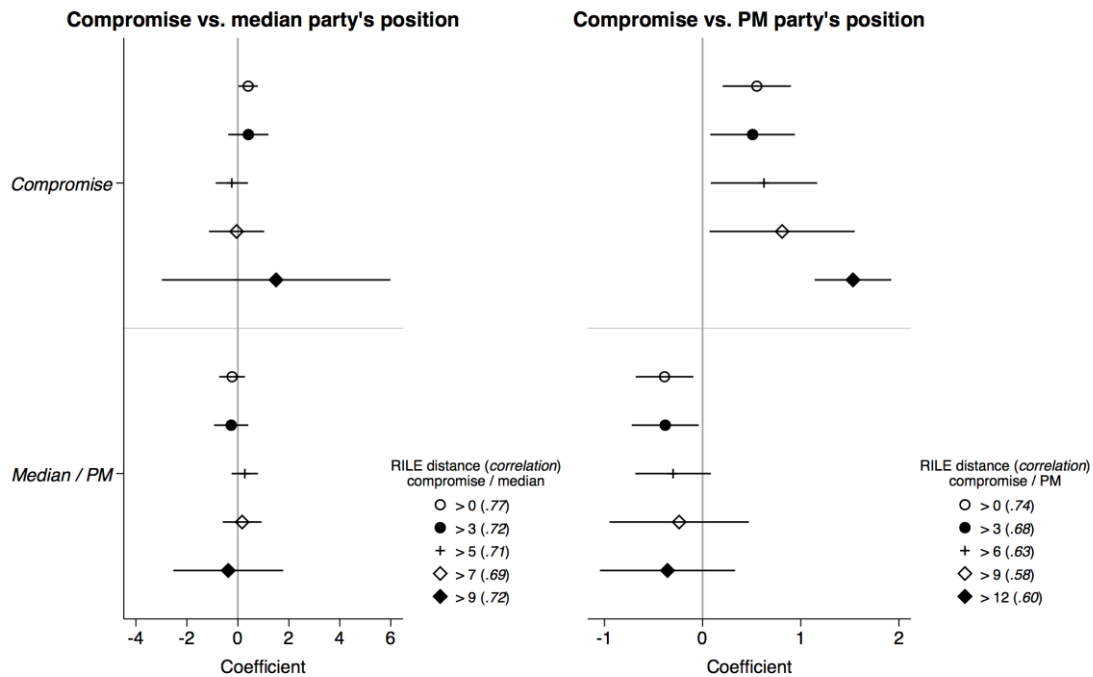
¹⁶ Participant lists of ministerial Council meetings could, in principle, serve as an indication of responsibility. Yet, in the 1990s, member states' Permanent Representatives to the EU attended a substantial amount of these meetings instead of the ministers and delivered pre-planned negotiation lines on their behalf. In addition, the accuracy of the participant lists is not very high. Speakers in official meetings and reported participants do not generally match. Moreover, as many pieces of legislation cover several portfolios they cannot be allocated to certain ministries in a straightforward manner.

multicollinearity. We address this problem by estimating a series of models, gradually increasing a minimum absolute distance between the median or PM party's position and the compromise position. The first model includes all observations in our sample, the second model only those where the distance between compromise and median or PM position is more than 1 RILE scale points, the third model sets 2 scale points as the minimum difference, the third 3 scale points etc. We increase the minimum distance until our number of observations falls below 20% of the original sample. For the comparison with the median party we fall under 20% of the observations at a difference of 9 RILE scale points, whereas the same figure is 12 for the PM party. We include the median or PM party's position and the compromise position as well as all control variables from the last section in all estimations.

Figure A4 shows the results for the coefficients on the compromise and the median or PM party's position for five models each. In parentheses, we also report the correlation between the compromise position and the median or PM party's position. In general, the results demonstrate that neither the median nor the PM party's position is a significant positive predictor of adopted policy positions in any of the models when controlling for the compromise position. Moreover, the compromise position has a positive coefficient in most of the models and is statistically significant in 6 out of 10 models. This is especially the case when comparing to the PM party in samples where the two positions do not correlate highly, i.e. at 9 or 12 scale points difference on the RILE.¹⁷

¹⁷ While the correlations between the compromise and the PM party shrink significantly with distance between the two measures, the median party's position and the compromise are highly correlated in virtually any sample.

Figure A4: Comparison of compromise position to median and PM party



Notes: 95% confidence intervals as horizontal lines; Detailed results are available from the authors upon request.

In total, these results suggest that our model of coalition policy-making is capturing the major dynamics between parties and we find no evidence that either the median or the PM party has to be considered in modelling the process of policy formulation.

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