Gubernatorial Midterm Slumps*

Olle Folke
School of International and Public Affairs
Columbia University
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James M. Snyder, Jr.
Department of Government
Harvard University
NBER

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Abstract

This paper studies gubernatorial midterm slumps in U.S. state legislative elections. We employ a regression discontinuity design, which allows us to rule out the hypothesis that the midterm slump simply reflects a type of "reversion to the mean" generated by simple partisan swings or the withdrawal of gubernatorial coattails, or "anticipatory balancing." Our results show that the party of the governor on average experiences a seat share loss of about 3.5 percentage points. We also find suggestive evidence that midterm slumps can be accounted for by (i) crude partisan balancing, and (ii) referendums on state economic performance, with approximately equal weight given to each.

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1. Introduction

The presidential midterm slump is one of the most regular and salient features of U.S. elections. Since 1876, the party controlling the presidency has lost congressional seats in all but 3 midterm elections, with an average loss of more than 8%.

While the phenomenon has been studied intensely by numerous scholars, there is still widespread disagreement about the underlying causes. One view holds that the midterm slump represents nothing more than "reversion to the mean." The party that wins the presidency in a given year must have done better than average, and presidential coattails mean that the party also won more congressional seats than average, so in the midterm election two years later that party should expect to lose seats (Hinckley, 1967; Campbell, 1985; Kiewiet and Rivers, 1985; Oppenheimer, et al., 1986). A related idea is "surge and decline," which argues that the midterm slump is driven by changes in the composition of the electorate (Campbell, 1966; Campbell, 1986, 1987, 1991, 1997; Born, 1990). Presidential elections are relatively exciting, and draw many citizens to the polls who do not vote in other elections. These citizens disproportionately vote for the party that wins the presidency, and coattails yield that party a disproportionate number of congressional victories as well. When these citizens fail to vote in the subsequent midterm elections, the president's party loses congressional seats.

Another view is that the midterm slump represents a direct voter reaction to the president or the president's party. After all, the presidency is by far the most visible and powerful political office in the nation. Tufte (1975) argues that midterm elections are essentially referendums on presidential performance, especially but not exclusively regarding the economy. Citing results from psychology that negative evaluations are more powerful at motivating political behavior than positive evaluations, Kernel (1977) argues that "negative voting" against the president tends to dominate in midterm elections. Patty (2006) makes a somewhat related argument, focusing on loss aversion and its implications for turnout. Another argument is that voters engage in ideological, policy or partisan balancing (Erikson, 1988; Alesina and Rosenthal, 1989, 1995, 1996; Alesina, et al., 1993). Assuming Democratic presidents tend to promote policies that are more liberal than those desired by the most citizens,

and Republican presidents tend to promote policies that are more conservative than those desired by the most citizens, voters can use midterm elections to counteract the results of presidential elections. By electing congressional representatives of the opposite political party they make it more likely that the president and congress will have to bargain to pass legislation, and the resulting policies will tend to be more moderate. Another type of behavior consistent with balancing theory is the possibility that voters can perform anticipatory balancing when they expect a presidential landslide – Erikson (2010) finds empirical evidence for this.[1]

In this paper take the ideas above to the U.S. states, and analyze *gubernatorial* midterm slumps. We demonstrate that the phenomenon exists for governors' parties, and while smaller in magnitude than the presidential midterm slump it is quite regular and persistent since World War II. More importantly, switching attention to states yields nearly 30 times as much data, and this massive gain allows us to conduct a number of analyses that would be impossible at the national level.

The first thing we do is employ a regression discontinuity design (RDD) to estimate the causal effect of gubernatorial party control on midterm election outcomes.[2] The identifying assumption is that when the margin of victory in the gubernatorial election is very small, the party of the governor is decided in an essentially random manner. This "as if random" assignment allows us to rule out all other factors that could be correlated with both the party of the governor and the midterm change in seats, such as swings in party support, changes in the electorate, anticipatory balancing, and gubernatorial coattails.

An RDD is particularly well suited for the specific question we are examining. The main confounding factor of concern is the withdrawal of gubernatorial coattail, which could easily bias the estimated effect of gubernatorial control. Given that the parties in the RDD have essentially equal support in the gubernatorial election, the coattail withdrawal effect will be the same for the two parties. The focus on close – and therefore uncertain – elections also allows us to rule out that other effects, such as anticipatory balancing, bias the estimates.

[1] Many other empirical papers attempt to assess the various explanations for presidential midterm slump, including Born (1986), Levitt (1994), Scheve and Tomz (1999), Mebane (2000), and Bafumi et al. (2010).

[2] See, e.g., Imbens and Lemieux (2008) for an overview of the RDD methodology. See, e.g., Lee, et al. (2004) and Ferreira and Gyorko (2009) for applications involving U.S. elections.

Note also that one common critique of RDD analyses is that the sub-sample of close elections are not the most interesting observations. For the midterm slump phenomenon, however, these may in fact be the most interesting cases, for the reasons mentioned above.

The estimates show that the party of the governor systematically loses legislative seats in midterm elections, and, on average, the loss is about 3.5 percentage points. Given our identification strategy we can interpret this as a causal effect. Thus, we can rule out the hypothesis that the midterm slump represents nothing more than reversion to the mean. This conclusion is supported by other results and several robustness checks. First, our results show a persistent effect from 1878 to 2008. The results are even more stable in the post-WWII era. Second, the negative effect is larger in non-presidential election years, indicating that the slumps are larger when state politics are relatively more salient. Third, changing the set of control variables does not substantially change the estimates. Finally, placebo tests also support the identifying assumption. The bottom line from this analysis is strong evidence that there is a *direct* effect of the party of the executive on midterm seat loss.

We next explore two of the hypotheses from the third paragraph above, ideological/partisan balancing, and the referendum hypothesis. Here the estimates must be treated more tentatively than those based on the RDD, due to the standard possible problems of omitted variable bias and endogenous variable bias that plague most observational studies. Nonetheless, the results are so striking that they are worth reporting. The estimates suggest that most if not all of the gubernatorial midterm slump can be accounted for by broad partisan balancing and a referendum on state economic performance, with approximately equal weight given to each.

2. Data and Specifications

2.1. Data

We focus on two time periods, 1882 to 2008 and the post-WWII period, 1946-2008. The main dependent variable is the partisan division of seats in state lower houses. We focus on lower chambers because most upper chambers have staggered terms, similar to the U.S.

senate, and many of them are quite small.[3] The data on state legislative seats are from Dubin (2007). One key independent variable is the partisan division of the vote in gubernatorial elections. This is from the ICPSR and publications by the election officials of each state. Other variables are: state personal income and population, from the Bureau of Economic Analysis; governor approval ratings, from the U.S. Officials' Job Approval Ratings website; and DW-Nominate scores, from Poole and Rosenthal (2007).

Term lengths for governors and state legislators vary across states and over time. Currently, the governors of all states except New Hampshire and Vermont serve four-year terms. However, at the beginning of the time period studied in this paper, almost a third of the states' governors served two-year terms. Most of these states had introduced four-year terms by the 1960's. Most states with two-year terms for the governor do not have any midterm elections where only state legislators are elected. There are two exceptions, New Jersey and New York.[4]

There is also some variation in term lengths for state legislators. Currently, in four states the legislators in the lower house have four-year terms, while the rest have two-year terms.[5] For the upper house, forty states have four-year terms, while the remainder have two-year terms. The majority of the states with four-year terms have staggered elections, in which half of the legislators are elected every second year. We drop Nebraska after 1936, and Minnesota from 1914 to 1948, since they had non-partisan legislatures.[6]

The dependent variable is distributed quite symmetrically about 0, with a mean of 0.3, a standard deviation of 13.0, and an inter-quartile range of -5.2 to 4.3. The 5th percentile

[3]Analyzing the upper chambers we find similar effects at least for the post-WWII period, but the estimates are less precise. We present results on the upper house in section 3.4 below.

[4]In New Jersey the governor served a three-year term until 1949. New Jersey also had annual lower-house elections. This gives two "midterm" elections in New Jersey from 1882-1948. In New York the governor served a three-year term until 1894, then a two-year term until 1938. New York also had annual lower-house elections until 1938. This gives two "midterm" elections in New York from 1882-1893, and one from 1895 to 1937. Connecticut had one-year term state representatives and a two-year term governor, but only until 1886, so this only gives two midterm observations in our sample period. State representatives in Massachusetts (until 1920), Rhode Island (until 1912) also had one-year terms, but in these states the governors also had one-year terms so there are no midterm elections.

[5]The states with four-year terms are Alabama, Louisiana, Maryland (since 1926), and Mississippi.

[6]Minnesota actually had non-partisan elections until 1973, but almost all legislators sorted into liberal and conservative caucuses aligned with the major parties by about 1950. Dubin (2007) uses these to give party breakdowns starting in 1950.

is at -21.8 and the 95th percentile is at 21.8. The Democrats control the governorship in 54.8% of our midterm elections. One important feature of the data is the large number of close gubernatorial elections, at least outside the south. The gubernatorial election margin variable is distributed symmetrically about 0, with a mean of 0.8, a standard deviation of 9.3, and an inter-quartile range of -4.2 to 5.9. In nearly half of the elections in our sample (433 out of 873) the winning margin is below 5%.

2.2 Specifications

We consider three different specifications for estimating the effect of the gubernatorial party on state legislative midterm slumps: (i) OLS, (ii) a RDD specification with a flexible control polynomial, and (iii) a RDD specification where only close elections are included.

Let t index state legislative election years, and let i index states. Let S_{it}^D be the share of lower house seats won by Democrats in state i in election t; let $C_{it}^D = S_{it}^D - S_{i,t-1}^D$ be the change in the Democratic seat share in state i between the gubernatorial election at time $t-1$ and the midterm election at time t; and let $G_{i,t-1}^D$ be a dummy variable indicating whether or not state i has a Democratic governor at time $t-1$. In each specification we also control for the change in the Democratic share of seats in the U.S. congress between $t-1$ and t, N_t^D, as a proxy for national swings in party popularity.[7] This term is not needed for our identifying assumptions to hold, but it typically reduces the estimated standard errors. In the robustness checks we show that our conclusions are similar whether or not this variable is included.

In the OLS we estimate the simple relationship between C_{it}^D and $G_{i,t-1}^D$:

$$C_{it}^D = \beta_0 + \beta_1 G_{i,t-1}^D + \gamma N_t + \epsilon_{it} \tag{1}$$

where β_1 measures the impact of having a Democratic governor on the midterm change in the Democratic seat share. We expect $\beta_1 < 0$ if there is a midterm slump.

The RDD regressions follows two of the standard RDD approaches. First we use the full

[7]Note that S_{it}^D, $G_{i,t-1}^D$ and N_t^D are defined in terms of the two-party share. Therefore, we only include cases where the Democrats and Republicans together controlled at least 90% of the seats in the state lower house. Also, we only include gubernatorial elections in which the Democratic and Republican candidates finished first and second in terms of votes, and in which the winner received less than 95% of the vote.

sample and include a control function. The forcing variable is the Democratic vote share in the gubernatorial election in state i at time $t-1$, $V^D_{i,t-1}$. The control function is a low-order polynomial of $V^D_{i,t-1}$. We present results for 3rd- and 4th-degree polynomials in the tables below, but we also considered 1st- and 2nd-degree polynomials.[8]

The specification is then:

$$C^D_{it} = \beta_0 + \beta_1 G^D_{i,t-1} + \gamma N_t + f(V^D_{i,t-1}) + \epsilon_{it} \tag{2}$$

where $f(V^D_{i,t-1})$ is the control function.

The second RDD approach is to use the OLS specification, equation (1) above, but limit the sample to "close" elections – i.e., those where the winner's share of the vote is close to 50%. We consider a variety of different thresholds to define close elections, including 5, 4, 3, 2 and 1 percentage points. Our preference if for the tighter thresholds, such as 52%, because it seems unlikely that outcomes of elections where the winner's vote share is 55% can be considered "as good as random." We include the less stringent thresholds, however, for two reasons. First, these thresholds are commonly used in the RDD literature. Second, presenting the full battery of estimates shows whether or not the estimates found using tight bounds – which have small sample sizes – are stable as we move away from the threshold and increase the sample size.

3. Basic Results

3.1. Graphical Analyses

Following previous RDD work, we begin with a graphical analysis. Figures 1(a)–1(d) show binned averages of the midterm change in Democratic percentage of lower house seats, C^D_{it}, as a function of the percentage of votes received by the Democratic gubernatorial candidate, $G^D_{i,t-1}$. To reduce the noise in the graphs we subtract the national swings in party popularity, N^D_t, from the change in state legislative seats. The range of $G^D_{i,t-1}$ in the figures is 40% to 60%, which covers 74% of the observations in our sample. The interval for each bin is 1

[8]The estimates of β_1 using a 1st- or 2nd-degree polynomial are often even *larger* in magnitude than the estimates with no control function; otherwise, they tend to lie between the estimates with no control function and those with a higher-order polynomial.

percentage point. Figure 1(a) is for the full sample from 1882 to 2008, 1(b) limits the sample to non-presidential election years, 1(c) shows the period up to the end of WWII, and 1(d) shows the period after WWII.[9]

It seems clear from Figure 1(a) that for the full sample C_{it}^{D} falls as we cross the 50% threshold and move from Republican gubernatorial control to Democratic control. The downward shift appears to be around 3-4 percentage points. Note that despite the variation across bins, there are no bins to the left of the threshold with a negative value, and none to the right of the threshold with a positive value. There appears to be some downward trending as well, which is consistent with the reversion to the mean hypothesis, but it is mainly driven by the observations far from the threshold. For example, if we focus on the observations with $V_{i,t-1}^{D}$ between -5% and 5% then there is little or no trending.

The downward shift across the threshold seems to be even larger in non-presidential years, around 5-6 percentage points, as Figure 1(b) shows. There does not seem to be a clear negative shift across the threshold for the period before WWII, as shown in Figure 1(c). On the other hand, Figure 1(d) shows that for the post-WWII period there is a very clear downward shift, in the range of 3-4 percentage points.

Overall, while it is difficult to pin down the magnitude, the figures indicate that there is a midterm loss of state legislative seats associated with party of the governor, especially in non-presidential years and the post-WWII period.

3.2. Regression Analyses

We now turn to regressions. Table 1 presents the main results. Each row of the table represents a different specification, and each column covers a different sample. Column 1 is for the full sample, column 2 covers non-presidential election years, column 3 covers presidential election years, column 4 covers the period before WWII , and column 5 covers the post-WWII period. Each cell contains the estimated coefficient on the Democratic governor dummy variable – i.e., β_1 in equation (1) or (2) – as well as the standard errors in parentheses and number of observations in brackets.

[9]Figures 1(c) and 1(d) include both presidential and non-presidential years.

The results for the full time period show quite stable point estimates for the RDD specifications, all in the range 3.0 to 3.9 (see column 1). All of the estimates are statistically significant at the .05 level, except in the specification limited to the 1% window where the sample sizes are relatively small. Thus, we can be fairly confident that the party that controls the governor's office can expect a midterm seat loss in the state lower house of about 3.5 percentage points. Perhaps surprisingly, the OLS estimate is only about 1 percentage point higher than the average of the RDD specifications. Thus, while OLS overestimates the midterm slump somewhat, it does not do too badly.

Column 2 shows that the effect of gubernatorial control is even larger for midterm elections in non-presidential years. The estimated midterm seat loss in the RDD specifications ranges from about 4.5 to 5.5 percent, except in the specification with a third-order polynomial where the estimated effect is even larger. Also, all of the estimates are statistically significant. The OLS diverges a bit more from the RDD estimates than in the full sample, but it is still similar. By contrast, in midterm elections held in presidential years the estimated effect of gubernatorial control on the midterm election is much smaller, and none of the coefficients are statistically significant (see column 3). This suggests that the high salience of presidential elections swamps much of state politics in those years.

Next we explore different time periods. Column 4 considers the period 1882-1945. The RDD point estimates are all between -3.3 and -4.5, except for the specification using the 1% win margin. However, the standard errors are much larger than those using the full sample, so none of the coefficients are statistically significant. Moreover, while the sample size is small when we use a 1% margin, the point estimate is essentially zero. Note also that in this time period the OLS estimate is much larger than the RDD estimates. Overall, these results suggest that in the pre-WWII era gubernatorial control did not have a clear and consistent negative effect on midterm election outcomes.[10]

Column 5 covers the post-WWII period, 1946-2008. Here, the RDD point estimates are similar in magnitude to those in column 4 (and column 1). However, the estimates are much more precise – the standard errors are less than half as large – so all of the point estimates are

[10]We explored with other "early" time periods but in all but a few cases the estimates of β_1 are statistically insignificant.

statistically significant at the .05 level. It is also interesting to note that the OLS estimate is essentially the same as the RDD estimate.

We also split the data both by time period and presidential/non-presidential midterm election year. We do not report these results in tables to conserve space, but the patterns are easily summarized. For non-presidential midterm elections in the post-WWII period the estimated effect of gubernatorial control is large and robust across specifications. The RDD estimates range from -5.8 to -7.3, and they are all statistically significant at the .05 level. For non-presidential midterm elections in the pre-WWII period the estimated effect of gubernatorial control is also large in some specifications, but the estimates are less stable than for the post-WWII period.[11] For the two presidential-year subsamples the estimates are noticeably smaller and always statistically insignificant.

3.3. Robustness Checks

We perform two types of robustness check to test the validity of our results in Table 1. First we change the set of control variables in the specification. Secondly we perform a placebo test where we test if the party of the governor has an effect on the seat share change in the previous midterm election. If the identifying assumptions of the RDD hold, the party of the governor should not have any effect on previous elections. We perform the robustness checks for both the full sample and the post-WWII period.

The results are presented in Table 2. The top panel covers the full period 1882-2008, and the bottom panel covers the postwar period, 1946-2008. Each row covers a different RDD specification, and each column covers a different robustness check. As in Table 1, each cell contains the point estimate of the Democratic governor dummy variable – i.e., β_1 in equation (1) or (2) – the standard error of the estimate in parentheses and number of observations in brackets.

In Column 1 we drop the control for national swings, N^D. For the full sample the point estimates are in the range of -5.6 to -6.0. These are larger than those in the corresponding

[11] For the specifications using the 3%, 4% and 5% thresholds, and the specification using a 3rd-order polynomial control function, the point estimates range from -5.5 to -6.3 and are statistically significant at the .05 level. However, for the 2% window and the the specification using a 4th-order polynomial control function the point estimates are -3.5 and -2.0, respectively, and neither is statistically significant.

cells of in column 1 of Table 1. The standard errors are also larger, but all of the estimate coefficients are still significant at the .05 level. For the post-WWII period the estimates are quite similar to one another, in the range 4.2 to 4.5, and they are only marginally larger than those in the corresponding cells in column 5 of Table 1. Again, all coefficients are statistically significant.

In columns 2-4 we add different controls – lagged seat share (column 2), a dummy variable indicating Democratic control of the presidency (column 3), and both variables (column 4). In almost all cases the point estimates decrease slightly compared to the corresponding cells in column 1 of Table 1. However, all but two of the estimates are statistically significant at the .05 level. For the 1946-2008 period the point estimates are barely affected by the controls. As in Table 1, the estimates imply that control of the governorship leads to an expected seat share loss of about 3.5 to 4.0 percentage points.

Column 5 shows the placebo tests. Note that the estimates are generally much smaller than the corresponding non-placebo cases in columns 1 and 5 of Table 1 and the other columns of Table 2; that they exhibit noticeably more variability than the corresponding non-placebo cases; and that half are negative and half are positive. None of the coefficients are statistically significant at the .05 level and only 1 of the 8 are statistically at the .10 level, which is about what we would expect just by chance. Thus, overall these tests provide strong support for our identifying assumptions.

3.4. State Upper Houses

As noted above, while we focus on lower house elections we also ran the same types of analyses on upper house elections. Table 3 presents the main results. The structure is exactly the same as that in Table 1, except we only show results for two samples – the entire period, and the post-WWII period (these correspond to columns 1 and 5 of Table 1).

Table 3 shows that for the full sample the estimated effect of gubernatorial control on midterm elections for the upper house is consistently negative, but smaller than the corresponding estimates in Table 1, and generally statistically insignificant at the .05 level.

On the other hand, for the post-WWII period the RDD estimates are all negative and

uniformly *larger* than those in column 5 of Table 1. They are also all statistically significant at the .05 level. The range is fairly wide, -3.7 to -7.3, but this is not unexpected given the noise introduced by staggered terms and small upper house size. Overall, the results strongly support those in the previous sections: at least in the post-WWII era, control of the governorship causes a party to lose seats in the midterm state legislative elections.

3.5. National Elections

As a point of reference it is worth considering what the same type of RDD approach yields at the national level, in midterm elections for the U.S. House of Representatives as a function of the party of the president. We run the same basic specifications as those in Table 1 – i.e., the national level versions of equations (1) and (2) – except that we do not include N^D as a regressor since it is the dependent variable.[12] We use the Democratic percentage of the two-party popular vote to define the presidential winning margin.

The results are presented in column 1 of Table 4.[13] The RDD point estimates are all negative and relatively large. Even though the standard errors are also large due to small sample sizes, the estimates are statistically significant at the .10 level in most specifications. The estimates are larger than those in column 1 of Table 1 and column 1 of Table 2 (top panel). Averaging across the specifications, the negative effect of presidential control on the change in U.S. House seats would appear to be roughly twice as large as the effect of gubernatorial control on the change in state lower house seats. Note, however, that the estimated effects are not much larger than the estimated effects of gubernatorial control on midterms in non-presidential election years.

Column 2 of Table 4 shows the results of placebo tests in which the dependent variable is the previous change in U.S. House seat share – the analog to column 5 of Table 2. In the RDD specifications only 2 of the coefficients are negative and 4 are positive. None are statistically significant even at the .10 level.

[12] We do not present results for the 1% vote margin because there are only 3 cases below the 1% threshold.

[13] Note that we begin the analysis in 1898 rather than 1882. If we use the entire period 1882 to 2008 then the estimates are even larger than those shown in Table 4, but this is driven by two large outliers – 1890 and 1894. These observations are beyond the standard threshold's for various influence statistics, such as DFbeta and Cooks-D. If we the period 1882 to 2008 and drop 1880 and 1884 then the estimates are all about 1-3 points larger in magnitude than those shown in Table 4, and statistically significant at the .05 level.

4. Mechanisms

The results above establish that winning the governorship leads to a midterm loss in state legislative seats of around 3.5 percentage points. In this section we attempt to shed some light on the underlying mechanisms. Note that in this section we do not have an "as if random" assignment of key variables used to estimate the importance of various mechanisms. Thus, unlike the results in the previous section, we cannot give a causal interpretation to the estimates here, so any interpretation must be treated with some caution.

The first hypothesis we analysis is that midterm elections are referendums on gubernatorial performance. This is simply a state level version of Tufte's (1975) argument for the national level that midterm congressional elections are referendums on presidential performance. The idea is that since voters cannot vote directly on the sitting governor in a midterm election, they use the legislative election to punish the party of a governor who is performing poorly (or, perhaps in some cases, to reward the party of a governor who is performing especially well). Note that this is not an implausible hypothesis, since governors are typically the most visible elected officials after the president, and there is some evidence from previous work that voters reward and punish governors seeking re-election on the basis of their past performance (e.g., Ebeid and Rodden, 2006; Wolfers, 2007).

We test this hypothesis in three ways. First, we check whether the midterm slump is larger in states with bad economic performance relative to other states. Second, we check whether the midterm slump is larger when the sitting governor has a low approval rating. Finally, we check whether the midterm slump is larger went the incumbent governor's party does not win re-election in the next gubernatorial election. The idea is that the outcome of the gubernatorial election at $t+2$ is a proxy for the overall incumbent's performance during his or her term, including the time leading up to the midterm election. This assumes that performance strongly affects the incumbent party's re-election probability in gubernatorial elections. It also assumes either that voters are not too myopic, or, if voters are myopic, that there is overall performance exhibits a high degree of serial autocorrelation (so performance in year 4 of a governor's term is strongly correlated with his or her performance in year 2).

The second hypothesis we analyze is policy balancing. Balancing theories, formalized

in Alesina and Rosenthal (1989, 1996) and Alesina et al. (1993), predict that voters use midterm elections to balance the policy position of the executive. If there is ideological divergence between Democrats and Republicans with the median voter's ideal policy in the middle, then the policies promoted by the executive will tend to be more extreme than those desired by the median voter. By increasing the power of the opposing party in the legislature, voters can push policy towards the median.[14] Balancing occurs in the midterm election at $t+1$, and not already in the gubernatorial election at t, because the party of the governor is known at the time of the midterm but not at the time of the gubernatorial election.

We do not have a good measure of governors' positions, or state party positions, relative the median voter. Therefore, we use four proxies. First, we check whether the midterm loss at $t+1$ is larger if the governors' party won full control of the legislature in the election at time t. These will tend to be the cases where there is the greatest need to balance, to undo unified control of the state's government. Second, we check whether the midterm loss is greater when the ideological gap between parties is largest. In the table below we present results using the overall difference between the parties' mean Nominate scores. Thus, all of the variation in this gap is across years – large inter-party differences around the turn of the 20th century, much smaller gaps in the 1940-1970 period, and a return to large gaps in the most recent decade or two.[15] Third, we can measure the ideological extremism of the subsample of governors who also served in the U.S. House or Senate, using the Nominate scores these individuals produced while in congress. We then check whether the midterm slump is larger for governors who are more ideologically extreme. Finally, we check whether the midterm slump is larger for term-limited governors. The idea behind is from List and Sturm (2006), who argue that term-limited governors implement policies closer to their ideal points, while those who are up for re-election will moderate their policies in order to win re-election. Note that the last three variables test for rather refined degrees balancing by voters, and are therefore perhaps too demanding.

[14] Alternatively, they might produce gridlock, which might also serve as a second-best solution to the problem of too much extremism.

[15] We also experimented with state-specific measures of the ideological gap, for the subset of states with enough senators and members of congress from each party to construct meaningful estimates, but these variables never yield substantively meaningful and statistically significant results.

We give the exact definitions of the variables used in the Appendix.

4.1. Specifications

For each of the mechanisms we want to test we construct a variable, X_{it}, which takes a high value when we expect a larger treatment effect from the gubernatorial party – i.e., when we expect a larger midterm seat loss. We interact this variable with the treatment variable, $G^D_{i,t-1}$, so the basic specification is:

$$C^D_{it} = \beta_0 + \beta_1 G^D_{i,t-1} + \beta_2 X_{it} + \beta_3 G^D_{i,t-1} X_{it} + \gamma N_t + \epsilon_{it} \tag{3}$$

To see how we interpret the estimates, consider the case of a dichotomous X_{it} variable, with $X_{it}=0$ meaning, say, good performance and $X_{it}=1$ meaning poor performance. Then β_1 is the estimated effect of having a Democratic governor when $X_{it}=0$, and β_3 is the difference between the estimated effect of having a Democratic governor when $X_{it}=1$ and the estimated effect of having a Democratic governor when $X_{it}=0$.[16] Note also that β_2 is the estimated effect of X_{it} when $G^D_{i,t-1}=0$. We expect $\beta_3<0$ to be negative if X_{it} captures a salient mechanism underlying the midterm slump.

For the specifications that use the control polynomial approach we include the low order polynomial terms of the prior gubernatorial vote share, $V^D_{i,t-1}$, and also interact these terms with X_{it}.[17]

4.2. Results on the Referendum Hypothesis

Again, we begin with a graphical analysis. We take exactly the same approach as in the previous section, except that we split the sample according to the value of X_{it} and use a different symbol each subsample. We use circles for the cases where $X_{it}=1$, and plus signs for the cases where $X_{it}=0$. The results are in Figures 2(a)–2(d).

[16] That is, $E[C^D_{it} \mid G^D_{i,t-1}=1, X_{it}=0] - E[C^D_{it} \mid G^D_{i,t-1}=0, X_{it}=0] = \beta_1$, and $E[C^D_{it} \mid G^D_{i,t-1}=1, X_{it}=1] - E[C^D_{it} \mid G^D_{i,t-1}=0, X_{it}=1] = \beta_1+\beta_3$, so $(E[C^D_{it} \mid G^D_{i,t-1}=1, X_{it}=1] - E[C^D_{it} \mid G^D_{i,t-1}=0, X_{it}=1]) - (E[C^D_{it} \mid G^D_{i,t-1}=1, X_{it}=0] - E[C^D_{it} \mid G^D_{i,t-1}=0, X_{it}=0]) = \beta_3$.

[17] An alternative approach would be to estimate model that includes only the control polynomial, not the terms where the control polynomial with X_{it}. That approach greatly reduces the standard errors of β_3. Since there is no established procedure for interaction terms we take the more conservative approach in the paper.

Figure 2(a) shows the plot for income growth. There appears to be a large negative shift in the seat change as we cross the 50% threshold for states with income growth below the median. The seat loss seems to be around 7 to 8 percentage points. For states with income growth above the median there does not seem to be any shift as we cross the threshold. This suggests there is only a seat share loss for the party of the governor in states with poor relative economic performance. Figure 2(b) shows the plot for approval ratings. Again, there only seems to be a negative shift as we cross the threshold when the governor's relative approval rating is low. The picture is not as clear as in the states with low economic performance, however, since there is an outlying, positive bin to the right of the threshold. When the ratings are high there is no distinguishable shift as we cross the threshold. Figures 2(c) and 2(d) show the plots for incumbent party performance as measured by the outcome of the next gubernatorial election. The pattern is again similar – there is a clear negative shift only when the incumbent party loses the upcoming governor's election.

Table 5 presents the regression results. These tell the same basic story as the figures.

Column 1 shows that the interaction term between gubernatorial control and the low income growth dummy variable is negative and statistically significant at either the .05 or .10 level in all specifications. Column 2 shows that the interaction term between gubernatorial control and the negative income growth continuous variable and is negative and statistically significant at the .05 level in all specifications. Thus, the results indicate that the midterm slump is much larger when economic performance is low.

The regression results for the approval ratings, shown in column 3, are inconclusive. Although the point estimates on the interaction terms are all negative and similar in magnitude to those for income growth, they are statistically insignificant at the .05 level. This may be due to the lack of approval ratings data, which makes the subsample of close elections very small. Gubernatorial approval ratings covering at least half of states consistently in each election year only begin in 1985.

Column 4 shows that when the incumbent party loses the next gubernatorial election the midterm loss is especially large. For the post-WWII period the seat loss is between 8.5 and 9.5 percentage points. The estimates are all statistically significant at the .05 level. Column

5 covers the entire 1882-2008 period, and while the estimates are more variable they again suggest an especially large seat loss when the incumbent governor's performance is poor.

Note that for all of the dummy interaction variables the main effect of gubernatorial control is small and statistically insignificant. This implies that when $X_{it} = 0$, i.e., when performance is especially good, the governor's party does not suffer a significant midterm seat loss. This is consistent with Figures 2(a)–2(c), as well. The specification underlying column 2 allows us to estimate more precisely the level economic growth that would eliminate the midterm seat loss.[18] The range of estimates is 3.9 to 6.5 percentage points higher than the median growth rate. This is a difficult level to achieve – the standard deviation of relative economic growth rates is about 3.6, so the required level is 1.1 to 1.8 standard deviations above the median.

Overall, the results are strongly consistent with the referendum hypothesis, but with an average bias against the party of the sitting governor. The governor's party does especially poorly in the midterm elections if performance is low, and roughly "breaks even" when performance is high.

4.3. Results on Balancing

Again we begin with a graphical analysis, shown in Figures 3(a)-3(d). These figures are constructed exactly as Figures 2(a)–2(d) above.

Figure 3(a) clearly shows that there large negative shift at the 50% threshold when the governor's party has full control of the state legislature, of about 7 to 8 percentage points (see the scatterplot of circles). When the governor's party does not fully control the legislature, however, there does not appear to be a shift at the threshold (see the scatterplot plus signs).

Table 6 presents the regression estimates, which exhibit the same patterns as the graphs. Columns 1 and 2 show the results for the legislative control dummy variable. Column 1 covers the post-WWII period and column 2 covers the entire 1882-2008 period. The point estimates on the interaction term range between -6.8 and -7.9 in column 1, and between and

[18] This is level of X_{it} such that $E[C^D_{it} \mid G^D_{i,t-1} = 1, X_{it}] = E[C^D_{it} \mid G^D_{i,t-0} = 0, X_{it}]$, i.e., such that $\beta_0 + \beta_1 + (\beta_2 + \beta_3)X_{it} = \beta_0 + \beta_2 X_{it}$, i.e., $X_{it} = -\beta_1/\beta_3$. Since X_{it} is the negative of income growth, the level of economic growth desired is β_1/β_3.

-8.3 and -10.1 in column 2, and they are all statistically significant at the .05 level. On the other hand, the point estimates for the dummy variable indicating Democratic control of the governorship are close to zero and statistically insignificant in all specifications. Thus, the results indicate that there is only a large midterm slump when the party of the governor hold full control of the legislature.

Figures 3(b)–3(d), and columns 3-7 in Table 6, present the results for interaction variables that try to capture more refined ideological balancing by voters.[19] Neither the figures nor the regression estimates show support for this type of balancing. In fact, almost all of the point estimates have the wrong sign, and none are statistically significant at the .05 level. These results suggest either that voters do not engage in refined balancing, or that our variables do not adequately measure gubernatorial extremism.

4.4. Comparing the Referendum and Partisan Balancing Hypotheses

Since the results above provide some support both for the referendum hypothesis and the partisan balancing hypothesis (at least in its "crude" form), we now we test both hypotheses simultaneously.

Table 7 presents the results. To keep the analysis simple, we focus on specifications where the sample is restricted to close gubernatorial elections at time $t-1$. Table 7 shows results for the 2% and 4% thresholds. In each specification we use the full legislative control dummy to capture partisan balancing. To capture the referendum hypothesis we use the low income growth dummy variable in column 1, and the the dummy indicating that the incumbent governor's party loses the next gubernatorial election in columns 2 and 3. Column 2 covers the post-WWII period and column 3 covers the entire 1882-2008 period.

Interestingly, the point estimates are all similar to those in Tables 5 and 6 where we tested the hypotheses separately. This indicates that there is little collinearity between the interaction variables. Thus, it also suggests that there is not a common omitted variable driving all of the results. The point estimates are similar for both mechanisms – all in the range -6 to -9.5 – suggesting that they contribute about equally to the gubernatorial midterm

[19] We also ran regressions for the post-WWII period for the *Gov is Extremist* and *Gov is Termlim* variables, and the estimated interaction effects are again statistically insignificant.

slump.

5. Conclusion

In this paper, we show that winning control of the governor's office in a state leads to a midterm seat loss in the next state legislative election of 3.5 percentage points on average, and perhaps 5.0 points in non-presidential midterm years. Our identification strategy allows us to rule out that this is caused by any factors other than the party of the governor, such as reversion to the mean or surge and decline.

The use of a regression discontinuity design puts the finding of a midterm slump for the party of the governor on a solid statistical footing. Moreover, the results from the RDD are not very different from the simple OLS estimates – and, in the post-WWII period they are essentially identical. This suggests that the OLS estimates do not suffer much in the way of omitted-variable bias. It also provides some indirect evidence that the midterm slump at the federal level might also reflect a direct effect of the party of the president.

Although the RDD strategy allows us to rule out the hypothesis that reversion to the mean is the only force underlying the midterm slump, reversion to the mean might still be part of the story. In fact, the downward slope evident in Figure 1(a) suggests some reversion to the mean. A more careful analysis of the data, however, indicates that reversion to the mean is probably not a major factor driving gubernatorial midterm slumps. First, the downward slope in Figure 1(a) is mainly in the tails – there is little evidence of a slope in the -5% to 5% range of vote margins. Second, there is little evidence of a downward slope in Figure 1(b) for non-presidential elections, and the slope is small in Figure 1(d) for the post-WWII period. Third, there is little evidence of downward slopes in the subsets of cases where the midterm slump is most evident: in FIgures 2(a)–2(d) for the cases where performance was poor, and in Figures 3(a)–3(b) for the cases where the governor's party had full control of the legislature. This might be expected, since there would seem to be much less scope for "surge and decline" in state elections than in national elections.

In the analyses of possible mechanisms we find evidence suggesting that the gubernatorial midterm slump can be attributed in about equal parts to the hypothesis that the midterm

election is a referendum on the performance of the governor, and they hypothesis that voters use the midterm election for partisan balancing between the executive and the legislature. Of course, the analysis of mechanisms must be viewed as tentative due to the usual problems that plague most observational studies – in particular, the danger that the estimates suffer from omitted variable bias or endogenous variable bias. The patterns in the data are so striking, however, that they would appear to point to promising directions for future research.

References

Alesina, Alberto, John Londregan, and Howard Rosenthal. 1993. "A Model of the Political Economy of the United States." *American Political Science Review* 87 (1): 12-33.

Alesina, Alberto, and Howard Rosenthal. 1989. "Partisan Cycles in Congressional Elections and the Macroeconomy." *American Political Science Review* 83 (2): 373-398.

Alesina, Alberto, and Howard Rosenthal. 1995. *Partisan Politics, Divided Government, and the Economy*. New York: Cambridge University Press.

Alesina, Alberto, and Howard Rosenthal. 1996. "A Theory of Divided Government." *Econometrica* 64 (6): 1311-134.

Bafumi, Joseph, Robert S. Erikson, and Christopher Wezien. 2010. "Balancing, Generic Polls, and Midterm Congressional Elections." *Journal of Politics* 72 (3): 705-719.

Born, Richard. 1986. "Strategic Politicians and Unresponsive Voters." *American Political Science Review* 80 (2): 599612.

Born, Richard. 1990. "Surge and Decline, Negative Voting, and the Midterm Loss Phenomenon: A Simultaneous Choice Analysis." *American Journal of Political Science* 34 (3):615-645.

Campbell, James E. 1985. "Explaining Presidential Losses in Midterm Congressional Elections." *Journal of Politics* 47 (4): 1140-1157.

Campbell, James E. 1986. "Presidential Coattails and Midterm Losses in State Legislative Elections." *American Political Science Review* 80 (1): 45-63.

Campbell, James E. 1987. "The Revised Theory of Surge and Decline." *American Journal of Political Science* 3 (4): 965979.

Campbell, James E. 1991. "The Presidential Surge and its Midterm Decline in Congressional Elections, 18681988." *Journal of Politics* 53 (2): 477-487.

Campbell, James E. 1997. "The Presidential Poles and the 1994 Midterm Congressional Election." *Journal of Politics* 59 (3): 830857.

Campbell, Angus. 1966. "Surge and Decline: A Study of Electoral Change." In *Elections and the Political Order*, edited by A. Campbell, P.E. Converse, W.E. Miller, and D.E. Stokes. New York: Wiley.

Dubin, Michael J. 2007. *Party Affiliations in the State Legislatures: A Year by Year Summary, 1796-2006*. Jefferson, NC: McFarland and Company, Inc.

Ebeid, Michael, and Jonathan Rodden. 2006. "Economic Geography and Economic Voting: Evidence from the U.S. States." *British Journal of Political Science* 36 (3): 527-547.

Erikson, Robert S. 1988. "The Puzzle of Midterm Loss." *Journal of Politics* 50 (4): 1011-1029.

Erikson, Robert S. 2010. "Explaining Midterm Loss: The Tandem Effects of Withdrwan Coattails and Balancing." *Journal of Politics* 50 (4): 1011-1029.

Ferreira, Fernando, and Joseph Gyorko. "Do Political Parties Matter? Evidence from U.S. Cities." *Quarterly Journal of Economics* 124 (1): 399-422.

Hinckley, Barbara. 1967. "Interpreting House Midterm Elections: Toward a Measurement of the In-Party's 'Expected' Loss of Seats." *American Political Science Review* 61: 691-700.

Kernell, Samuel. 1977. "Presidential Popularity and Negative Voting: An Alternative Explanation of the Midterm Congressional Decline of the President's Party." Unpublished manuscript. Columbia University..

Kiewiet, D. Roderick, and Douglas Rivers. 1985. "A Retrospective on Retrospective Voting." In *Economic Conditions and Electoral Outcomes*, edited by H. Eulau and M.S. Lewis-Beck. New York: Agathon Press.

Lee, David, Moretti, E., and Butler, M. 2004. "Do Voters Affect or Elect Policies? Evidence from the U.S. House." *Quarterly Journal of Economics* 119 (3): 807-859.

Levitt, Steven D. 1994. "An Empirical Test of Competing Explanations for the Midterm Gap in the U.S. House." *Economics and Politics* 6 (1): 2537.

List, John A., and Daniel M. Sturm, 2006. "How Elections Matter: Theory and Evidence from Environmental Policy." *Quarterly Journal of Economics* 121 (4): 1249-1281.

Mebane, Walter. 2000. "Coordination, Moderation, and Institutional Balancing in American Presidential and House Elections." *American Political Science Review* 94 (1): 37-57.

Oppenheimer, Bruce I., James A. Stimson, and Richard W. Waterman. 1986. "Interpreting U.S. Congressional Elections: The Exposure Thesis." *Legislative Studies Quarterly* 11 (2): 227-247.

Patty, John W. 2006. "Loss Aversion, Presidential Responsibility, and Midterm Congressional Elections." *Electoral Studies* 25 (2): 227-247.

Poole, Keith, and Howard Rosenthal. 2007. *Ideology and Congress.* New Brunswick NJ: Transaction Publishers.

Scheve, Kenneth, and Michael. Tomz. 1999. "Electoral Surprise and the Midterm Loss in US Congressional Elections." *British Journal of Political Science* 29(3): 507521.

Tufte, Edward. 1975. "Determinants of Outcomes of Midterm Congressional Elections." *American Political Science Review* 69 (3): 812-826.

Wolfers, Justin. 2007. "Are Voters Rational? Evidence from Gubernatorial Elections." Unpublished manuscript, University of Pennsylvania.

Appendix: Variable Definitions

As above, i indexes states and t indexes election years.

- Let I_{it} be the change in per-capita income over the 2 years up to and including year t – e.g., for midterm elections in 2008 it is the change between 2006 and 2008. Let $\overline{I}_t$ be the median of $I_{1t}, ..., I_{nt}$ across all states. Then $-$*Income Growth* $= -(I_{it} - \overline{I}_t)$.

- *Low Inc Growth* $= 1$ if $I_{it} < \overline{I}_t$.

- Let A_{it} be the governor's approval rating, averaged across polls if there are multiple polls in the year; and let $\overline{A}_t$ be the mean of $I_{1t}, ..., I_{nt}$ across all states. Then *Low Gov Approval* $= 1$ if $A_{it} < \overline{A}_t$. (Note, we use mean rather than median because the distribution of A_{it} is somewhat skewed.)

- *Gov Party Loses Next* $= 1$ if the governor's party loses the next gubernatorial election – e.g., for midterm elections in 2006 it is 1 if the party that controls the governorship in 2006 loses the gubernatorial election in 2008.

- *Full Leg Control* $= 1$ if the governor's party controls a majority of the seats in both chambers of the state legislature in the year of the midterm election.

- Let N_{jt} be the DW-Nominate score of U.S. representative or senator j in year t; recall that scores are oriented so that in each year the average score among Republicans is higher than the average among Democrats. Let N_t^D be the average score among Democrats, and let N_t^R be the average score among Democrats. Then *Party Gap* $= N_t^R - N_t^D$. (Note, using the medians rather than means produces essentially the same results.)

- First, do the following separately for the U.S. House and Senate: Let N_{it} be the median DW-Nominate score of all representatives (senators) serving in state i between year $t-6$ and $t+6$. This gives a measure of the state "central tendency." Let $E_{jt} = N_{jt} - N_{it}$ if representative (senator) j is a Republican and from state i, and let $E_{jt} = N_{it} - N_{jt}$ if representative (senator) j is a Democrat and from state i. Next, let $\overline{E}_j$ be the mean of E_{jt} over all t for which j served either as a representative or a senator. Thus, higher values of $\overline{E}_j$ mean "more extreme" legislators relative to the typical members from their state, in the direction of the usual bias exhibited by members of their party. Finally, let $\overline{\overline{E}}$ be the mean of the $\overline{E}_j$'s across all governors who served in congress. Then *Gov is Extremist* $= 1$ if $\overline{E}_j > \overline{\overline{E}}$.

- *Gov is Termlim* $= 1$ if the governor at the time of the midterm cannot run for re-election due to term limits.

Table 1: Midterm Seat Loss of Governor's Party Lower House of State Legislature					
Specification	1882-2008 All Elections	1882-2008 Non-Pres	1882-2008 Pres Year	1882-1945 All Elect	1946-2008 All Elect
OLS	-4.795 (0.775) [873]	-7.308 (1.262) [425]	-2.410 (0.935) [448]	-7.477 (1.735) [314]	-3.308 (0.710) [559]
RDD, 3rd-Order Polynomial	-3.864 (1.347) [873]	-6.518 (2.057) [425]	-0.327 (1.750) [448]	-3.635 (2.848) [314]	-3.464 (1.298) [559]
RDD, 4th-Order Polynomial	-3.751 (1.394) [873]	-5.639 (2.164) [425]	-0.629 (1.766) [448]	-3.333 (2.998) [314]	-3.634 (1.322) [559]
RDD, 5% Margin	-3.482 (1.142) [433]	-5.566 (1.709) [221]	-1.268 (1.487) [212]	-4.444 (2.354) [177]	-3.287 (1.034) [256]
RDD, 4% Margin	-3.805 (1.276) [365]	-5.775 (1.831) [192]	-1.549 (1.744) [173]	-4.454 (2.529) [158]	-3.886 (1.164) [207]
RDD, 3% Margin	-3.335 (1.474) [288]	-5.611 (1.995) [161]	-0.259 (2.144) [127]	-4.343 (2.836) [130]	-3.158 (1.357) [158]
RDD, 2% Margin	-3.440 (1.765) [200]	-4.493 (2.320) [111]	-1.664 (2.702) [89]	-3.660 (3.396) [91]	-4.208 (1.610) [109]
RDD, 1% Margin	-2.953 (2.581) [98]	-4.700 (2.961) [53]	-0.145 (4.371) [45]	-0.061 (5.325) [42]	-5.465 (2.310) [56]

Cell entries are the estimated coefficients on the *Democratic Governor* dummy variable. The dependent variable is *Democratic Midterm Seat Change*. Standard errors in parentheses. Sample sizes in brackets.

Table 2: Robustness Checks					
		Additional Controls			Placebo
Specification	Drop Natl Seat Swing	Lagged Seat Share	Dem Pres Dummy	Both Controls	DV = Prev Seat Change
1882-2008					
3rd-Order Polynomial	-5.998 (1.503) [873]	-3.229 (1.301) [873]	-3.832 (1.348) [873]	-3.226 (1.303) [873]	-0.379 (1.412) [841]
4th-Order Polynomial	-5.812 (1.557) [873]	-3.205 (1.347) [873]	-3.720 (1.395) [873]	-3.201 (1.348) [873]	-0.352 (1.452) [841]
4% Margin	-5.684 (1.429) [365]	-2.638 (1.237) [365]	-3.745 (1.284) [365]	-2.666 (1.243) [365]	0.131 (1.427) [357]
2% Margin	-5.579 (2.033) [200]	-2.787 (1.684) [200]	-3.422 (1.775) [200]	-2.846 (1.691) [200]	-1.473 (2.247) [194]
1946-2008					
3rd-Order Polynomial	-4.376 (1.562) [559]	-3.296 (1.272) [559]	-3.420 (1.274) [559]	-3.265 (1.251) [559]	1.811 (1.384) [527]
4th-Order Polynomial	-4.299 (1.591) [559]	-3.524 (1.294) [559]	-3.601 (1.297) [559]	-3.500 (1.272) [559]	1.668 (1.401) [527]
4% Margin	-4.177 (1.479) [207]	-3.688 (1.132) [207]	-3.684 (1.135) [207]	-3.524 (1.109) [207]	2.123 (1.330) [198]
2% Margin	-4.467 (2.134) [109]	-3.957 (1.569) [109]	-4.108 (1.597) [109]	-3.893 (1.563) [109]	-0.113 (2.129) [100]

Cell entries are the estimated coefficients on the *Democratic Governor* dummy variable. In columns 1-4 the dependent variable is *Democratic Midterm Seat Change*. Standard errors in parentheses. Sample sizes in brackets.

Table 3: Midterm Seat Loss of Governor's Party Upper House of State Legislature		
Specification	1882-2008 All Elections	1946-2008 All Elections
OLS	-1.085 (0.701) [773]	-2.422 (0.752) [488]
RDD, 3rd-Order Polynomial	-2.395 (1.226) [773]	-3.971 (1.382) [488]
RDD, 4th-Order Polynomial	-2.747 (1.266) [773]	-4.387 (1.407) [488]
RDD, 5% Margin	-1.491 (1.085) [381]	-3.665 (1.271) [220]
RDD, 4% Margin	-1.797 (1.187) [321]	-4.732 (1.464) [178]
RDD, 3% Margin	-2.405 (1.310) [251]	-5.320 (1.716) [136]
RDD, 2% Margin	-2.590 (1.665) [176]	-6.409 (2.275) [94]
RDD, 1% Margin	-2.787 (2.666) [83]	-7.319 (3.849) [48]

Cell entries are the estimated coefficients on the *Democratic Governor* dummy variable. The dependent variable is *Democratic Midterm Seat Change*. Standard errors in parentheses. Sample sizes in brackets.

Table 4: Midterm Congressional Seat Loss of President's Party 1898-2006		
	DV = Cong Seat Change	Placebo: DV = Prev Seat Change
OLS	-13.676 (2.337) [27]	-3.671 (3.500) [27]
RDD, 3rd-Order Polynomial	-6.006 (4.603) [27]	1.464 (7.519) [27]
RDD, 4th-Order Polynomial	-8.839 (4.790) [27]	4.544 (7.978) [27]
RDD, 5% Margin	-10.330 (2.844) [14]	-3.168 (5.188) [14]
RDD, 4% Margin	-9.864 (2.430) [12]	-0.291 (5.644) [12]
RDD, 3% Margin	-7.711 (2.486) [8]	2.682 (8.838) [7]
RDD, 2% Margin	-5.783 (2.927) [6]	6.514 (9.067) [6]

Cell entries are the estimated coefficients on the *Democratic President* dummy variable. In column 1 the dependent variable is *Democratic Midterm Congressional Seat Change*. Standard errors in parentheses. Sample sizes in brackets.

Table 5: Mechanisms I, Referendum on Performance						
Specification		Low Inc Growth	-Income Growth	Low Gov Approval	Gov Party Loses Next	Gov Party Loses Next
		1946-2008	1946-2008	1964-2008	1946-2008	1882-2008
3rd-Order Polynomial	β_1	-1.640 (1.896)	-4.167 (1.362)	-0.529 (2.206)	-0.523 (1.735)	-1.647 (1.795)
	β_3	-4.598 (2.714)	-0.827 (0.368)	-3.893 (2.946)	-8.951 (2.795)	-5.345 (2.915)
		[523]	[523]	[216]	[517]	[828]
4th-Order Polynomial	β_1	-1.675 (1.933)	-4.182 (1.380)	-0.257 (2.269)	-0.726 (1.784)	-1.250 (1.883)
	β_3	-4.683 (2.780)	-0.932 (0.388)	-4.174 (2.999)	-8.560 (2.851)	-5.805 (2.995)
		[523]	[523]	[216]	[517]	[828]
4% Margin	β_1	-1.270 (1.649)	-4.336 (1.178)	-1.406 (1.981)	-1.180 (1.543)	-1.553 (1.689)
	β_3	-6.165 (2.350)	-0.673 (0.297)	-4.282 (2.515)	-8.546 (2.424)	-5.769 (2.675)
		[201]	[201]	[75]	[198]	[355]
2% Margin	β_1	0.613 (2.283)	-4.607 (1.579)	-0.509 (2.665)	-0.760 (2.161)	0.738 (2.466)
	β_3	-10.061 (3.143)	-1.193 (0.408)	-5.663 (3.446)	-9.488 (3.229)	-9.403 (3.660)
		[107]	[107]	[38]	[105]	[196]

First cell entries are the estimated coefficients on the *Democratic Governor* dummy variable. Second cell entries are the estimated coefficients on the *Democratic Governor* dummy variable, interacted with the variable of interest. Standard errors in parentheses. Sample sizes in brackets.

Table 6: Mechanisms II, Partisan or Ideological Balancing							
Specification		Full Leg Control	Full Leg Control	Party Gap	Party Gap	Gov is Extremist	Gov is Termlim
		1946-2008	1882-2008	1946-2008	1882-2008	1882-2008	1882-2008
3rd-Order Polynomial	β_1	0.300	1.818	-12.480	-15.252	-4.990	-2.700
		(2.291)	(2.456)	(5.999)	(6.821)	(3.963)	(2.780)
	β_3	-7.640	-10.118	13.103	16.559	10.373	1.051
		(3.069)	(3.198)	(9.163)	(9.819)	(6.014)	(4.552)
		[559]	[873]	[484]	[710]	[200]	[245]
4th-Order Polynomial	β_1	0.327	1.686	-10.146	-13.741	-5.840	-2.813
		(2.298)	(2.462)	(6.488)	(7.138)	(4.756)	(2.792)
	β_3	-7.909	-9.749	10.007	14.740	11.229	0.998
		(3.108)	(3.251)	(9.718)	(10.147)	(6.561)	(4.564)
		[559]	[873]	[484]	[710]	[200]	[245]
4% Margin	β_1	-0.394	0.936	-11.752	-13.981	-6.603	-2.748
		(1.868)	(2.088)	(5.382)	(6.445)	(3.913)	(2.819)
	β_3	-6.768	-8.275	12.097	14.740	9.281	-1.770
		(2.697)	(2.890)	(8.197)	(9.226)	(5.501)	(5.221)
		[207]	[365]	[189]	[299]	[85]	[62]
2% Margin	β_1	-0.485	1.196	-9.345	-12.268	-10.879	-2.233
		(2.560)	(2.725)	(7.491)	(8.911)	(6.619)	(3.690)
	β_3	-7.308	-8.879	8.891	12.750	12.417	-2.986
		(3.674)	(3.965)	(11.625)	(12.902)	(9.117)	(6.880)
		[109]	[200]	[100]	[164]	[42]	[38]

First cell entries are the estimated coefficients on the *Democratic Governor* dummy variable. Second cell entries are the estimated coefficients on the *Democratic Governor* dummy variable, interacted with the variable of interest. Standard errors in parentheses. Sample sizes in brackets.

Table 7: Mechanisms III, Comparison of Referendum on Performance and Party Balancing				
Specification		Low Inc Growth & Full Leg Control	Gov Party Loses Next & Full Leg Control	Gov Party Loses Next & Full Leg Control
		1946-2008	1946-2008	1882-2008
4% Margin	β_1	2.443	1.788	3.603
		(2.199)	(2.085)	(2.433)
	Referendum β_3	-6.053	-7.965	-6.105
		(2.317)	(2.406)	(2.655)
	Balancing β_3	-7.253	-6.271	-8.675
		(2.708)	(2.720)	(2.953)
		[201]	[198]	[355]
2% Margin	β_1	3.700	1.724	4.367
		(2.905)	(2.823)	(3.124)
	Referendum β_3	-9.595	-8.209	-8.502
		(3.126)	(3.310)	(3.673)
	Balancing β_3	-6.535	-6.048	-7.696
		(3.580)	(3.781)	(4.058)
		[107]	[105]	[196]

First cell entries are the estimated coefficients on the *Democratic Governor* dummy variable. Second cell entries are the estimated coefficients on the *Democratic Governor* dummy variable, interacted with the first variable of interest. Third cell entries are the estimated coefficients on the *Democratic Governor* dummy variable, interacted with the second variable of interest. Standard errors in parentheses. Sample sizes in brackets.

Figure 1

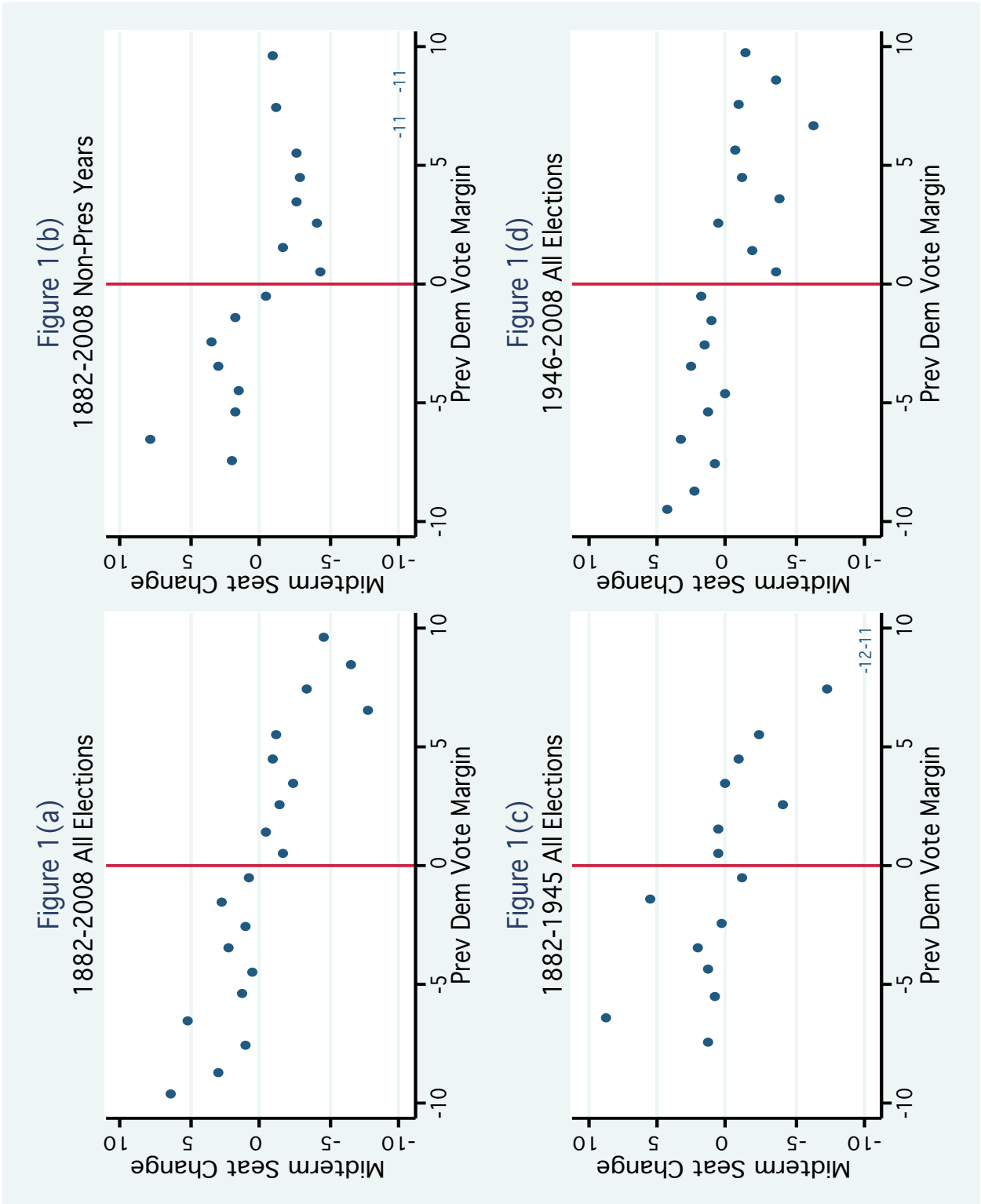
Figure 1 (a)
1882-2008 All Elections
Figure 1 (b)
1882-2008 Non-Pres Years
-11
-11
-11
Figure 1 (c)
1882-1945 All Elections
-12-11
Figure 1 (d)
1946-2008 All Elections
Midterm Seat Change
-10
-5
0
5
10
Prev Dem Vote Margin
-10
-5
0
5
10

Figure 2

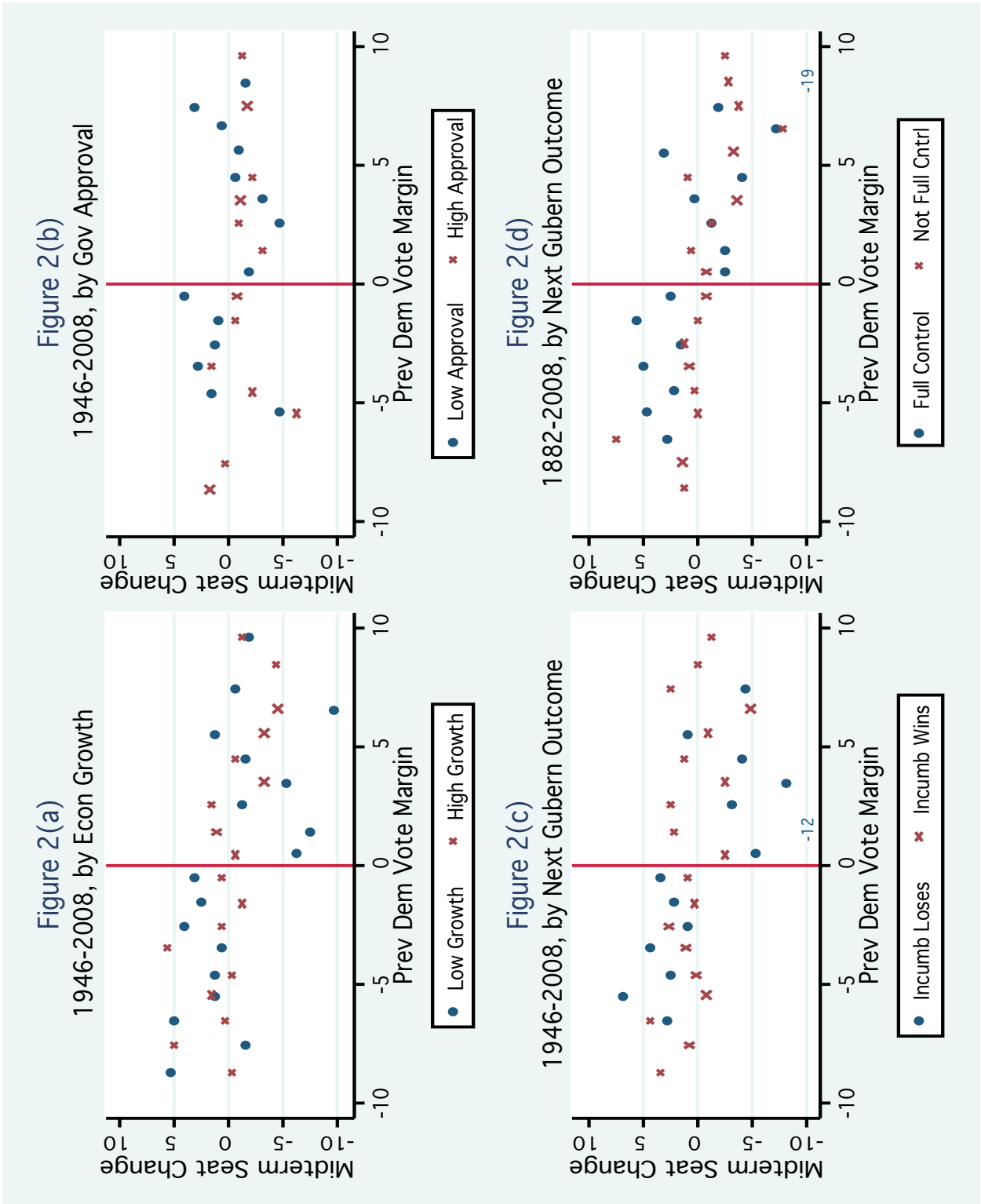
Figure 2(a)
1946-2008, by Econ Growth
Figure 2(b)
1946-2008, by Gov Approval
Figure 2(c)
1946-2008, by Next Gubern Outcome
Figure 2(d)
1882-2008, by Next Gubern Outcome
Midterm Seat Change
Prev Dem Vote Margin
Low Growth
High Growth
Low Approval
High Approval
Incumb Loses
Incumb Wins
Full Control
Not Full Cntrl
-12
-19

Figure 3a

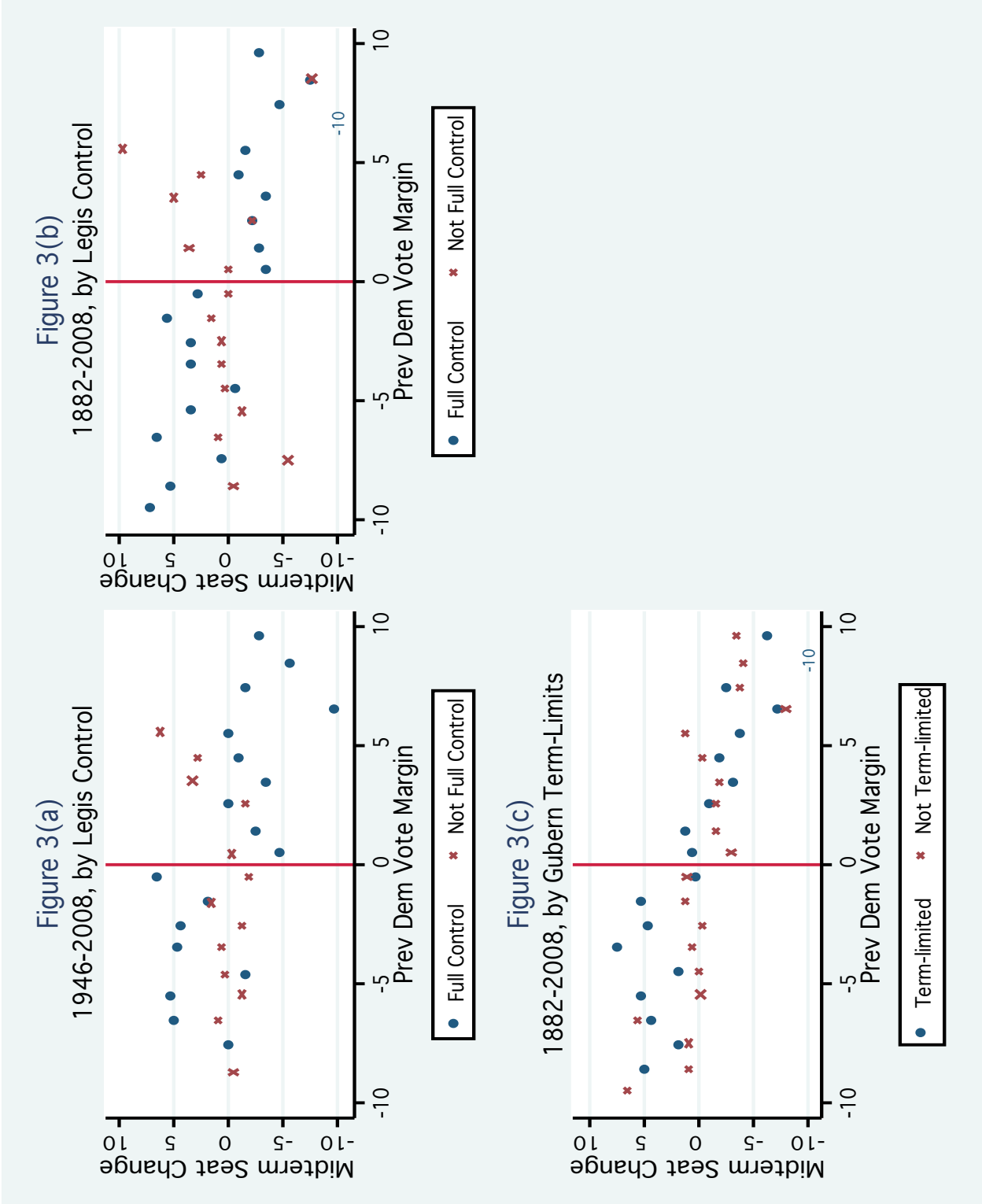
Figure 3(a)
1946-2008, by Legis Control
Figure 3(b)
1882-2008, by Legis Control
Figure 3(c)
1882-2008, by Gubern Term-Limits
Midterm Seat Change
Prev Dem Vote Margin
-10
-5
0
5
10
Full Control
Not Full Control
Term-limited
Not Term-limited