### ARTICLES

# **Electoral Balancing, Divided Government** and 'Midterm' Loss in German Elections

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This paper takes a fresh look at the midterm loss in German elections and argues that government type is a crucial determinant of midterm loss. Using panel regressions on a newly compiled data set covering all state elections during the period 1949–2004, we find that systematic midterm losses occur only when both chambers of the federal legislature (Bundestag and Bundesrat) are controlled by one party or a party coalition. Prior research has failed to discover this important regularity. These findings lend strong support to electoral balancing models while calling into doubt more traditional explanations of midterm loss.

In American politics, it is a well-established fact that the party controlling the White House almost always loses votes in congressional midterm elections. Midterm losses are also common in other presidential and parliamentary democracies. In this article, we look at midterm losses in German elections, test several explanations proposed so far and show that only the electoral balancing models introduced by Alesina and Rosenthal as well as Fiorina are able to explain midterm losses in German elections. <sup>2</sup>

Owing to the federal structure of the German political system, federal policy outcomes are a compromise between the policy preferences of the parties controlling the Bundestag (the lower chamber) and the parties controlling the Bundesrat (the upper chamber). The federal government is largely unconstrained in

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the implementation of its ideal policies if the parties supporting it in the Bundestag also possess a majority in the Bundesrat. If, on the other hand, the Bundesrat is controlled by opposition parties, federal policies are moderated because of the opposition's veto power. Since the Bundesrat is composed of representatives of state governments, voters who dislike the policy preferences of the federal government might vote for federal opposition parties in state elections to balance against the federal government. Midterm losses as well as recurring periods of divided government would be the consequence.

We test this hypothesis together with alternative explanations of midterm loss using a newly compiled panel data set that records state-party vote shares for all German state elections for the period 1949–2004. Our findings demonstrate that only the electoral balancing hypothesis provides an explanation for midterm losses in German state elections. As electoral balancing models (which are discussed below) would predict, we observe midterm losses only when the parties controlling the federal government are in control of both chambers of the federal legislature. Under divided government, in contrast, systematic midterm losses do not occur. Prior research on German elections has overlooked this important regularity.

The article is structured as follows. The next section summarises the electoral balancing models proposed by Alesina and Rosenthal as well as Fiorina, and briefly surveys alternative explanations for midterm loss.<sup>5</sup> The section following that provides a short overview of the German electoral system and summarises the existing work on midterm losses in German elections. The econometric model is then introduced and the results discussed. The last section concludes.

#### EXPLAINING THE MIDTERM LOSS

Many explanations have been proposed for the midterm loss in US congressional elections. According to the 'regression towards the mean' or 'presidential coat tails' view, midterm losses are a negative function of the vote share received in the preceding election. As Campbell aptly summarised it, 'the bigger they are, the harder they fall'. Another theory predicts that different groups of voters will participate in midterm and non-midterm elections, resulting in characteristic 'surge-and-decline' turnout cycles and midterm losses. Tufte finally argued that midterm elections serve primarily as 'referenda' on the administration's management of the economy, and that midterm losses occur when voters are dissatisfied economically. In the empirical analysis, we attempt to account for these different hypotheses.

More recent explanations for midterm loss focus on electoral balancing on the part of voters. <sup>11</sup> According to this view, moderate or 'middle-of-the-road' voters take advantage of the checks and balances implicit in the interaction between Congress and the president. Since policy outcomes reflect

compromises between the executive and legislative branch, voters can moderate the president by handing control over Congress to the opposing party. When a Republican president is forced to bargain with a Democratic Congress, for example, he will have to accept policy outcomes that are more liberal than those he prefers. Giving control over the two branches of government to opposing parties thus enables moderate voters, even when faced with quite polarised party positions, to get moderated policies. Divided government occurs because 'middle-of-the-road' voters like it; it is not an accident but the result of some voters' preference for moderate policies.

How does electoral balancing explain midterm losses? In presidential election years, when both the president and Congress are elected simultaneously, voters will be uncertain about the final election outcome and the identity of the president. Given their policy preferences, some voters will have made a 'mistake' when voting for Congress. Expecting to get a Democratic president, for example, they might have voted for a Republican House candidate in order to balance the president with a more conservative Congress. Surprised by the Republicans capturing the White House, these voters are now confronted with policy outcomes that are much more conservative than those they hoped for. Two years later, at the point of congressional midterm elections, these voters will have an incentive to switch their vote to the Democrats in order to balance the president with a more liberal Congress. So midterm losses can be explained by strategic voting on the part of voters fuelled by uncertainty about the outcome of presidential elections. Two recent articles by Mebane and Mebane and Sekhon provide strong evidence in favour of the electoral balancing hypothesis using National Election Studies (NES) survey data. 12 The article by Mebane found evidence to support the Alesina and Rosenthal model, but not that of Fiorina. The crucial difference between the two models is that Fiorina assumed that voters act sincerely, whereas Alesina and Rosenthal allowed for strategic interaction among voters; voters only vote sincerely conditional upon the outcome of the presidential election. While this is an important difference, we shall ignore it here. The aggregate-level data at our disposal unfortunately do not allow us to discriminate between the two models.

Work on German elections has largely ignored electoral balancing models. <sup>13</sup> After all, these models were developed with the American political system in mind, which differs from the German political system in many respects; but, as will be demonstrated, these models can still be applied fruitfully to German elections.

#### ELECTORAL BALANCING AND MIDTERM LOSSES IN GERMANY

Like the USA, Germany has a federal system of government, with 16 state governments (11 before unification) and the federal government sharing

power. Elections to the Bundestag, the lower chamber of the federal legislature, take place every four years. Elections to state legislatures are staggered between Bundestag elections and take place in four- or five-year intervals, depending on state legislation. The two major 'catch-all' parties in Germany are the Christian Democratic Union/Christian Social Union (CDU/CSU) and the Social Democrats (SPD). <sup>14</sup> The only smaller parties currently represented in the Bundestag are the Liberals (FDP), the Greens and the Party of Democratic Socialism (PDS). Because of a five per cent threshold set by election laws, parties that gain only a minor share of the popular vote are not represented in the Bundestag at all. With rare exceptions, all parties compete in both federal and state elections.

The chancellor is elected by the party coalition that controls a majority of seats in the Bundestag. He or she is wholly dependent on maintaining a parliamentary majority. If a new majority coalition should emerge between federal elections, it can present a candidate to the Bundestag and request a vote of no confidence (konstruktives Misstrauensvotum). If the chancellor loses the vote, the candidate immediately becomes the new chancellor. In Germany, one therefore never observes the kind of divided government so common in the USA, with the executive controlled by one party and the House controlled by the other. But with the German political system structured according to federal principles, a different form of divided government can be observed on a regular basis. State governments have exclusive legislative competence in policy areas such as law enforcement, education, and local and state-level administration. For most other policy areas, the federal government and the states share responsibility. At the federal level, states have the ability to influence federal legislation through the upper chamber of the legislature, the Bundesrat. In contrast to the American Senate, the Bundesrat is not elected by the people, but composed of the representatives of state governments.

The German constitution, the Basic Law (Grundgesetz), distinguishes between two types of legislation. 'Zustimmungsgesetze' passed by the Bundestag require the consent of the Bundesrat in order to become law. 'Einspruchsgesetze' can be vetoed by the Bundesrat, but its veto can be overridden by the Bundestag. <sup>15</sup> Approximately 55 per cent of all bills, including virtually all major bills, are 'Zustimmungsgesetze' and thus require the consent of the upper chamber. <sup>16</sup> The Bundesrat therefore plays an important role in German federal politics. <sup>17</sup> Under conditions of divided government (when Bundestag and Bundesrat are controlled by different party coalitions), policy outcomes tend to represent a compromise between the preferences of the federal government and the opposition parties controlling the Bundesrat. <sup>18</sup> Scharpf famously called this institutional constellation the 'joint-decision trap'. <sup>19</sup>

Given such a federal structure, what do electoral balancing models predict? The ability of the federal government to implement its policy preferences depends strongly on control of the Bundesrat. Under conditions of unified government, with the federal government in control of both chambers of the legislature, it is largely unconstrained in its ability to implement policies close to its partisan preferences. In this case, 'middle-of-the-road' voters will have an incentive to use state elections to balance against the federal government by voting for parties that, at the federal level, are part of the legislative opposition. Such electoral balancing will, in time, lead to a switch in the Bundesrat majority, and divided government. Moderate policy outcomes will be the consequence.

The central observable implication of this argument is that under unified government, we expect strong midterm losses for the party coalition controlling the Bundestag. Under divided government, in contrast, voters will have little incentive to engage in electoral balancing. Federal policy outcomes will already be (relatively) moderated; we therefore do not expect to see systematic midterm losses. State election results will instead be driven by motives unrelated to electoral balancing, such as dissatisfaction with the achievements of the state government or partisan preferences. As a quick review of the literature will demonstrate, previous work has overlooked these observable implications of the electoral balancing hypothesis.

Dinkel was the first to postulate the existence of a systematic midterm loss in German state elections, which he attributed to 'surge-and-decline'. He discovered that, between 1949 and 1976, parties controlling the federal government did less well in state elections than expected given their federal election results in the same state; but Dinkel also found that controlling the state government conferred an electoral advantage strong enough to offset almost two-thirds of the midterm loss.

After this early work by Dinkel, the topic failed to attract further scholarly attention. It was only during the 1990s that German reunification and the regular occurrence of divided government accompanied by complaints about gridlock led to renewed interest in the German electoral system and midterm losses. Anderson and Ward, in their work on British by-elections and German state elections, found an average midterm loss of four percentage points for the period 1950–92. They also found significant effects of federal unemployment. Surprisingly, however, higher unemployment appeared to offset the ruling parties' midterm losses. Further work has confirmed the existence of a substantial midterm loss, while disagreeing about its causes. Whether or not it has become weaker since unification remains equally controversial.

Lohmann, Brady and Rivers have provided the most extensive discussion of the midterm loss in German elections so far. They found that, compared to the preceding Bundestag election, parties controlling the federal government

on average lose between six and eight percentage points in state elections simply by virtue of holding power at the federal level. They regard this as evidence for what they call the 'weak moderation hypothesis' and argue that these losses can be seen as a result of voters' balancing behaviour. Lohmann *et al.* also added an interaction term to their model, which captures the simultaneous control of federal and state governments (to test their 'strong moderation hypothesis'), and showed that voters are slightly more likely to punish parties that are in power at both the state level and the federal level. <sup>26</sup> The empirical evidence they presented, however, is somewhat ambiguous. In one of their specifications, the state–federal level interaction term is statistically significant but positive, indicating that control of a state government in addition to having power at the federal level leads to an increase in expected vote share. Gaines and Crombez replicated the analysis of Lohmann *et al.* for the period 1990–2001, coming to broadly similar conclusions. <sup>27</sup>

Our analysis differs from previous work in that it offers a direct test of the electoral balancing hypothesis. As described above, midterm losses can be seen as a result of voters' preferences for policy moderation. What matters for policy moderation in the German political system is whether the parties that control the Bundestag also control the Bundesrat. In order to test if balancing really causes midterm losses, we have to demonstrate that systematic midterm losses occur only under conditions of unified government, when both chambers of the legislature are controlled by the same party coalition. Previous work has not taken this important observable implication into account, limiting our ability to explain why midterm losses occur in German elections.

# Descriptive Statistics

Concentrating on descriptive statistics for a moment, we find strong support for our argument. There are marked differences when looking at the conditional distribution of midterm losses under divided and unified government. For both unified and divided government, we computed Tukey's boxand-whisker plots to show the conditional distribution of vote share changes for state parties in power at the federal level for each year since the last Bundestag election. <sup>28</sup> The results are displayed in Figure 1. Filled circles denote medians; the length of the boxes denotes the inter-quartile range.

The graph clearly shows the impact of unified and divided government on midterm losses. Under divided government (lower panel), we do not witness any systematic midterm loss. Over the federal election cycle, the conditional distribution of changes in vote shares of parties in control of the federal government is almost exactly centred on zero. In other words, under conditions of divided government, parties that are members of the federal coalition government on average neither win nor lose votes in state elections compared with

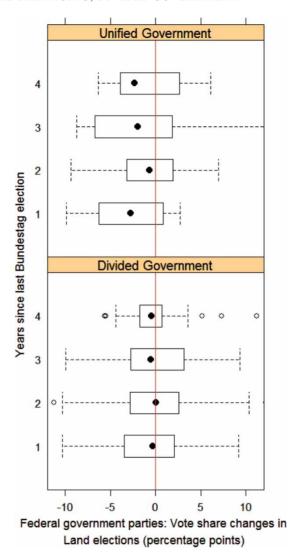


FIGURE 1
THE MIDTERM LOSS IN GERMAN STATE ELECTIONS (1949-2004, WEST GERMAN STATES)

the previous state election, regardless of when the state election takes place in the federal election cycle.

Only under conditions of unified government (upper panel) do we observe a systematic midterm loss. The conditional distribution of the changes in party vote shares shifts to the left of zero over the whole course of the federal election cycle, indicating (substantial) losses for the parties that are members of the federal coalition government. The graph suggests that such parties face a median midterm loss of about three to four percentage points (again, compared to the last state election).

These losses are fairly stable over the entire federal election cycle (we see a 'clean' additive median shift to the left), with the only small exception being somewhat lower median losses in the second year after the last Bundestag election. This pattern, however, is easily explained. Five out of the 14 state election results that form this conditional distribution belong to elections that took place in 1967 under the unique circumstances of the 'Grosse Koalition', the only time that the CDU and SPD formed a 'grand coalition' government at the federal level. Under these conditions, electoral balancing models clearly no longer apply. With both 'catch-all' parties forming the federal government, voters' options for electoral balancing were virtually zero. <sup>29</sup> If we exclude these somewhat anomalous state elections from the graph, average vote share losses for this period become much larger, as one would expect. In sum, the descriptive statistics clearly suggest the usefulness of distinguishing between unified and divided government for the explanation of German midterm losses.

If we assume that voters engage strategically in electoral balancing, periods of unified government should be uncommon and relatively short-lived; and this is indeed what we observe. Between 1949 and 2004, there have been only 16 years of unified government, but 35 years of divided government. Both the median and mean lengths of divided government have been 7 years, compared with 4 years for unified government. Obviously, such descriptive statistics do not take into account many other factors that might also cause midterm losses. In the next section, we therefore proceed to a more refined multivariate analysis.

#### EMPIRICAL TEST

## Model Specification

The identification strategy is to model the midterm loss according to the following baseline specification:

$$\Delta V_{i,t} = \theta_0 V_{i,t-r} + \theta_1 F G_{i,t} + \theta_2 B M_{i,t} + \theta_3 B M_{i,t}^* F G_{i,t} + \mathbf{X}_{i,t} \delta + \gamma_t + \lambda_i + \nu_{i,t}$$

where:  $\Delta V_{i,t}$  is the *change in vote share* for state party i in year t compared to the previous state election;  $V_{i,t-r}$  is the *state-party vote share* of party i in the

previous state election;  $FG_{i,t}$  is a dummy variable that equals 1 if the party was a member of the federal coalition government at the time of the state election and 0 otherwise;  $BM_{i,t}$  is a dummy variable that equals 1 if the party held the majority in the *Bundesrat* at the time of the state election and 0 otherwise;  $\mathbf{X}_{i,t}$  is a matrix of covariates including a *state government* dummy (coded 1 if the state party was a member of the state coalition government at the time of the election and 0 otherwise), state election *turnout* and, depending on the precise specification, various state- and federal-level covariates (all log differenced) that may affect party vote shares such as changes in inflation, economic growth and unemployment;  $\gamma_t$  and  $\lambda_i$  denote a full set of state-party fixed effects and year indicators; and  $\nu_{i,t}$  is a mean-zero random error term that reflects unobserved factors associated with vote shares.

This baseline specification largely follows Anderson and Ward, with the exception that we also include a Bundesrat majority dummy and its interaction with federal government membership to allow for different midterm loss estimates under unified and divided government.<sup>30</sup> Moreover, we also include a full set of state-party and year fixed effects in the equation to deal with unobserved unit heterogeneity and to account for common shocks. The inclusion of state-party fixed effects is particularly important, since they difference out all unobserved time-invariant features of each state party (that is, each party in each state) that cause changes in vote shares.<sup>31</sup>

## Data and Variables

Since our unit of analysis is the party in a given state in a given year, we compiled a panel data set that includes information on the changes in state-party vote share for all major parties (SPD, CDU, FDP, the Greens) as well as Others (a residual category combining the vote share of all other small parties) for all state elections for the period 1949–2004.<sup>32</sup> It would be interesting to see to what extent electoral behaviour in Eastern Germany differs from that in the West. However, since elections in Eastern Germany enter the sample only in 1990, the New Länder provide us with too few observations to attempt explicitly any such comparison. We therefore only look at Eastern Germany in the robustness section. This leaves us with 639 state-party vote shares, which to our knowledge provides the largest panel data set on German state elections currently available.<sup>33</sup>

The following covariates are included in the analysis. State-party vote share in the previous election is included to account for regression towards the mean. The coefficient for this variable is expected to be negative; a party is more likely to lose some percentage of the vote if it garnered a large share of the vote in the preceding election.<sup>34</sup>

The independent variables of central interest are the federal government (FG) dummy and its interaction with the Bundesrat majority (BM) dummy.

The federal government dummy is coded 1 if a party is a member of the federal coalition government, 0 otherwise. The Bundesrat dummy is coded 1 if a party (or the federal coalition of which it is a member) controlled the majority of votes in the Bundesrat at the time of the state election, and 0 otherwise. The construction of this measure is slightly complicated by the fact that coalition governments at the state level do not always mirror federal coalitions. The voting behaviour of such state governments in the Bundesrat is thus hard to predict. Sometimes, it is predetermined in (publicly not available) coalition agreements. Other state governments such as the 1996 SPD/FDP coalition government in Rhineland-Palatine agree to flip a coin in contentious cases. 35

The Bundesrat does not record roll-call votes either. Unless explicitly demanded by a state government, all votes are taken as unrecorded voice votes. Analysing actual votes cast is thus impossible. We therefore chose not to count Bundesrat seats as contributing to the federal coalition's majority if the state in question is governed by a coalition government that only partially overlaps with the federal coalition (for example, a SPD/FDP coalition government in Rhineland-Palatine facing a SPD/Greens federal coalition government). Our Bundesrat dummy thus provides a lower bounds estimate for the effects of unified government.<sup>36</sup>

Recall that we expect midterm losses to take place only under conditions of unified government ( $BM_{i,t}=1$ ). Under such conditions, being a member of the federal coalition government should have a highly adverse impact on the party's vote share in state elections, that is, the coefficient  $\theta_1 + \theta_3$  should enter negative and significant.<sup>37</sup> Under conditions of divided government ( $BM_{i,t}=0$ ), we expect federal government membership to have no effect. Apart from the year and state-party fixed effects, a dummy for being part of the state coalition government is included in all estimations to account for potential effects of being in power at the state level.<sup>38</sup> Turnout has been included in all models to test for potential 'surge-and-decline' effects.<sup>39</sup>

The set of variables listed above enters our streamlined benchmark specification. Incorporating additional covariates is problematic for several reasons. Regarding state-level covariates, relevant data are not available for many interesting variables and if data are available, then only for a quite limited time-span. Including additional state-level controls would result in a sharp drop in sample size. We shall therefore use state-level covariates for growth in state GDP per capita and state expenditures only in the robustness section. Regardless of the precise econometric specification, inclusion of these variables leaves the central findings completely unchanged; all economic state-level covariates are highly insignificant.

Federal-level covariates are available for the whole sample period. However, we chose to omit them from the baseline specification for several reasons. First, once federal government membership is controlled for, any changes at the federal level constitute *de facto* external shocks; the year dummies should pick up their effects. Moreover, since any federal-level variable is necessarily time-invariant each year across units, it cannot be included alongside the time dummies due to perfect collinearity. We prefer year dummies, as they will eliminate any common shocks, compared to the more limited accounting for common shocks that substantive federal-level covariates would provide.

In order to circumvent the collinearity problem, we could use federal-level variables interacted with state government dummies to allow for a different effect of federal-level changes for incumbent and opposition parties in a particular state. Such a specification seems plausible, and we test it in the robustness section. However, the effects of these federal-level variables (including unemployment, inflation and growth) mostly prove to be jointly insignificant. Their inclusion does not change the basic findings. This suggests that they should be kept out of the baseline specification.

To avoid strong assumptions about the distribution of the error term, we compute robust standard errors adjusted for potential within state-party clustering to take the non-independence of observations into account. Note that since we estimate a first-differenced equation, serial correlation is not an issue here. This is also confirmed by various higher order serial correlation tests computed.<sup>40</sup>

#### **FINDINGS**

## Full Sample Estimations

Results for the full sample estimations and various party selections are displayed in Table 1. Following conventional specifications of the midterm loss as used in prior research, the first column shows the baseline model for the 'all parties' sample, estimated without the Bundesrat majority dummy. Note that this will result in an estimate of what we call the 'constrained midterm effect' since the specification does not allow it to differ depending on government type.

As expected, federal government membership enters with a negative sign and is highly significant at conventional levels. The magnitude of this constrained midterm effect is also significant in substantive terms. According to model 1, holding the other covariates constant, on average a party loses about 1.85 percentage points of vote share in a state election if it is a member of the federal coalition government. Note that the magnitude of this effect is somewhat smaller than estimated in previous work, presumably because prior estimates are slightly biased upwards (away from zero) due to

TABLE 1
MIDTERM LOSS IN GERMAN ELECTIONS (1949–2004, VARIOUS PARTY SELECTIONS)

Time Frame Party Selection	1949-2004					
	All Parties	All Parties	CDU, SPD, FDP, Greens	CDU, SPD, FDP	CDU, SPD	
Dependent Variable	Change in State-Party Vote Share from Last State Election (Percentage Points)					
Model No.:	1	2	3	4	5	
Lagged vote share	-0.422 (0.040)***	-0.457 (0.044)***	-0.506 (0.041)***	-0.506 (0.045)***	-0.263 (0.084)***	
Turnout	-0.100 (0.109)	-0.081 (0.121)	-0.167 (0.119)	-0.183 (0.127)	-0.199 (0.166)	
State government	-0.149 (0.649)	-0.032 (0.683)	0.467 (0.717)	0.469 (0.754)	1.077 (1.049)	
Federal government (divided gov.) $\theta_1$	-1.850 (0.481)***	-1.300 (0.578)**	-1.566 (0.562)***	-1.503 (0.679)**	-0.764 (0.746)	
Federal government $\times$ Bundesrat majority $\theta_3$		-2.812 (1.212)**	-2.197 (1.201)*	-2.789 (1.293)**	-3.590 (1.739)*	
Bundesrat majority $\theta_2$		2.361 (1.593)	1.162 (1.531)	1.276 (1.534)	1.506	
Constant	38.921 (10.268)***	39.280 (11.423)***	34.211 (8.507)***	35.068 (9.124)***	22.810 (12.360)*	
Federal government (unified gov.) $\theta_1 + \theta_3$	(,	-4.112 (0.982)***	-3.763 (0.969)***	-4.292 (0.985)***	-4.354 (1.422)***	
Year effects	yes	yes	yes	yes	yes	
State-party fixed effects	yes	yes	yes	yes	yes	
Observations	639	596	458	406	273	
R-squared	0.37	0.39	0.42	0.43	0.40	

Ordinary least square (OLS) regression coefficients shown; robust standard errors, adjusted for potential within state-party clustering, in parentheses. All models include a full set of year and state-party (CDU/SPD specifications only state) fixed effects (coefficients not shown).

<sup>\*</sup>Significant at 0.10; \*\*significant at 0.05;

<sup>\*\*\*</sup>significant at 0.01.

the exclusion of state-party fixed effects (the unobserved heterogeneity is likely to be positively correlated with both federal government membership and changes in state-party vote shares).<sup>41</sup>

Forcing the midterm effect to be equal across unified and divided government, however, causes us to miss the most interesting part of the story. This becomes immediately evident once we add the Bundesrat majority dummy and the multiplicative term to the equation (column 2). Now the effect of federal government membership is much bigger (indeed about four times as big!) under unified government than under divided government. According to model 2, under unified government a party loses on average about 4.11 percentage points of vote share in a state election if it is a member of the federal coalition government. Under divided government, in contrast, the effect of federal government membership is only about 1.30 percentage points. As we shall see, this effect is also no longer robust. The fact that the midterm loss depends largely on unified government has been masked in prior work that failed to account for majority control of the Bundesrat.

Regarding the other covariates, we find some support for the 'regression towards the mean' hypothesis. The lagged level of state-party vote share is negative and remains highly significant across models. On average, a 1 percentage point increase in vote share in the previous state election is associated with a decrease in vote share of about half a percentage point.

In contrast to the earlier work by Dinkel and Lohmann, we found that being in power at the state level has no systematic effect once unobserved fixed effects are controlled for. State government membership does not reach conventional levels of statistical significance across models; the coefficient even switches signs. The same holds true for turnout. Across specifications, turnout has no systematic effect on changes in state-party vote shares, a finding that is contrary to the 'surge-and-decline' hypothesis.

Taken together, these estimates strongly support the claim that unified government is a crucial determinant of midterm losses in German state elections. Only if both the Bundesrat and Bundestag are controlled by the same party coalition do we observe a strong and robust midterm loss. This finding is consistent with electoral balancing models, yet runs counter to other common explanations for midterm loss.

# Estimations for Different Party Selections

Are the estimates presented in column 2 for the 'all parties' sample driven by the group of parties we included? In Table 1, columns 3–5, we test for this possibility by estimating our benchmark model for three additional party selections. First, as in the benchmark model presented in column 2, we include all parties but exclude the residual category of 'Others' (column 3). We are thus left with the CDU, the SPD, the FDP and the Greens. Next, we

also drop the Green Party (column 4); and in our final selection, we examine just the two 'catch-all' parties, the CDU and the SPD (column 5).

As one can easily see, our results are not driven by the choice of the precise party selection. Under unified government, the effect of being a member of the federal coalition government is negative and highly robust across all party selections. The magnitude of the midterm loss is fairly stable across models, with an estimated average loss of about 4 percentage points for parties that are in power at the federal level. Under divided government, the coefficients are negative too, but much smaller in magnitude. The effect also does not seem to be very robust as it is insignificant for the CDU/SPD party selection (column 5). These findings lend additional support to the electoral balancing model.

## Sensitivity Analysis

We have performed a variety of additional tests to gauge whether the key findings are robust to alternative specifications of the model and other time-spans. To economise on space, we focus here on two samples only: the sample that includes all parties and the sample that includes only the CDU and SPD.

Shorter time-span. A potential concern with the estimates presented above may be that the results are driven by our choice of sample period. Some scholars have argued that the German party system has undergone unprecedented change as a consequence of reunification.<sup>42</sup> Therefore, post-unification dynamics in state elections might be fundamentally different from the pre-unification period. It has also been argued that the party system was very much in flux during the 1950s and 1960s, and that electoral dynamics might have been quite different during this period.<sup>43</sup> Most of these changes over time probably constitute common shocks that are already accounted for by our year dummies. Yet to get a precise estimate of the midterm loss for the pre-unification and the post-1970 period, we re-estimated our model for these shorter time-spans (1949–89; 1970–2004). Note that the model is not identified for the post-unification period as such because of the insufficient number of observations. The results are displayed in Table 2.

For both party selections and the pre-unification and the post-1970 period, the estimates are very similar to those obtained for the longer time period. The effect under unified government remains negative and highly significant; it is only slightly stronger (yet not significantly so) in the pre-unification period. Note also that for these sub-samples we no longer find any significant midterm losses under divided government. Overall, there is little indication that the choice of time period is driving our results.

Various specifications. In Table 3, we test the sensitivity of our model to a range of alternative econometric specifications. We again focus on the 'all

TABLE 2 MIDTERM LOSS IN GERMAN ELECTIONS (PRE-UNIFICATION AND POST-1971)

Time Frame	1949-89		1971-2004			
Parties	All Parties	CDU, SPD	All Parties	CDU, SPD		
Dependent Variable	Change in State-Party Vote Share from Last State Election (Percentage Points)					
Model No.	1	2	4	5		
Lagged vote share	-0.436 (0.052)***	-0.263 (0.074)***	-0.668 (0.067)***	-0.197 (0.132)		
Turnout	-0.128 (0.175)	-0.329 (0.205)	-0.001 (0.102)	0.044 (0.167)		
State government	-0.799 (1.028)	1.765 (1.065)	0.946 (0.701)	-0.118 (1.438)		
Federal government (divided gov.) $\theta_1$	-1.004 (0.793)	-1.027 $(0.715)$	-1.300 (0.662)*	-0.130 (1.410)		
Federal government $\times$ Bundesrat majority $\theta_3$	-3.695 (1.436)**	-4.075 (2.326)*	-2.508 (1.099)**	-4.707 (2.607)*		
Bundesrat majority $\theta_2$	3.093 (1.331)**	1.933 (1.508)	2.105 (1.755)	1.942 (1.695)		
Constant	53.557 (23.520)**	43.373 (17.761)**	33.101 (10.326)***	12.534 (14.553)		
Federal government (unified gov.) $\theta_1 + \theta_3$	-4.699 (0.910)***	-5.102 (1.797)**	-3.808 (0.944)***	-4.837 (1.622)***		
Year effects	yes	yes	yes	yes		
State-party fixed effects	yes	yes	yes	yes		
Observations	398	193	396	172		
R-squared	0.43	0.46	0.36	0.30		

OLS regression coefficients shown; robust standard errors, adjusted for potential within state-party clustering, in parentheses. All models include a full set of year and state-party (CDU/SPD specifications only state) fixed effects (coefficients not shown).

<sup>\*</sup>Significant at 0.10;

<sup>\*\*</sup>significant at 0.05;

<sup>\*\*\*</sup>significant at 0.01.

 ${\small \textbf{TABLE 3}} \\ {\small \textbf{MIDTERM LOSS IN GERMAN ELECTIONS (ROBUSTNESS SECTION)}}$ 

			1949-2004			
Party Selection  Dependent Variable		All Parties		CDU, SPD		
		Change in State-Party Vote Share from Last State Election (Percentage Points)				
	Federal Gov. (Unified) $\theta_1 + \theta_3$	Federal Gov. (Divided) $\theta_1$	Federal Gov. (Unified) $\theta_1 + \theta_3$	Federal Gov. (Divided) $\theta_1$		
Specification						
e Analysis						
Baseline	-4.112 (0.982)***	-1.300 (0.578)**	-4.354 (1.422)***	-0.764 (0.746)		
Omitting one state at a time: maximum effect	-4.525 (1.079)***	-1.359 (0.630)**	-5.088 (1.474)***	-0.731 (0.811)		
Omitting one state at a time: minimum effect	-3.389	-1.462	-3.597	-0.691 (0.892)		
urther state-level covariates	(*** * *)	(*****)	(====)	(**** =)		
State GDP per capita growth	-3.371	-0.783	-5.088	1.469		
Changes in state expenditures	(1.130)***	(0.749)	(1.797)***	(1.111)		
Plus all interactions with state government	-3.207 $(1.172)***$	-0.924 (0.707)	-4.919 (1.810)**	1.578 (1.021)		
tate-level plus federal-level covariates						
State-level covariates as in (B) plus Federal GDP growth; changes in inflation and unemployment	-3.427 (1.661)**	-1.211 (0.795) -0.788	-5.519 (2.156)** -6.306	1.131 (1.249) 1.588		
23 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Specification  Analysis Baseline  Omitting one state at a time: maximum effect  Omitting one state at a time: minimum effect  Orither state-level covariates state GDP per capita growth  Changes in state expenditures Plus all interactions with state government  State-level plus federal-level covariates state-level covariates as in (B) plus		Variable  Change in State-Party Vote (Percer  Federal Gov. (Unified) (Divided) $\theta_1 + \theta_3$ $\theta_1$ Specification  Analysis Baseline $-4.112 -1.300$ $(0.982)^{***}$ $(0.578)^{**}$ Omitting one state at a time: maximum effect $-4.525 -1.359$ $(1.079)^{***}$ $(0.630)^{**}$ Omitting one state at a time: minimum effect $-3.389 -1.462$ $(0.974)^{***}$ $(0.649)^{**}$ Analysis  Analysis  Omitting one state at a time: maximum effect $-3.389 -1.462$ $(0.974)^{***}$ $(0.649)^{**}$ Analysis  Analysis  Omitting one state at a time: maximum effect $-3.389 -1.462$ $(0.974)^{***}$ $(0.649)^{**}$ Analysis  Analysis  Omitting one state at a time: maximum effect $-3.389 -1.462$ $(0.974)^{***}$ $(0.649)^{**}$ Analysis  Analysis  Omitting one state at a time: maximum effect $-3.389 -1.462$ $(0.974)^{***}$ $(0.649)^{***}$ Analysis  Analysis	Variable $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		

	(1.463)**	(0.697)	(2.237)***	(1.179)
g Eastern Germany				
Benchmark covariates only	-4.112	-1.300	-4.354	-0.764
	(0.982)***	(0.578)**	(1.422)***	(0.746)
Plus full set of state- and federal-level covariates	-3.438	-1.740	5.921	-2.081
and all interactions with state government	(1.585)**	(0.792)**	(2.003)***	(1.272)
ding state elections under grand coalition				
Benchmark covariates only	-3.116	-1.535	-3.538	-0.696
	(1.051)***	(0.676)**	(1.322)**	(0.897)
Plus full set of state- and federal-level covariates	-3.293	-0.874	-5.775	1.571
and all interactions with state government	(1.530)**	(0.709)	(1.874)***	(1.134)
nting by state population				
Benchmark covariates only	-3.553	-2.173	-2.123	-2.592
	(1.116)***	$(0.700)^{***}$	(1.048)**	(1.135)**
Plus full set of state- and federal-level covariates	-4.294	-1.099	-6.118	0.685
and all interactions with state government	(1.307)***	(0.875)	(1.501)***	(0.803)
ng full set of state-party/year interactions				
Benchmark covariates only	-4.869	-1.170	-6.890	-0.663
•	(1.177)***	(0.696)*	(2.412)***	(1.263)
Plus full set of state- and federal-level covariates	-4.897	-0.934	-7.665	2.306
and all interactions with state government	(2.054)**	(1.172)	(1.971)***	(0.930)**
	Plus full set of state- and federal-level covariates and all interactions with state government ding state elections under grand coalition Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government atting by state population Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government and all interactions with state government are full set of state-party/year interactions Benchmark covariates only  Plus full set of state- and federal-level covariates	Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government  ding state elections under grand coalition  Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government  (1.585)**  ding state elections under grand coalition  Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government  inting by state population  Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government  inting by state population  Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government  integral set of state-party/year interactions  Benchmark covariates only  Plus full set of state-party/year interactions  Benchmark covariates only  -4.869  (1.177)***  Plus full set of state- and federal-level covariates  -4.897	Benchmark covariates only  Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government  Constant of the federal state and federal state government  Benchmark covariates only  Benchmark covariates only  Plus full set of state- and federal-level covariates and all interactions with state government  Benchmark covariates only  Benchmark	Benchmark covariates only

The results in this table are variations of the baseline specification presented in Tables 1 and 2, column 4; the top row of the table reproduces these benchmark estimates. Thus, all models estimated here include the benchmark controls and a full set of year and state-party (CDU/SPD specifications only state) fixed effects (coefficients not shown). Except when noted otherwise, all specifications are estimated using our annual state-party panel data for the years 1949–2004 for all West German states. OLS regression coefficients shown; robust standard errors, adjusted for potential within state-party clustering, in parentheses.

<sup>\*</sup>Significant at 0.10;

<sup>\*\*</sup>significant at 0.05;

<sup>\*\*\*</sup>significant at 0.01.

parties' and the CDU/SPD sub-samples. As a benchmark, we use the baseline estimate (Table 1, columns 2 and 5) and add covariates or alter the econometric specifications of the model as we move down the rows. To economise on space, only the federal government membership coefficient under divided government and the combined effect for the federal government membership coefficient under unified government are reported in each row of Table 3. In other words, each row presents a different specification.

We begin with a Jack-knife analysis, in which we iteratively re-estimate our model omitting one state at a time. The central findings remain robust across all models. Rows 2 and 3 show the maximum and minimum effect of federal government membership that we obtained under unified and divided government. Regardless of party selection, omitting one state at a time has very little impact on the magnitude of the coefficients. They vary only marginally around the benchmark estimates (row 1); in fact, we cannot even reject the null hypothesis that the minimum and maximum effects are identical to the benchmark magnitude.

In row 4, we add (log differenced) state-level covariates for economic growth and changes in state expenditures. Across party selections, these covariates are highly insignificant; they have virtually no impact on the magnitude of our federal government membership effects. Note that any changes in magnitude are entirely due to the sharp drop in sample size associated with the inclusion of the state-level covariates, which are only available from the 1970s onward. The same holds true when we add interactions for these state-level variables and the state government dummy to allow for a different effect of state-level changes for incumbent and opposition parties (row 5). Again, all state-level variables and their interactions are highly insignificant; the magnitude of the midterm loss remains unaffected. These results strongly suggest that when past vote shares, state government membership, common shocks and unobserved fixed effects are taken into account, state-level factors have little systematic impact on vote shares in state elections.

In rows 6 and 7, we repeat the same exercise with a full set of federal-level covariates for changes in unemployment, inflation and growth. We again first add these variables on their own and then include a full set of interactions with state government membership. The results mirror those obtained with state-level covariates. Across party selections, the great majority of federal-level variables fail to reach conventional levels of statistical significance. The base-line estimates remain unaffected even if the full set of controls and interactions is added to the model. Our results therefore depart from prior studies, which found significant effects of economic variables for the German case. Appointed out above, this divergence is presumably attributable to the fact that earlier studies did not difference out the cross-sectional variation.

Next, we extend the sample scope and add all post-unification state elections in Eastern Germany to the model. Rows 8 and 9 display the resulting federal government membership coefficients for the baseline model without (row 8) and including (row 9) a full set of state- and federal-level covariates plus all their interactions. We find that across party selections the inclusion of the New Länder has only little impact on the central findings. The same holds true if, going back to the original sample of the 11 West German states, we exclude those state elections that took place during the 'grand coalition' between the CDU and SPD under Chancellor Kiesinger in 1966-69. The results for this test are displayed in row 10 for the benchmark model and in row 11 for the benchmark model augmented with the full set of state- and federal-level controls plus interactions. Once these ambiguous cases are excluded, midterm losses under divided government become, if anything, larger. Our results also hold if we weight the benchmark regression by state population to control for bias caused by dissimilar state population sizes (rows 12 and 13). There is no sign that larger states are driving the results (the magnitude of the midterm loss is somewhat reduced, yet highly significant for the CDU/SPD selection in the model without covariates).

Finally, omitted variable bias might be a concern given the relatively limited set of covariates available. One crude way of addressing this problem is to include state-party/year interaction terms in an attempt to absorb geographically correlated shocks. The federal government membership coefficients are not substantially affected by this approach, regardless of which party selection is considered or whether we examine the standard or the fully augmented benchmark model (rows 14 and 15). Midterm losses get, if anything, larger.

Taken together, these results firmly corroborate our central findings. Most importantly, under unified government the effect of being in power at the federal level is robust across all specifications, no matter which party sample we examine. Moreover, across specifications and party selections its magnitude is fairly stable, between 3 and 7 percentage points, which strongly suggests that we are capturing a systematic pattern, not some econometric artefact.

#### CONCLUSIONS

In this article, we have taken a fresh look at the midterm loss in German state elections. Using a new measure for unified and divided government, we found that systematic midterm losses occur only when the Bundestag and Bundesrat (the lower and upper chamber of the federal legislature) are both controlled by the same party coalition. Under such conditions of unified government, midterm losses reach considerable proportions, making unified government in Germany unsustainable in the medium- to long-run.

In contrast to the earlier literature, we find little support for more traditional explanations of midterm loss such as 'surge-and-decline' or 'referenda'. Our findings strongly support the more recent electoral balancing models, which is somewhat ironic given the outcomes of the 1998 and 2002 American congressional midterm elections in which the electorate, instead of balancing the incumbent, decided to increase his share of seats. None the less, we do not think that the adequacy of any model should be judged based on only one or two observations. In this sense, it is reassuring to see that a model originally formulated with the US Congress in mind travels so well to other political contexts. Testing it with a new data set allows us to overcome some of the limitations that result from the unfortunate split between the fields of American and comparative politics. Beyond extending our knowledge about the dynamics of German elections, our results should therefore also be of interest to students of voting behaviour in general.

#### NOTES

- P. Norris and F. Feigert, 'Government and Third-party Performance in Midterm By-elections: The Canadian, British, and Australian Experience', *Electoral Studies*, 8 (1989), pp.117–30; M.S. Shugart, 'The Electoral Cycle and Institutional Sources of Divided Presidential Government', *American Political Science Review*, 89 (1995), pp.1–17.
- A. Alesina and H. Rosenthal, 'Partisan Cycles in Congressional Elections and the Macroeconomy', American Political Science Review, 83 (1989), pp.373–98; A. Alesina and H. Rosenthal, Partisan Politics, Divided Government, and the Economy (Cambridge and New York: Cambridge University Press, 1995); A. Alesina and H. Rosenthal, 'A Theory of Divided Government', Econometrica, 64 (1996), pp.1311–41; M. Fiorina, Divided Government (New York: Macmillan, 1992).
- 3. T. Bräuninger and T. König, 'The Checks and Balances of Party Federalism: German Federal Government in a Divided Legislature', *European Journal of Political Research*, 36 (1999), pp.207–34; T. König, 'Bicameralism and Party Politics in Germany: an Empirical Social Choice Analysis', *Political Studies*, 49 (2001), pp.411–37.
- 4. We should note here that German state elections do not necessarily take place in the middle of the term of the federal legislature (so 'midterm' losses do not necessarily take place at midterm). They also do not redress the outcome of a previous federal election, like American midterm elections, but rather affect the balance of power at the national level through their effect on the composition of state governments. We none the less refrain from putting midterm loss in inverted commas (except in the title), as doing so would unduly clutter the text. We thank the anonymous reviewers for urging us to be more explicit about these differences.
- Alesina and Rosenthal, 'Partisan Cycles in Congressional Elections and the Macroeconomy'; Alesina and Rosenthal, Partisan Politics, Divided Government, and the Economy; Alesina and Rosenthal, 'A Theory of Divided Government'; Fiorina, Divided Government.
- 6. R.S. Erikson, 'The Puzzle of Midterm Loss', Journal of Politics, 50 (1988), pp.1011-19.
- B.I. Oppenheimer, J.A. Stimson, and R. Waterman, 'Interpreting U.S. Congressional Elections: The Exposure Thesis', *Legislative Studies Quarterly*, 11 (1986), pp.227–47; J.E. Campbell, 'Explaining Presidential Losses in Midterm Congressional Elections', *Journal of Politics*, 47 (1985), pp.1140–57; B. Hinckley, 'Interpreting House Midterm Elections: Toward a Measurement of the In-party's Expected Loss of Seats', *American Political Science Review*, 61 (1967), pp.694–700.
- 8. Campbell, 'Explaining Presidential Losses in Midterm Congressional Elections', p.1140.

- 9. A. Campbell, 'Surge and Decline: A Study of Electoral Change', in A. Campbell (ed.), *Elections and the Political Order* (New York: Wiley, 1966).
- 10. E.R. Tufte, 'Determinants of the Outcomes of Midterm Congressional Elections', *American Political Science Review*, 69 (1975), pp.812–26; E.R. Tufte, *Political Control of the Economy* (Princeton, NJ: Princeton University Press, 1978).
- Alesina and Rosenthal, 'Partisan Cycles in Congressional Elections and the Macroeconomy'; Alesina and Rosenthal, Partisan Politics, Divided Government, and the Economy; Alesina and Rosenthal, 'A Theory of Divided Government'; Fiorina, Divided Government.
- 12. W.R. Mebane Jr., 'Coordination, Moderation, and Institutional Balancing in American Presidential and House Elections', *American Political Science Review*, 94 (2000), pp.37–57; W.R. Mebane Jr. and J.S. Sekhon, 'Coordination and Policy Moderation at Midterm', *American Political Science Review*, 96 (2002), pp.141–57.
- 13. The work done by Lohmann et al., discussed below, is the sole exception.
- 14. The CSU runs only in Bavaria, and the CDU runs in all states except Bavaria. The two parties always form a single parliamentary faction in the Bundestag. Following earlier work [K. Bawn, 'Voter Responses to Electoral Complexity: Ticket Splitting, Rational Voters and Representation in the Federal Republic of Germany', *British Journal of Political Science*, 29 (1999), pp.487–505; S. Lohmann, 'Federalism and Central Bank Independence: The Politics of German Monetary Policy, 1957–92', *World Politics*, 50 (1999), pp.401–46; B.J. Gaines and C. Crombez, 'Another Look at Connections Across German Elections', *Journal of Theoretical Politics*, 16 (2004), pp.289–319], we treat the CDU/CSU as a single party.
- 15. If a majority of the Bundesrat vetoes a bill, it takes an absolute Bundestag majority to override it. If a two-thirds Bundesrat supermajority vetoes a bill, two-thirds of the present members of the Bundestag are needed to override the veto. For a concise summary, see P. Schindler, Datenhandbuch zur Geschichte des deutschen Bundestages 1949 bis 1999: Gesamtausgabe in drei Bänden (Baden-Baden: Nomos, 1999), p.2928.
- 16. Schindler, Datenhandbuch zur Geschichte des deutschen Bundestages 1949 bis 1999: Gesamtausgabe in drei Bänden, p. 2428.
- 17. G. Lehmbruch, *Parteienwettbewerb im Bundesstaat* (Stuttgart: Kohlhammer, 1976). German states have several other ways to influence federal policies. Constitutional amendments, for example, require a two-thirds supermajority in the Bundesrat. Moreover, most federal laws are actually administered by state bureaucracies, which also tends to increase the influence of the states. See P. Badura, *Staatsrecht* (Munich: C.H. Beck, 1986).
- 18. Bräuninger and König, 'The Checks and Balances of Party Federalism: German Federal Government in a Divided Legislature'; König, 'Bicameralism and Party Politics in Germany: an Empirical Social Choice Analysis'; Lohmann, 'Federalism and Central Bank Independence: The Politics of German Monetary Policy, 1957–92'.
- 19. F. W. Scharpf, 'The Joint-Decision Trap: Lessons from German Federalism and European Integration', *Public Administration*, 66 (1988), pp.239–78.
- 20. Bräuninger and König, 'The Checks and Balances of Party Federalism: German Federal Government in a Divided Legislature'; König, 'Bicameralism and Party Politics in Germany; an Empirical Social Choice Analysis'.
- R. Dinkel, 'Der Zusammenhang zwischen Bundes- und Landtagswahlergebnissen', *Politische Vierteljahresschrift*, 18 (1977), pp.348–59; R. Dinkel, 'Zur Gesetzmässigkeit der Trendverschiebungen zwischen Landtags- und Bundestagswahlen', *Zeitschrift f\( \tilde{u}r \) Parlamentsfragen*, 12 (1981), pp.135–39.
- 22. In 1997, Reformstau (gridlock) was elected 'Word of the Year' by the Society for the German language (Gesellschaft fűr Deutsche Sprache).
- 23. C.J. Anderson and D.S. Ward, 'Barometer Elections in Comparative Perspective', *Electoral Studies*, 15 (1996), pp.447–60.
- 24. C. Jeffery and D. Hough, 'The Electoral Cycle and Multi-level Voting in Germany', German Politics, 10 (2001), pp.73–98; D. Hough and C. Jeffery, 'Landtagswahlen: Bundestestwahlen oder Regionalwahlen', Zeitschrift für Parlamentsfragen, 34 (2003), pp.79–94; F. Decker and J. von Blumenthal, 'Die bundespolitische Durchdringung der Landtagswahlen. Eine

- empirische Analyse von 1970 bis 2001', *Zeitschrift für Parlamentsfragen*, 33 (2002), pp.144–65; S. Burkhart, 'Parteipolitikverflechtung. Der Einfluss der Bundespolitik auf Landtagswahlentscheidungen von 1976 bis 2002', Working paper, Max-Planck-Institut für Gesellschaftsforschung.
- See Jeffery and Hough, 'The Electoral Cycle and Multi-level Voting in Germany'; Hough and Jeffery, 'Landtagswahlen: Bundestestwahlen oder Regionalwahlen'; Burkhart, 'Parteipolitikverflechtung. Der Einfluss der Bundespolitik auf Landtagswahlentscheidungen von 1976 bis 2002'.
- S. Lohmann, D.W. Brady and D. Rivers, 'Party Identification, Retrospective Voting, and Moderating Elections in a Federal System. West Germany, 1961–1989', Comparative Political Studies, 30 (1997), pp.420–49.
- 27. Gaines and Crombez, 'Another Look at Connections Across German Elections'.
- 28. J.W. Tukey, Exploratory Data Analysis (Reading, MA: Addison-Wesley, 1977); J.W. Tukey, 'Graphic Comparisons of Several Linked Aspects: Alternatives and Suggested Principles (with Discussion)', Journal of Computational and Graphical Statistics, 2 (1993), pp.1–49. A state party is a party in a specific state. In other words, in our empirical analysis we distinguish between, say, the SPD in Bavaria and the SPD in Berlin, treating them as two different parties and allowing for different intercepts for each of them.
- 29. The only other party in the Bundestag during this period was the FDP, with less than 10 per cent of the seats.
- 30. Anderson and Ward, 'Barometer Elections in Comparative Perspective'.
- 31. We conducted a series of Hausman tests, and the null hypothesis that random effects are consistent and efficient is clearly rejected. Results are available upon request.
- 32. Pre-unification state elections in Berlin have been excluded from the sample because of Berlin's unique political status. Berlin's representatives participated in sessions of the Bundestag and Bundesrat but had no right to vote. Elections in the Saarland have been excluded until its reintegration into West Germany in 1957. The Greens were not formed until the late 1970s. It should also be noted that the PDS only enjoys significant support in Eastern Germany. Our sample period ends in March 2004.
- 33. Data on election results were provided by the German Federal Returns Officer. Data on Bundesrat vote shares for 1949–96 were taken from Schindler, Datenhandbuch zur Geschichte des deutschen Bundestages 1949 bis 1999: Gesamtausgabe in drei Bänden; Data for 1997–2004 were supplied by the administration of the Bundesrat. Data on state coalition governments for 1945–97 were also taken from Schindler's book; data for the period 1999–2004 were supplied by the respective state governments. Data on state and federal per capita GDP, population figures, per capita state expenditures and gross fixed capital formation were supplied by the German Federal Statistical Office. Inflation figures are from the World Bank and unemployment figures from the Bundesagentur f\u00fcr Arbeit (Federal Unemployment Agency).
- 34. Oppenheimer et al., 'Interpreting U.S. Congressional Elections: The Exposure Thesis'.
- 35. Schindler, Datenhandbuch zur Geschichte des deutschen Bundestages 1949 bis 1999: Gesamtausgabe in drei Bänden, p.2348.
- 36. We have also re-estimated our models using a more inclusive variable (which measures whether a federal coalition holds a plurality of seats in the Bundesrat instead of the majority), again with partially overlapping state coalition governments not contributing seats towards the federal coalition's plurality. The results are substantively similar and available upon request.
- 37. The variance for the combined effect is computed as  $Var(\theta_{combined}) = Var(\theta_1) + Var(\theta_3) + 2*Cov(\theta_1, \theta_3)$ .
- 38. Dinkel, 'Der Zusammenhang zwischen Bundes- und Landtagswahlergebnissen'; Lohmann *et al.*, 'Party Identification, Retrospective Voting, and Moderating Elections in a Federal System. West Germany, 1961–1989'.
- 39. Campbell, 'Surge and Decline: A Study of Electoral Change'.
- 40. Results are available upon request.
- 41. Dinkel, 'Der Zusammenhang zwischen Bundes- und Landtagswahlergebnissen'; Lohmann *et al.*, 'Party Identification, Retrospective Voting, and Moderating Elections in a Federal

- System. West Germany, 1961–1989'; Anderson and Ward, 'Barometer Elections in Comparative Perspective'.
- 42. Jeffery and Hough, 'The Electoral Cycle and Multi-level Voting in Germany'; Hough and Jeffery, 'Landtagswahlen: Bundestestwahlen oder Regionalwahlen'.
- 43. Lohmann *et al.*, 'Party Identification, Retrospective Voting, and Moderating Elections in a Federal System. West Germany, 1961–1989'.
- 44. All first differences are defined as changes in a particular covariate from the preceding to the current election year. Following Paldam, election year is defined as the current year if the election occurs in the second semester and the year before the election year if the election takes place in the first semester. See M. Paldam, 'Testing Alesina's Theory of RE Partisan Cycles On Data For Seventeen Countries', in N. Thygesen, K. Velupillai and S. Zambelli (eds.), Business Cycles: Theories, Evidence, and Analysis (New York: New York University Press, 1991).
- 45. If we re-estimate the model only for years for which state-level data are available while omitting the state covariates, we obtain almost identical estimates.
- 46. We were not able to obtain state-level unemployment data for any reasonable period of time. We are confident that their inclusion would not materially alter our findings.
- 47. Anderson and Ward, 'Barometer Elections in Comparative Perspective'; Lohmann *et al.*, 'Party Identification, Retrospective Voting, and Moderating Elections in a Federal System. West Germany, 1961–1989'.