AN ECONOMETRIC EVALUATION OF COMPETING EXPLANATIONS FOR THE
MIDTERM GAP

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<u>ABSTRACT</u>

This paper provides a unified theoretical and empirical analysis of three longstanding explanations for the consistent loss of support for the President's party in midterm Congressional elections: (1) a Presidential penalty, defined as a preference for supporting the opposition during midterm years, (2) a surge and decline in voter turnout, and (3) a reversion to the mean in voter ideology. To quantify the contribution of each of these factors, we build an econometric model in which voters jointly choose whether or not to participate and which party to support in both House and Presidential elections. Estimated using ANES data from both Presidential and midterm years, the model can fully explain the observed midterm gaps, and counterfactual simulations demonstrate that each factor makes a sizeable contribution towards the midterm gap, with the Presidential penalty playing the largest role.

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1 Introduction

One of the most striking empirical regularities in American politics involves the midterm gap, under which the President's party routinely loses seats in Congressional elections held during midterm years. Since 1842, the President's party has lost seats in 40 out of 43, or 93 percent of cases, with the exceptions being 1934, 1998, and 2002 (Bafumi, Erikson, and Wlezien, 2010). Recent cases with large swings include 1974, when President Ford's party lost 48 out of 435 seats in the House and 4 out of 100 seats in the Senate, 1994, when President Clinton's party lost 54 seats in the House and 9 seats in the Senate, and 2010, when President Obama's party lost 63 seats in the House and 6 seats in the Senate.

There is a long literature in political science developing and testing hypotheses regarding different mechanisms underlying this midterm gap, and this paper addresses three such long-standing hypothesized mechanisms. First, due to a Presidential penalty, midterm voters, conditional on participating, may have a preference for the opposition and express this preference in the voting booth. This preference could reflect, among other factors, a dissatisfaction with the President's performance or a preference for divided government. Second, there may be a surge and decline in voter turnout, with supporters of a strong Presidential candidate energized to participate in the Presidential year but not turning out to vote in midterm years. Third, there could be a reversion to the mean in voter ideology, with the President's party advantaged in Congressional races during the Presidential year before ideology returns to its normal state in the midterm year.

To quantify the contribution of each of these factors, we build and estimate a statistical model in which voters jointly choose whether or not to participate and, conditional on participating, which party to support in both House and

Presidential elections. Following a literature on expressive voting, voters in the model are assumed to receive a higher benefit from participating if they have strong preferences over the set of the candidates and a lower benefit if they are indifferent over the set of candidates. Candidates differ in terms of their quality (or valence) and their ideology, and voters differ in their ideology, with a preference for like-minded candidates. To accommodate the Presidential penalty hypothesis, we allow for a simple preference to vote against the President's party in midterm years. To accommodate the surge and decline hypothesis, we allow for differences in quality between Presidential candidates, leading to an increase in turnout among supporters of the higher quality candidate and a subsequent decline in turnout during the midterm year. Finally, to accommodate the reversion to the mean hypothesis, we allow for the distribution of voter ideology to change between Presidential and midterm years.

This statistical model is then estimated using American National Election Study (ANES) data from both Presidential and midterm years between 1952 and 2008. The estimated model matches well the observed midterm gap over time and can fully explain the midterm gap when averaged across midterm years. We then conduct counterfactual simulations in which the three underlying mechanisms are removed from the model, and these simulations demonstrate that each factor makes an sizeable contribution towards the observed midterm gap, with the Presidential penalty playing the largest role.

The paper proceeds as follows. We first discuss the literature on the midterm gap and possible underlying mechanisms. We then present the theoretical model and walk the reader through the three different hypotheses for the midterm gap. After translating the theoretical model into a statistical model and describing the data, we present the results and the counterfactual simulations. The conclusion

discusses some limitations of the approach and provides some overall lessons to be drawn from the analysis.

2 Related Literature

As noted above, we focus here on evaluating three of the leading explanations for the midterm gap. The first explanation involves voters simply having a preference for voting against the President's party in midterm years, and we refer to this as a Presidential penalty. According to this view, the Presidential year reflects the normal vote, and the midterm year a deviation from the normal vote. Within this category, there are several underlying explanations for *why* voters may prefer the opposition party in midterm years. First, the electorate may use the midterm year as a referendum on the President's performance, and if voters have systematically high expectations for Presidential performance, then voters may routinely vote against the President's party. Indeed, Tufte (1975) suggests that midterm gaps reflect the dissatisfaction of the electorate with the performance and management of the economy by the president's party. Second, as developed by Alesina and Rosenthal (1989, 1996), the Presidential penalty may involve a preference for balancing, under which voters prefer a divided government. In Presidential years, the outcome of the Presidential election is uncertain, and voters thus cannot condition on the party of the President when choosing which party to support in the House election.[1] In the midterm year, by contrast, this uncertainty is eliminated, and voters can choose to vote against the President's party.[2]

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[1] Of course, voters may have a good sense of the outcome of the Presidential election and may thus engage in anticipatory balancing even in Presidential years (Erikson, 2010).

[2] Scheve and Tomz (1999) find support for this idea in an analysis of individual survey data from the National Election Studies (NES). In particular, they find that moderate voters are

A second theory that tries to explain the midterm gap involves differences in turnout between Presidential and midterm years. We refer to this hypothesis as surge and decline. While it is well-known that turnout is lower in midterm years, the idea here is that the electorate may be systematically different between Presidential and midterm years. In the original idea of surge and decline, Campbell (1960) defined two types of voters: core voters, who are affiliated with one party and always turn out to vote, and peripheral voters, who are not necessarily tied to a party and will turn out to vote only in Presidential years. Since peripheral voters are more responsive to short-term political factors, the advantaged party in Presidential years will benefit in both House and Presidential races. These peripheral voters will abstain in the midterm elections and these elections are thus decided by core voters, who are less responsive to short-term factors, and the President's party will lose seats.

The notion of surge and decline in our model is closer to the revised theory of surge and decline, as formulated by Campbell (1987). Unlike the original theory, which focused on short term factors affecting preferences over parties, the revised theory focuses on short term factors affecting preferences over Presidential candidates. Such factors could include, for example, candidate quality. Based upon this difference, he then argues that supporters of the advantaged party in the Presidential election are energized and are thus more likely to participate, boosting the vote share of House candidates affiliated with the advantaged Presidential candidate. Supporters of the disadvantaged party, by contrast, are "cross-pressured" and may choose to abstain, depressing the vote share of the House candidates affiliated with the disadvantaged Presidential candidate. These differences go away

more likely to vote for the opposition in midterm elections when they have been surprised by the outcome of the previous presidential election.

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in midterm years, leading to a loss in support for the President's party. As will be shown in the next section, these theories of voter turnout can be naturally accommodated in a model that includes expressive voting and candidates with differing levels of quality.

The third theory that we address involves a reversion to the mean in voter ideology. According to this view, voter ideology shifts over time in aggregate, with some elections being held with a left-leaning electorate and others being held with a right-leaning electorate. If voters are leaning in one direction in a Presidential year, this will increase support for both the Presidential and House candidates from the advantaged party. If this support disappears in the midterm year, then the President's party will lose support. See, for example, Hinckley (1967), Oppenheimer, Stimson, and Waterman (1986), and McDonald and Best (2006).

Empirical tests of these hypotheses can be divided into two categories. The first category has employed aggregate election returns and, in some cases, aggregate polling data. These studies exploit variation over time and across geographic units, such as states or Congressional districts. Levitt (1994), who used district-level data between 1948 and 1990, found a strong role for withdrawn coattails and systematic punishment of the President in midterm elections. Bafumi, Erikson, and Wlezien (2010) use polling data at different points during midterm campaigns and find that support for the President's party in midterm years weakens as election day approaches, suggesting that voters are engaged in ideological balancing. In the context of Governors, Folke and Snyder (2012) conduct a regression discontinuity design and find that the Governor's party loses seats in the state legislature in subsequent midterm elections even when the Governor narrowly won. These studies have the benefit of being able to exploit more variation over

time and across Congressional districts and thus, for example, are better suited to studying the role of an incumbency advantage in the midterm gap.[3] Likewise, by examining close elections, Folke and Snyder can eliminate the surge and decline hypothesis and the reversion to the mean hypothesis and thus focus exclusively on the electoral penalty imposed on the party of the executive branch. On the other hand, these studies lack information on voter ideology and are thus not well-suited to an examination of a reversion to the mean in voter ideology. Likewise, these studies lack information on the turnout margin and thus may not always be well suited to examining surge and decline.

My paper is closer to the second category: those studies using individual-level survey data. Here we focus on the most closely related studies, those that have jointly analyzed the choice of candidates by voters and the turnout decision in their econometric models. Born (1990), using NES data on turnout and the choice of House candidates in both midterm and Presidential years, estimates a nested logit model where the three outcomes are abstention, supporting the House Republican, and supporting the House Democrat. In contrast to the predictions of negative voting (Kernell, 1977), he does not find a negative relationship between turnout in midterm elections and a voter-specific measures of Presidential approval, as proxied via thermometer scores. In an investigation of surge and decline, he also develops a procedure to identify likely peripheral voters, and using NES panel covering the years 1972, 1974, and 1976, does not find a significant increase in abstention for these voters in midterm elections, casting doubt on the original surge and decline hypothesis.

Mebane and Sekhon (2002) provide a test of the balancing hypothesis in

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[3] See, for example, Flemming (1995).

midterm elections. Like Born (1990), they also allow for three choices in their econometric model: abstain, support the House Republican, or support the House Democrat. While Mebane and Sekhon (2002) focus on midterm years, Mebane (2000) has estimated similar models for House elections held during Presidential years. While Mebane and Sekhon (2002) find support for the balancing theory, it explains only a small part of the midterm gap. They also show that the policy preferences of voters in midterm years move away from the policy preferences of the President's party's but that there is a similar pattern for non-voters, casting doubt on the surge and decline hypothesis. Finally, they show that the midterm gap can be explained by the policy preferences of midterm voters moving away from the President's party and towards the opposition party. However, the authors do not quantify the contribution of this factor towards explaining the midterm gap, and their analysis cannot provide an explanation for why the policy preferences of voters move in this manner.

My paper makes several contributions relative to these analyses in Born (1990) and Mebane and Sekhon (2002) and Mebane (2000). First, while these papers examine House voting in Presidential years, they do not examine Presidential voting in Presidential years, and, as will be shown below, this is necessary for testing the hypothesis associated with the revised theory of surge and decline. Likewise, my paper is the first in this literature to explicitly link the intensity of voter preferences over candidates to turnout, with a focus on how this turnout decision differs between Presidential years, when voters have preferences over two sets of candidates, and midterm years, when voters choose between one set of candidates. Most importantly, this paper is first of which I am aware that unifies all three hypothesized mechanisms, the Presidential penalty, surge and decline, and reversion to the mean in voter ideology, into a single theoretical and

statistical framework.

Finally, this paper is related to two studies outside of the literature on midterm gaps that jointly examine turnout and voting decisions. Degan and Merlo (2011) estimate an uncertain voter model in the context of a Presidential year, when voters choose between two sets of candidates. Unlike my paper, they allow for selective abstention, defined as voting in one of the two elections and abstaining in the other, and show that their estimated model fits the data quite well. They do not, however, compare Presidential and midterm years and thus do not address the midterm gap. Finally, Hill (2010) examines the dynamics of changes in vote shares across elections. He shows that when the persuasion region is large, due to changes in the ideology of the set of candidates across elections, then changes in vote shares can be explained by changing support among participating voters. When the persuasion region is small, by contrast, then change in vote shares can be explained by changes in voter participation. His study, however, focuses exclusively on executive branch (President and Governor) elections and thus does not address the midterm gap.

3   A Unified Theoretical Model

This section develops a simple model that generates a midterm gap according to the three mechanisms that have been prominently featured in the existing literature. We consider elections for two offices: House and President. We also consider two scenarios for the ballot. In a Presidential year, participating voters choose candidates in both House and Presidential elections. In midterm years, participating voters choose candidates only in House elections knowing the party of the President. In developing this model, we first consider how voters, conditional on participating, choose between candidates in Presidential and House elections.

Taking these choices as given, we then examine the participation decision and how it differs between midterm years and Presidential years.

3.1 Candidate choice in Presidential elections

Consider first the voter's choice, conditional on participation, between Presidential candidates. There are two candidates for President ($p \in \{D, R\}$) and a set of eligible voters, indexed by v. Voters differ in terms of their ideology (i_v), with increases in ideology associated with a movement to the right on the ideological spectrum (i.e., more conservative voters). Ideology is assumed to be centered at zero, and these voters are neutral with respect to parties. Voters with ideology less than zero, all else equal, have a preference for liberal candidates, and voters with ideology greater than zero, all else equal, have a preference for conservative candidates.

Candidates differ in terms of their valence or quality (q_p), which is valued equally by voters across the ideological spectrum and can be interpreted as the productivity, integrity, or honesty of the candidate. In addition, candidates differ in terms of their ideology (i_p), with increases in ideology being associated with more conservative candidates. Voters have a preference for like-minded candidates and experience a squared loss as the ideology of the candidate moves away from the ideology of the voter. Taken together, we then have that voter v receives the following payoff from candidate p winning the election:

$$U_{vp} = q_p \ \square \ \frac{\omega^P}{2}(i_v \ \square \ i_p)^2$$

where ω^P captures the importance of ideology, relative to quality, for voters in the Presidential election, indexed by P. We normalize candidate ideologies such that they are centered around zero. That is, $i_R = \square i_D = \kappa_P/2$. Then, defining Δ_v^P as

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the utility difference between electing the Republican and electing the Democrat for voter v and defining relative quality as $\Delta q^P = q_R \square q_D$, we have that:

$$\Delta_v^P = U_{vR} \square U_{vD} = \Delta q^P + \omega^P \kappa^P i_v$$

As shown, this difference is increasing in the quality difference between the Republican and Democratic candidates and in voter ideology. Also, voter ideology plays a stronger role when candidates are polarized (κ^P large) and when voters place more weight on ideological differences (ω^P large). Finally, we have that voters, conditional on participating, support the Republican in the Presidential election ($R^P = 1$) if and only if $\Delta_v^P > 0$.

An important feature of the model is the ideology of the voter who is indifferent between the two candidates (i_v^*). This can be found by setting $\Delta_v^P = 0$ and solving for the ideology of the indifferent voter as follows:

$$i_v^* = \frac{\square \Delta q^P}{\omega^P \kappa^P}$$

As shown, as the quality of the Republican candidate, relative to the Democrat, increases, liberal voters are cross-pressured in the sense that they prefer the Democratic candidate along ideological grounds but the Republican candidate along quality grounds. Given this, the ideology of the indifferent voter shifts to the left. Likewise, as the relative quality of the Republican candidate decreases, conservative voters are cross-pressured, and the ideology of the indifferent voter shifts to the right.

3.2 Candidate choice in House elections

Consider next the voter's choice, again conditional on participating, in the House election, indexed by H. Voters again choose between two candidates $h \in \{D,R\}$.

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To focus on quality in the Presidential election, which has been one of key issues in the literature on Presidential coattails and the midterm gap, we abstract from differences in quality for House candidates. That is, we assume that $\Delta q^H = 0$. Note that this assumption will be relaxed to some extent in the econometric analysis to follow. Also, let ω^H denote the importance of ideology for voters in House elections, and let κ^H represent polarization between House candidates.

In a House election held during a Presidential year, there is no consideration of punishing the party of the sitting President in the model. We thus have the following for elections to the House during Presidential years:

$$
\begin{aligned}
U_{vh} &= \Box \frac{\omega^H}{2}(i_v \Box i_p)^2 \\
\Delta_v^H &= \omega^H \kappa^H i_v
\end{aligned}
$$

Again, voters, conditional on participating, support the Republican House candidate ($R^H = 1$) if and only if $\Delta_v^H > 0$, and this is more likely when voters are right-leaning.

During midterm years, we allow for the possibility of penalty against the party of the sitting President. Let $I \in \{0, 1\}$ indicate whether the incumbent President is a Republican during a midterm year, and let ρ, which is hypothesized to be negative, denote a penalty in midterm years imposed by voters on the President's party. Then, we have that:

$$
\Delta_v^H = \omega^H \kappa^H i_v + \rho(2I \Box 1)
$$

As shown, when the incumbent President is a Republican, the willingness to support Republican House candidates falls. Likewise, when the President is a Democrat, the willingness of voters to support Republican House candidates increases.

3.3 Participation decision

Recall that the idea behind the revised theory of surge and decline is that the voters from the advantaged party in Presidential elections are energized to vote and that voters from the disadvantaged party are cross-pressured and may choose to abstain. One way to formalize this notion is to extend the model of expressive voters to bundled elections (i.e., voters choosing between candidates in both Presidential and House elections in Presidential years). Following Fiorina (1976), voters are assumed to be expressive in the sense they are not voting to change the outcome of the election but instead to voice their opinion over the candidates and parties.[4] In this case, the expressive benefits to voting in a House and Presidential election are given by the intensity of preference for the preferred candidate. More specifically, these are represented by the absolute value of the utility differences in the House ($|\Delta_v^H|$) and Presidential elections ($|\Delta_v^P|$). When voters have strong preferences, these values will be large, and when voters are relatively indifferent, these values will be closer to zero.

We first consider participation in a midterm year. With a cost of voting (c_v), which could be negative in the presence of a "civic duty" motive for participation, we can then say that voters in a midterm year choose to abstain ($A = 1$) if their preference for one of the candidates is not sufficiently strong to overcome the costs of voting. That is, voters participate if and only if the following condition holds:

$$\beta_H |\Delta_v^H| > c_v$$

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[4] More formally, using the language of Brennan and Hamlin (1998), we assume that there is a "perfect correlation" between expressive factors and instrumental factors and that the probability of being pivotal is sufficiently small such that instrumental factors play no role in participation decisions.

where β_H represents the value of expressing an opinion in the House election.

In a Presidential year, voters are assumed to consider the benefits from expressing their opinions over both sets of candidates. In particular, we assume that voters place a value β_P of expressing their opinion in the Presidential election. Then, voters participate if and only if the following condition holds:

$$\beta_H|\Delta_v^H| + \beta_P|\Delta_v^P| > c_v$$

Comparing participation decisions across these two scenarios, it is clear that there are several important differences in turnout between Presidential and midterm years. Consistent with well-known facts regarding voter participation, the model predicts that turnout will be higher in Presidential years so long as $\beta_P > 0$. This is due to the fact that voters can express multiple opinions in Presidential years but only a single opinion in midterm years. More interestingly, we can also consider how an increase in the quality of the Democratic candidate for President, relative to the Republican, changes turnout in Presidential years. As shown above, as Δq^P decreases, the ideology of the indifferent voter shifts to the right. As will be shown below, this increases $|\Delta_v^P|$ for left-leaning voters, energizing the base, and decreases $|\Delta_v^P|$ for cross-pressured voters from the right, depressing turnout. This mechanism will play a key role in terms of the surge and decline mechanism.

3.4   Model Summary

Then, the behavior of eligible voters in a midterm year can be summarized as the probabilities of three distinct outcomes. Voters abstain $(A = 1)$ if the costs of voting exceed the benefits of voting. Otherwise, voters participate and support the Republican $(R^H = 1)$ if the utility difference is positive and support the

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Democrat ($R^H = 0$) if the utility difference is negative:

$$\Pr(A = 1) = \Pr(\beta_H |\Delta_v^H| < c_v)$$

$$\Pr(R^H = 1) = \Pr(\beta_H |\Delta_v^H| > c_v,\ \Delta_v^H > 0)$$

$$\Pr(R^H = 0) = \Pr(\beta_H |\Delta_v^H| > c_v,\ \Delta_v^H < 0)$$

Likewise, the behavior of eligible voters in a Presidential years can be summarized as the probabilities of five distinct outcomes: abstaining, voting a straight ticket for the Republican party, voting a straight ticket for the Democratic party, and two cases of split tickets:

$$\Pr(A = 1) = \Pr(\beta_H |\Delta_v^H| + \beta_P |\Delta_v^P| < c_v)$$

$$\Pr(R^H = 1, R^P = 1) = \Pr(\beta_H |\Delta_v^H| + \beta_P |\Delta_v^P| > c_v, \Delta_v^H > 0, \Delta_v^P > 0)$$

$$\Pr(R^H = 0, R^P = 0) = \Pr(\beta_H |\Delta_v^H| + \beta_P |\Delta_v^P| > c_v, \Delta_v^H < 0, \Delta_v^P < 0)$$

$$\Pr(R^H = 1, R^P = 0) = \Pr(\beta_H |\Delta_v^H| + \beta_P |\Delta_v^P| > c_v, \Delta_v^H > 0, \Delta_v^P < 0)$$

$$\Pr(R^H = 0, R^P = 1) = \Pr(\beta_H |\Delta_v^H| + \beta_P |\Delta_v^P| > c_v, \Delta_v^H < 0, \Delta_v^P > 0)$$

3.5   Midterm gaps and Mechanisms

Figures 1-4 summarize the three mechanisms through which this simple model generates midterm gaps, defined as a loss in support for the President's party during midterm years. In each graph, the left side depicts a Presidential year, and the right side depicts a midterm year. In this graphical summary, we assume that voter ideology is normally distributed in the baseline case to be described below. We also assume that voters have identical and positive costs of voting ($c_v = c > 0$, for all v). Neither of these assumptions is critical for the results, and both will be relaxed in the empirical analysis to follow.

Figure 1 illustrates the baseline case of no midterm gap. We assume here that (A) there is no Presidential penalty in midterm years ($\rho = 0$), (B) there is no difference in quality between the two Presidential candidates ($\Delta q^P = 0$), and (C) the distribution of voter ideology is stable across Presidential and midterm years. Then, the indifferent voter in all elections has ideology zero, and conditional on participating, voters with ideology above zero support the Republican and voters with ideology below zero support the Democrat. In terms of the turnout decision, voting costs, which, as noted above, are assumed to be uniform and positive for the purposes of this graph, are represented by the dotted line. Voters receive an expressive benefit (b) from voting in each election, and this is given by the solid line, which is V-shaped since the indifferent voter receives no expressive benefits from voting and benefits increase as voters become more ideologically extreme. In Presidential years, voters receive two such expressive benefits, and this combined benefit is given by the dashed line. Voters then choose to participate in Presidential years when these combined expressive benefits exceed the costs of voting. As shown, this leads to higher participation in Presidential years. In terms of electoral outcomes, the red area then depicts those who participate and support the Republican, and the blue area depicts those who participate and support the Democrat. As shown, Republican candidates receive 50 percent of the vote in all three elections, and there is no midterm gap since the President's party does not lose support in midterm years.

[Figure 1 about here]

Figure 2 illustrates the case in which a midterm gap is due to a Presidential penalty in midterm years ($\rho < 0$) but where the other two mechanisms are not in play. That is, we continue to assume that there is no quality difference in the

candidates for President and that the distribution of voter ideology is stable across Presidential and midterm years. We generate a Presidential penalty in midterm years by simply assuming that a Republican won the Presidential election via some tiebreaker, such as the flip of the coin. Voters then respond to a Republican President by punishing the party in the midterm year. In this case, the ideology of the indifferent voter in the midterm year shifts to the right, expressive benefits of voting shift to the right, turnout increases on the left and falls on the right, and the Republican vote share falls.[5]   To summarize, Figure 2 illustrates that a simple preference for voting against the President's party in midterm years generates a midterm gap.

[Figure 2 about here]

Figure 3 illustrates the case in which a midterm gap is generated by a surge and decline in voter turnout. That is, we now assume that there is no Presidential penalty in the midterm year ($\rho = 0$) but that the Democratic candidate is of higher quality ($\Delta q^P < 0$). We also retain the assumption that the distribution of voter ideology is stable across the two election years. As shown, an increase in the quality of the Democratic candidate shifts the ideology of the indifferent voter to the right, and the expressive benefits of voting in the Presidential election also shift to the right. This also shifts the combined expressive benefits of voting in the Presidential year to the right, boosting turnout among core supporters on the left and depressing turnout among cross-pressured voters on the right. As shown, this

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[5] While this graph depicts the Presidential penalty in midterm years arising from changes in turnout, it could also be due to participants who shift their support to the Democrats in midterm years. To see this, consider the extreme case in which voting costs are zero for all voters and turnout is complete in both Presidential and midterm years. In this case, the Republican vote share will still fall due to moderate Republican voters shifting their support to the Democrats in the midterm year.

benefits House Democrats and hurts House Republicans, leading to Presidential coattails. These coattails are withdrawn in the midterm year as turnout returns to normal, and the President's party loses support in the midterm year. Thus, a quality difference in the Presidential election also generates a midterm gap.

[Figure 3 about here]

Figure 4 illustrates the case in which a midterm gap is generated by reversion to the mean in voter ideology. That is, we assume no Presidential penalty in midterm years ($\rho = 0$) and no differences in the quality of Presidential candidates ($\Delta q^P = 0$) but now allow for the distribution of voter ideology to shift between Presidential and midterm years. For purposes of illustration, we assume that voter ideology shifts to the left in the Presidential year before returning to its original baseline position in the midterm year. As shown, this lead to no changes in turnout, conditional on ideology, but leads to increased support for Democrats in both the Presidential and House elections during the Presidential year. As ideology returns to normal in the midterm year, however, support for Democrats fades, generating a loss in votes for the President's party. Thus, a temporary shift in the distribution of voter ideology can generate a midterm gap.

[Figure 4 about here]

To summarize, the model nests three long-standing hypothesized mechanisms underlying the midterm gap: Presidential penalty, surge and decline in voter turnout, and reversion to the mean. We next turn to an empirical evaluation of this model and a decomposition of the midterm gap into these hypothesized mechanisms.

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4 Empirical Approach

Our empirical approach relies on individual-level turnout, choice of candidates, and voter ideology taken from the American National Election Survey (NES) for a subset of the years between 1952-2008. In this section, we first develop a statistical model analogous to the theoretical model presented above and then provide details on the NES data.

4.1 Econometric Model

Given this long time span in the NES data, we next introduce a time dimension (t). Then, support for the Republican candidate, relative to the Democrat, for voter v at time t in a midterm year is given by:

$$\Delta_{vt}^H = \Delta q^H + \theta^H i_{vt} + \rho(2I_t \square 1)$$

where Δq^H is a constant and, while set to zero in the theoretical model, is included here to capture average differences in quality between Republican and Democrat candidates. The parameter θ^H can be interpreted, in the context of the model, as reflecting the product of voter preferences for like-minded candidates (ω^H) as well as the degree of polarization in House elections (κ^H). That is, $\theta^H = \omega^H \kappa^H$.

In addition, we allow for unobserved voter characteristics (ε_{vt}^H) to influence voting decisions. Adding these unobserved characteristics to the equation determining support for the Republican House candidate, we then have that:

$$
\begin{aligned}
\Pr(A &= 1) = \Pr(\beta^H |\Delta_{vt}^H| < c_{vt}) \\
\Pr(R^H &= 1) = \Pr(\beta^H |\Delta_{vt}^H| > c_{vt}, \Delta_{vt}^H + \varepsilon_{vt}^H > 0) \\
\Pr(R^H &= 0) = \Pr(\beta^H |\Delta_{vt}^H| > c_{vt}, \Delta_{vt}^H + \varepsilon_{vt}^H < 0)
\end{aligned}
$$

In Presidential years, we have that the utility differences between Republican and Democratic candidates in the two elections for a voter with ideology i_{vt} are given by:

$$\Delta_{vt}^H = \Delta q^H + \theta^H i_{vt}$$
$$\Delta_{vt}^P = \Delta q_t^P + \theta^P i_{vt}$$

where Δq_t^P is a series of time dummy variables that will be estimated and capture the quality of the Republican candidate, relative to the Democratic candidate, in each Presidential election. These dummy variables are identified by the degree to which moderate voters support the Republican. If moderate voters strongly support the Republican, then we infer that the Republican is of higher quality ($\Delta q_t^P > 0$). If moderate voters support the Democrat, by contrast, then we infer that the Republican is of lower quality ($\Delta q_t^P < 0$).

Defining unobserved voter preferences in the Presidential election as ε_{vt}^P, the behavior of eligible voters in a Presidential year can be summarized by:

$$\Pr(A = 1) = \Pr(\beta^H |\Delta_{vt}^H| + \beta^P |\Delta_{vt}^P| < c_{vt})$$
$$\Pr(R^H = 1, R^P = 1) = \Pr(\beta^H |\Delta_{vt}^H| + \beta^P |\Delta_{vt}^P| > c_{vt}, \Delta_{vt}^H + \varepsilon_{vt}^H > 0, \Delta_{vt}^P + \varepsilon_{vt}^P > 0)$$
$$\Pr(R^H = 0, R^P = 0) = \Pr(\beta^H |\Delta_{vt}^H| + \beta^P |\Delta_{vt}^P| > c_{vt}, \Delta_{vt}^H + \varepsilon_{vt}^H < 0, \Delta_{vt}^P + \varepsilon_{vt}^P < 0)$$
$$\Pr(R^H = 1, R^P = 0) = \Pr(\beta^H |\Delta_{vt}^H| + \beta^P |\Delta_{vt}^P| > c_{vt}, \Delta_{vt}^H + \varepsilon_{vt}^H > 0, \Delta_{vt}^P + \varepsilon_{vt}^P < 0)$$
$$\Pr(R^H = 0, R^P = 1) = \Pr(\beta^H |\Delta_{vt}^H| + \beta^P |\Delta_{vt}^P| > c_{vt}, \Delta_{vt}^H + \varepsilon_{vt}^H < 0, \Delta_{vt}^P + \varepsilon_{vt}^P > 0)$$

To generate an analytic expression for these probabilities, we assume that voting costs are both unobserved and normally distributed. Given that there is no constant in the participation/abstention equation, we allow for voting costs

to have a non-zero mean, and following discrete choice modeling, we normalize the variance to equal one. More formally, $c_{vt} \sim N(\mu, 1)$. Likewise, unobserved preferences for Republican candidates in the two elections are assumed to be distributed bivariate normal with a non-zero correlation σ. More formally, $(\varepsilon_{vt}^H, \varepsilon_{vt}^P) \sim N(0, 0, 1, 1, \sigma)$. For tractability reasons, we assume that voting costs are independent of these unobserved preferences for candidates in the two elections.

Estimation proceeds in two steps. In the first step, the set of parameters governing the voting decisions are identified based upon the set of voters participating in the election. These parameters include the Presidential penalty in midterm years (ρ), parameters linking voter ideology to vote choices in House and Presidential elections (θ^H and θ^P), and measures of Presidential quality (Δq_t^P) for each Presidential election. The contribution to the likelihood function in Presidential years is the likelihood for a bivariate probit model, and the contribution to the likelihood in midterm years is a univariate Probit model, with constraints imposed on parameters across the Presidential and midterm years.

Given these estimated parameters from the first step, the expressive benefits of voting in House ($|\Delta_{vt}^H|$) and Presidential ($|\Delta_{vt}^P|$) elections can be calculated, where the latter is simply set to zero during midterm years, for both participants and non-participants. Then, these calculated expressive benefits are included as generated regressors in a second stage univariate Probit equation examining whether or not eligible voters choose to participate. This second stage employs information from the entire sample and identifies the parameters linking expressive benefits to participation decisions (β^H and β^P).

Finally, bootstrap standard errors, using 1,000 replications, are calculated in order to account for the uncertainty associated with using generated regressors

in the second stage.

Given this setup, identification of the three key mechanisms underlying the midterm gap can be summarized as follows. The Presidential penalty is identified by examining the degree to which respondents, holding ideology fixed and conditional on participation, report voting against the President's party in midterm years. The surge and decline in voter turnout is identified by the degree to which the participation margin is influenced by the intensity of preferences over the Presidential candidates. Finally, mean reversion in ideology is identified by the degree to which ideology shifts from year to year in aggregate and also by the degree to which ideology is linked to choice of candidates.

4.2   Data

Our data comes from the American National Election Survey, which has been conducted in every year with federal elections since 1948 except for the midterm years of 1950, 1954, 2006, and 2010. Given that our key measure of voter ideology was not collected in 1948, we begin our sample in 1952 and thus have information from 15 Presidential years and from 12 midterm years. Among these 12 midterm years, seven were held with a sitting Republican President (1958, 1970, 1974, 1982, 1986, 1990, and 2002), and five were held with a sitting Democratic President (1962, 1966, 1978, 1994, and 1998).

Implementation of this empirical approach requires the following pieces of information from surveys conducted during Presidential years:

  1) voter turnout decisions

  2) choice of House candidate

  3) choice of Presidential candidate

  4) voter ideology

Of course, during midterm years, we will not have information on the choice of Presidential candidates.

Measures of turnout and voting decisions are based upon standard questions included in all years of the ANES. The more complex issue involves the measurement of voter ideology. In order to capture the possibility of mean reversion in explaining the midterm gap, we require a measure that is both comparable across years and time-varying[6] Given this, we use two measures of self-reported ideology that are comparable across years and time-varying. The first measure is included in all survey years since 1952 and is based upon self-reported party affiliation. There are seven possible responses to this question:

1. Strong Democrat

2. Weak Democrat

3. Independent - leaning Democrat

4. Independent - Independent

5. Independent - leaning Republican

6. Weak Republican

7. Strong Republican

For consistency with the theoretical model, we convert this measure to a $[-1, 1]$ interval, with Strong Democrat scoring -1, Weak Democrat scoring -0.67, Independent - leaning Democrat scoring -0.33, Independent-Independent scoring 0, Independent - leaning Republican scoring 0.33, Weak Republican scoring 0.67 and, finally, Strong Republican scoring 1.

As an alternative measure, we use thermometer scores of conservatives and

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[6] One option would be to parameterize ideology as a function of demographics, exploiting the fact, for example, that women tend to be more supportive of Democrats than men. The problem here is that this measure will not be time-varying, absent dramatic changes in demographics, and thus will not capture high frequency change in ideology underlying the reversion to the mean hypothesis.

liberals. In particular, respondents were asked to rate conservatives on a 0 to 100 scale and were asked to rate liberals on a 0 to 100 scale. We take the difference between these scores (conservative score minus liberal score), which covers the interval $[\square 100, 100]$, and then convert this measure to the $[\square 1, 1]$ interval by dividing by 100. Those providing the same thermometer score to Democrats and Republicans receive a score of 0, those that provide a higher score to liberals have a negative score, and those providing a higher score to conservatives have a positive score. One drawback of this measure is that it is not available until 1964 and was also not included in the 1978 midterm year survey. Given this more limited availability over time, we view this measure as providing a robustness check on our preferred measure of party affiliation.

In terms of defining the sample, we exclude voters who reported voting for a third-party candidate in either House or Presidential elections since our model is designed for two-party elections. We also exclude voters who reported voting for only one of the two elections during Presidential years (i.e. cases of roll off). We also exclude voters for whom the ideology measures were not collected. Finally, all summary statistics and regressions use post-election sampling weights for the years in which they are available.

Table 1a reports summary statistics for two samples. The party affiliation sample includes all respondents with a valid ideology measure based upon self-reported partisan affiliation. Likewise, the conservative/liberal thermometer sample includes all respondents with a valid ideology measure based upon thermometer scores.

[Table 1a about here]

As shown in Table 1a, roughly 70 percent of respondents in both samples

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report having participated in Presidential years, with turnout falling to 52 percent and 54 percent in the two samples during midterm years. Both samples also report a tendency for voters to support Democrats in House elections, with support for Republicans between 43 and 45 percent in the different samples. Support for parties in the Presidential election, by contrast, is roughly evenly split, with a slight advantage for Republican candidates on average.

In terms of the ideology measures, the party affiliation measure has a negative sample mean in both Presidential and midterm years, with more voters identifying as Democrats than Republicans. This suggests that voters tend to be left-of-center on average. The thermometer scores, by contrast, have positive sample means, with voters giving higher scores on average to conservatives than to liberals. This suggests that voters tend to be right-of-center on average.

In order to assess the validity of these data in terms of replicating midterm gaps over time, Figure 5 plots the midterm gap using actual voting returns against the midterm gap using self-reported voting in the ANES data between 1956 and 2002, with the actual midterm gap in grey and the ANES midterm gap in orange.[7] Note that both measures are based upon national vote shares, rather than seats. For example, in 1958, Republicans lost 5 percentage points of the national vote compared to 1956, and the ANES measure reports a slightly larger midterm gap, between 7 and 8 percentage points.

As shown, the two measures coincide in most instances. There are some noticeable differences, with the ANES reflecting a gain in votes for the President's party in 1962, 1978, and 1998. Also, the ANES significantly over-predicts the midterm gap in 1994.[8] Nonetheless, the correlation between the ANES midterm

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[7] As noted above, the ANES survey was not conducted during 1954, 2006, and 2010.

[8] This over-prediction in 1994 like resuls from the exclusion of voters supporting Perot in

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gap and the actual midterm gap across the years of Figure 5 is 0.76, and the average midterm gaps are similar, with the actual midterm gap averaging 3.0 percentage points and the ANES midterm gap averaging 3.6 percentage points.

[Figure 5 about here]

Before turning to the econometric analysis, we first use the raw ANES data to examine whether or not two key features of the model are satisfied. First, the approach assumes expressive voting and thus the benefits of voting are high for extreme voters and low for moderate voters. Given this, the model predicts that, across many elections, extreme voters should be more likely to participate than moderate voters. As shown in Table 1b, this is indeed the case in our data, with the lowest turnout rates among self-declared Independents (36 percent) and the highest turnout rates among Strong Democrats (73 percent) and Strong Republicans (82 percent), with intermediate turnout rates for weak partisans and independents who lean towards one of the two parties. Second, the approach assumes a monotonic relationship between party affiliation and support for candidates. As shown in third column, this is indeed the case for the fraction supporting House Republicans, which increases monotonically across the seven categories from Strong Democrats (9 percent) to Strong Republicans (88 percent). The relationship is also generally monotonic when examining Presidential voting with the exception of moving from the movement from Weak Democrat (27 percent) to Independent-Leaning Democrat (20 percent) and likewise for the movement from Independent-leaning Republican (88 percent) to Weak Republican (86 percent). On the whole, however, the additional summary statistics in Table 1b support these two key features of the theoretical model.

1992. If these Perot supporters differentially support Republican House candidates, this will in ate support for Democrats in 1992, leading to a larger decline for Democrats in 1994.

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5   Results

Table 2 provides the statistical results from the first-stage estimation of preference parameters from self-reported participants in Presidential and midterm years. As shown the first column in Panel A, there is a strong link between self-reported party affiliation and vote choice, with right-leaning voters more likely to support Republican candidates. We also find a statistically significant Presidential penalty in midterm years, with voters going against the sitting President's party in House elections held during midterm years.

Panel B reports the results for Presidential elections. Similarly to House elections, there is a strong link between voter ideology and the choice of candidates. As shown in the final row, the estimated correlation in preferences for House and Presidential Republican candidates is 0.5404. In terms of Presidential quality, we find that voters perceived Republicans to be of higher quality in all years between 1952 and 1988 with the exception of 1964. Democrats were perceived to be of higher quality during 1964 and 1996, with no statistically significant differences in 1992, 2000, 2004, 2008.

This finding that Republicans tend to be of higher quality is consistent with the facts, as previously documented, that support in Presidential elections was roughly split evenly between the two parties but that voters were more likely to identify as Democrats. The coexistence of these two facts requires that Democratic-identifying voters are more likely to support Republican candidates, when com-

pared to the rate of crossing party lines in Presidential elections for Republican-identifying voters.

Using these results from Table 2, we then compute the expressive benefits to voting in both Presidential and midterm years for both participants and non-participants. In Presidential years, we separately compute the benefits to voting in the House elections and the benefits to voting in Presidential elections. In the midterm year, by contrast, we set the benefits to voting in the Presidential election to zero.

Using these constructed measures of the expressive benefits of voting, we then examine how they impact turnout decisions. As shown in the first column of Table 3, the positive coefficients for both House and Presidential elections make clear that the expressive benefits of voting in both types of elections increase voter turnout, with the benefits from expressing support in the House election playing a somewhat stronger role.

[Table 3 about here]

Since the expressive benefit from voting in the Presidential election is zero during midterm years, one alternative explanation for the positive coefficient on the expressive benefits of voting in Presidential elections is that turnout is simply higher in Presidential years. While there is no reason to believe that the economic costs of voting should be different between Presidential and midterm years, one could imagine that civic duty considerations are stronger in Presidential years. That is, there may be non-expressive benefits of voting in Presidential years, boosting turnout. We recognize this alternative explanation and attempt to address this in column (2) of Table 3 by including an indicator for Presidential years. In this case, the coefficient on the expressive benefits of voting in the Presidential

election are identified by variation in the quality of Presidential candidates across different Presidential elections. As shown, while this key coefficient does fall in magnitude, it remains positive and statistically significant.

As a robustness check, we next run the second stage regressions using an alternative measure of the expressive benefits of voting based upon the squared, rather than absolute, difference in preferences over the candidates. That is, instead of calculating absolute differences in House elections, $|\Delta_{vt}^H|$, we calculate $(\Delta_{vt}^H)^2$, and we define analogous measures in Presidential elections. In this case, expressive benefits are convex, rather than linear, in the difference in preferences over candidates. As shown in column (3) of Table 3, the results are similar in sign to the baseline results in column (1). Finally, as shown in column (4), these results are also robust to using this squared measure of expressive benefits and the inclusion of an indicator for Presidential years.

Returning to Table 2, we next conduct the analysis using the conservative-liberal thermometer measure of voter ideology. As shown in column (2), the coefficients on voter ideology remain positive and statistically significant.[9]   As shown in the final row, the estimated correlation in preferences for House and Presidential Republican candidates in this case is 0.7214. Finally, the quality measures, with the exception of 1984, are strongly negative, suggesting that Democrats are more appealing to swing voters, defined as those close to zero in this ideology measure. As noted above, this is consistent with voters having more right-leaning ideology using this measure and votes being roughly split between the two parties in Presidential elections.

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[9] Note that the coefficients in column 2 are not directly comparable to those in column 1 since the variance of the unobserved components may differ across these specifications.

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Finally, Table 4 provides the turnout results using this alternative ideology measure. As shown, the coefficient on the expressive benefits of voting in House elections is statistically insignificant in the first column. After controlling for Presidential years, however, the coefficient rises and becomes statistically significant. Similarly to Table 3, the coefficient on the expressive benefits from voting in Presidential elections is positive and statistically significant in both columns (1) and (2). Finally, as shown in the final two columns, the results are similar when using a measure of the squared preference difference.

[Table 4 about here]

6 Midterm Gap Simulations

Using these parameter estimates, we next use the statistical model to decompose the midterm gap into the three channels discussed previously. The first step in this exercise is to calculate the midterm gap as predicted by the estimated model in each year. Figure 6 depicts the midterm gap in the ANES raw data (orange) and the midterm gap as predicted by the model in black. As shown, the model fits the data quite well, with a correlation of 0.86 between the two series in midterm years. Averaging across years, the model predicted midterm gap is 4.5 percent, a bit higher than the ANES midterm gap of 3.6 percent.

[Figure 6 about here]

We next decompose the model predicted midterm gap into its three components. We do so by removing the mechanisms one at a time. Removing the Presidential penalty mechanism is achieved quite simply by setting the penalty in midterm years to zero ($\rho = 0$). This requires that voting probabilities in House

elections, conditional on ideology and participation, are identical in midterm and Presidential years and also are independent of the Presidential party in power in midterm years.

Likewise, removing the surge and decline mechanism can be achieved by setting the coefficient on the expressive benefits to voting in Presidential elections to zero ($\beta^P = 0$). This requires that turnout in Presidential and midterm years is identical and thus changes in the composition of the electorate when moving from Presidential to midterm years cannot lead to a reduction in support for the President's party.

Finally, removing reversion to the mean in voter ideology is achieved by holding fixed the distribution of voter ideology when moving from a Presidential year to the subsequent midterm year. Operationally, we do this by using only the sample of voters in Presidential years and then, holding only their ideology constant, predict both their choice over candidates and their participation decision in the subsequent midterm year environment.

Figure 7 displays the results from these calculations. The black line represents the midterm gap predicted by the model and it identical to that in Figure 6. The blue line represents the midterm gap without the Presidential penalty mechanism. The red line represents the midterm gap without surge and decline. Finally, the yellow line represents the midterm gap without mean reversion in voter ideology.

[Figure 7 about here]

As shown, removing the Presidential penalty unambiguously benefits the President's party, with smaller losses in years with midterm losses and larger gains in years with midterm gains. The surge and decline and mean reversion mechanisms, by contrast, appear to be moderating forces. That is, removing these mechanisms

tends to push midterm gaps towards zero in years with both midterm losses and years with midterm gains.

To get a sense of the contribution of these factors on average, Figure 8 displays the midterm gap decomposition averaged across all midterm years. As shown, the Presidential penalty mechanism appears to play the largest role, with the midterm gap falling from 4.5 percent on average to 2.4 percent in the absence of this mechanism. The fact that midterm gap falls significantly when removing the Presidential penalty mechanism implies that this mechanism is important in explaining the midterm gap. In particular, we can say that this mechanism explains 47 percent of the midterm gap when averaged across years. In the absence of either of the other two mechanisms, by contrast, the midterm gap falls to 3.3 percent. Thus, we can say that surge and decline and mean reversion in voter ideology each explain 27 percent of the midterm gap.

[Figure 8 about here]

As noted above, the model predicts a midterm gain for the President's party in three of the twelve cases considered in Figure 7, and eliminating the Presidential penalty mechanism leads to larger midterm gains in those cases. Given this, eliminating these three electoral cycles leads to a smaller role for the Presidential penalty mechanism. In this case, the model predicts a midterm gap of 6.4 percent, with a more equal split between the three mechanisms. In particular, in this case, the Presidential penalty mechanism contributes 33 percent, surge and decline contributes 28 percent, and mean reversion in voter ideology contributes 39 percent.

Figure 9 repeats these decompositions based upon the analysis using the conservative/liberal thermometer measure underlying the results in column (2) of

Table 2 and Table 4. As shown, the Presidential penalty hypothesis again plays the largest role here. Eliminating this mechanism leads the midterm gap to fall from its predicted value of 4.2 percent to just 1.2 percent. Thus, the Presidential penalty mechanism here explains a large fraction, 72 percent, of the midterm gap predicted by the model. The surge and decline mechanism explains 17 percent, and mean reversion in voter ideology explains 11 percent. Thus, this analysis using an alternative measure voter ideology places a larger emphasis on the Presidential penalty hypothesis.

[Figure 9 about here]

7   Conclusion

In summary, this paper has provided an investigation of three long-standing explanations for the midterm gap. These hypothesized explanations include the Presidential penalty in midterm years, a surge and decline in voter turnout, and mean reversion in voter ideology. These mechanisms are developed in the context of a model in which voters decide both whether or not to participate in midterm and Presidential years and, conditional on participating, which candidates to support. The parameters of this model are then estimated, and counterfactual simulations allow for the decomposition of the midterm gap into the contributions from these three hypothesized mechanisms.

It is important to note several limitations of this analysis. First, this analysis does not address some explanations for the midterm gap, such as the informational spillovers hypothesis put forward by Halberstam and Montagnes (2012). Second, the analysis cannot distinguish between competing explanations underlying the Presidential penalty in midterm years. These include voters using midterm

years as a referendum on the President's performance and voter preferences for divided government. Third, the analysis does not incorporate the possibility of selective abstention or roll-off, under which voters may choose to participate in the Presidential election but not the House election during Presidential years. This may tend to weaken the surge and decline mechanism, which highlights the impact of changing incentives for turnout in the Presidential election on House elections during Presidential years. That is, some voters who turn out in Presidential years but not House years will selectively abstain from the House election during Presidential years. Thus, these voters will not cast voters for House elections in either year and thus cannot play a role in the midterm gap.

Although the quantitative results vary across specifications, there are a few general lessons to be taken away from the analysis. First, the estimated model matches well the observed midterm gap over time and can fully explain the midterm gap when averaged across midterm years. Second, each of the three mechanisms, as formalized in the theoretical model and estimated in the empirical analysis, plays a substantive role in explaining the midterm gap. Finally, while this lesson is more sensitive to the specification, the bulk of the evidence points towards the Presidential penalty hypothesis playing a stronger role than surge and decline and a reversion to the mean in voter ideology.

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Figure 1: Baseline scenario with no midterm gap

Figure 2: Midterm Penalty with a Republican President

Presidential voting

0
voter ideology

House voting in Presidential year

0
voter ideology

House voting in midterm year

0
voter ideology

c b combined_b

c b

Figure 3: Surge and Decline

Presidential voting
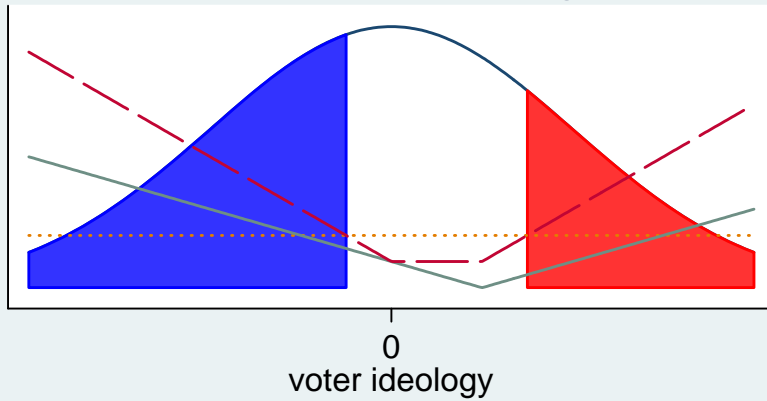
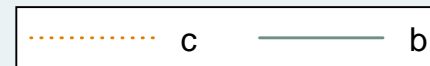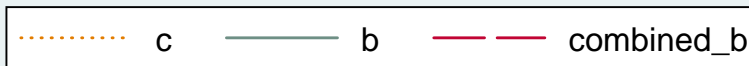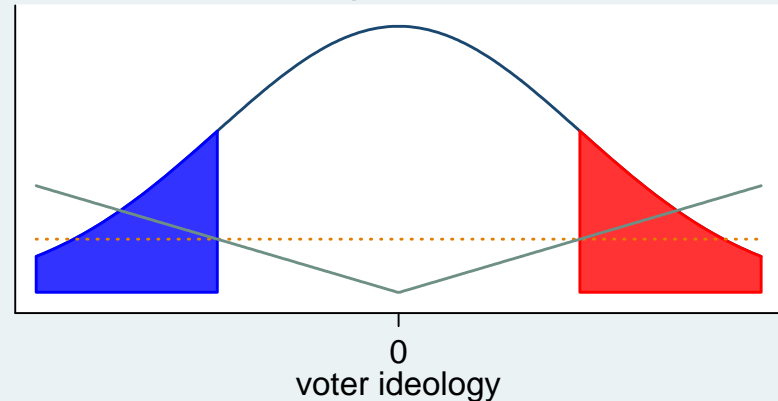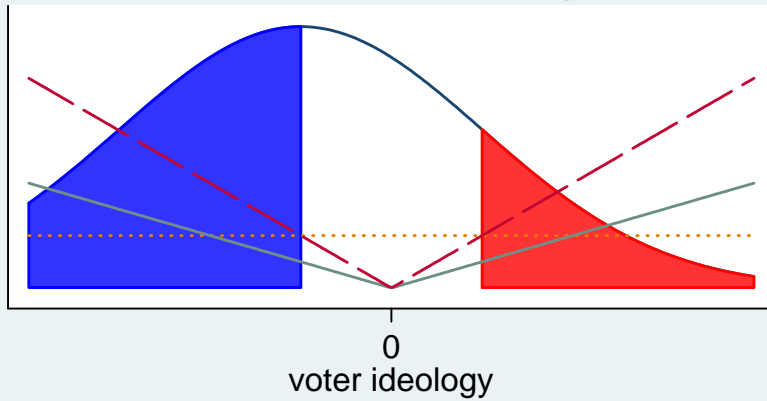House voting in Presidential year

House voting in midterm year

voter ideology

c   b   combined_b

c   b
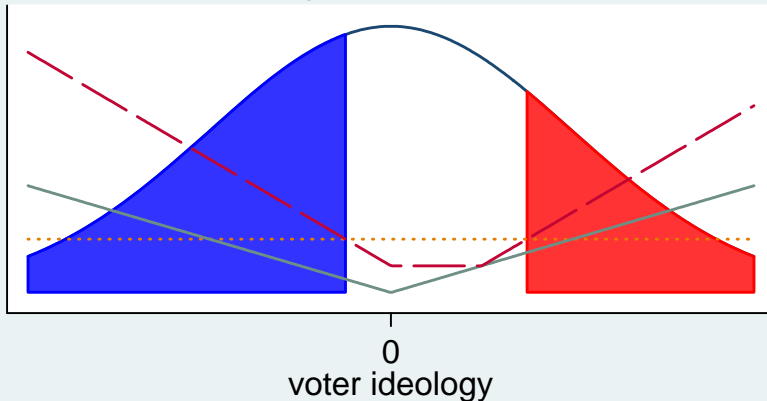
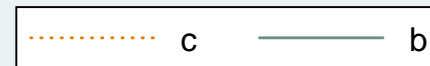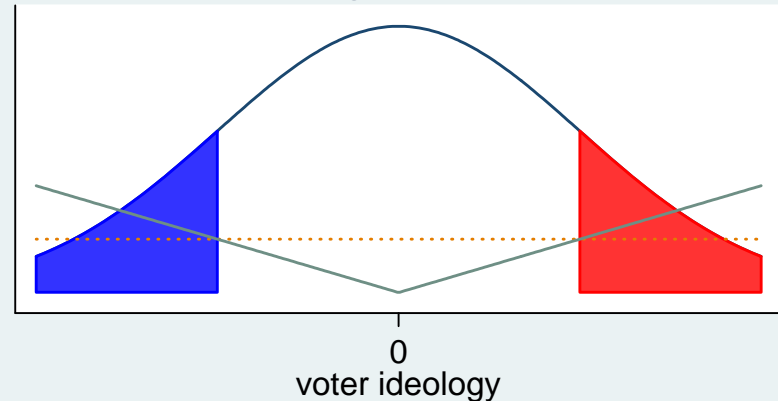Figure 4: Reversion to the Mean in Voter Ideology
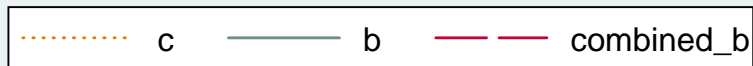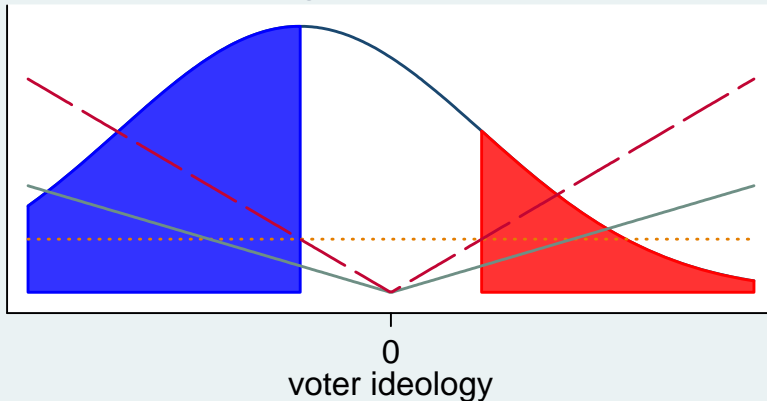
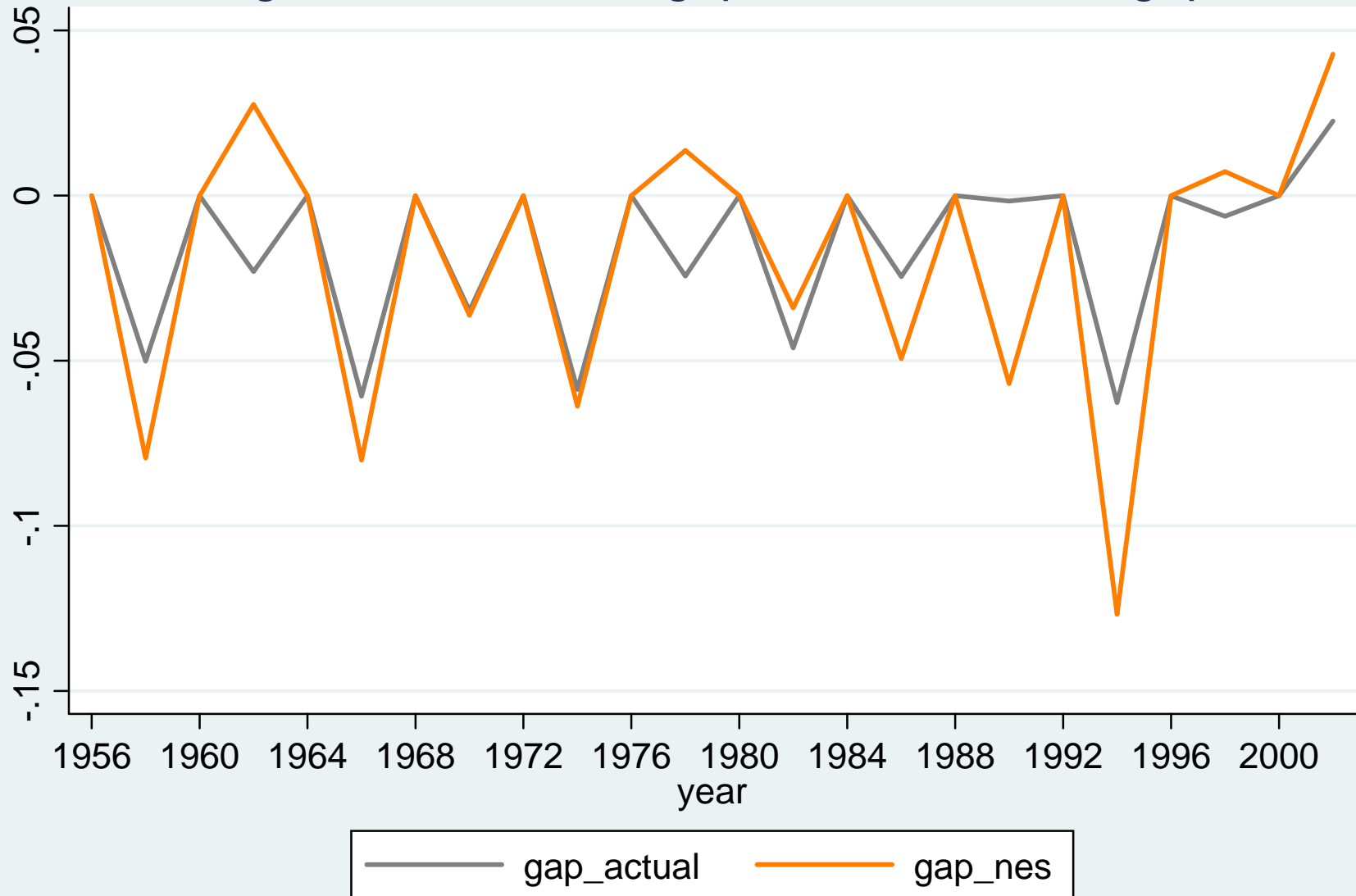Figure 5: Actual MT gap versus NES MT gap

Figure 6: NES MT gap versus model predicted MT gap
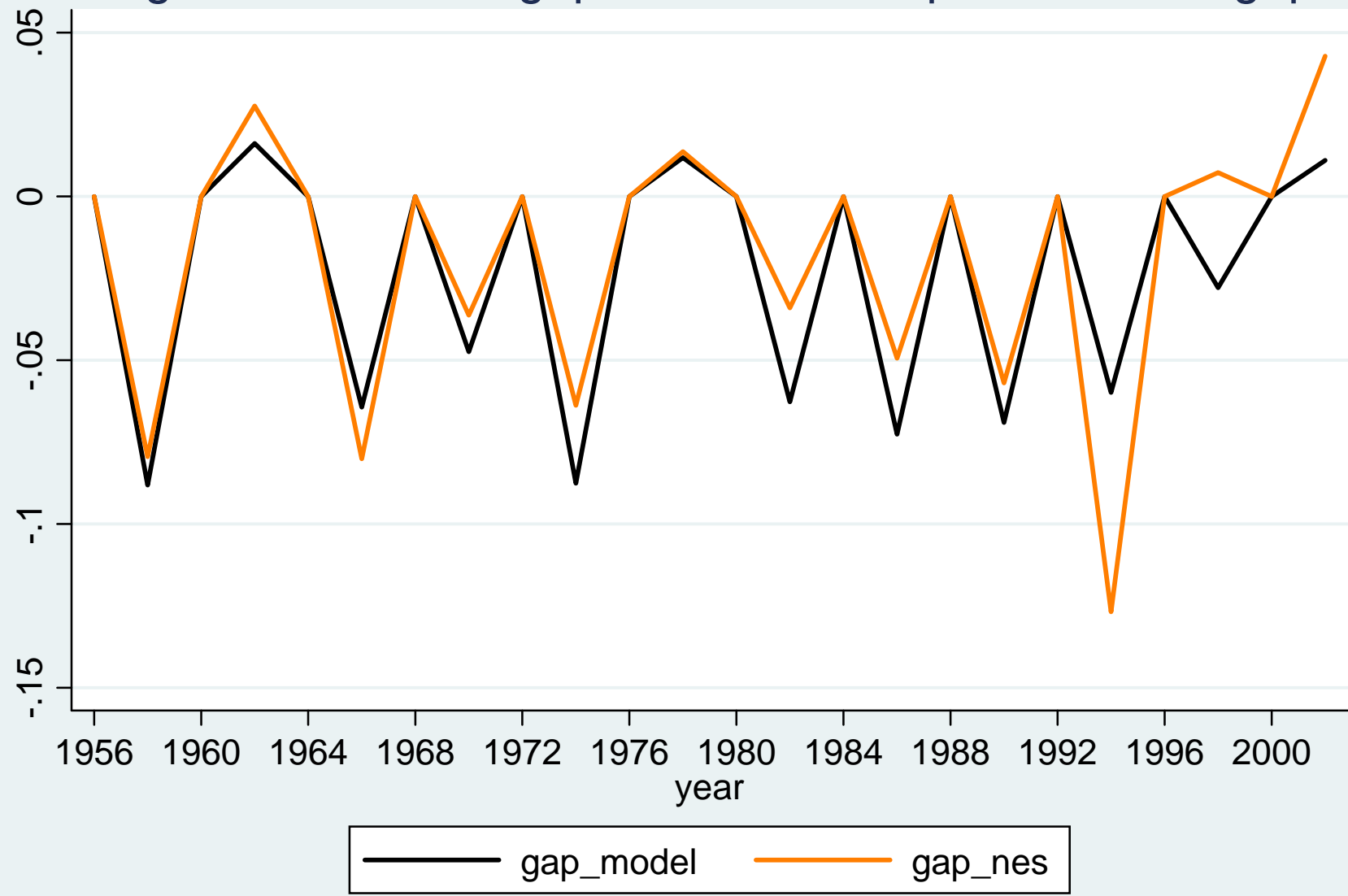
Figure 7: MT gap decomposition

Figure 8: MT gap decomposition
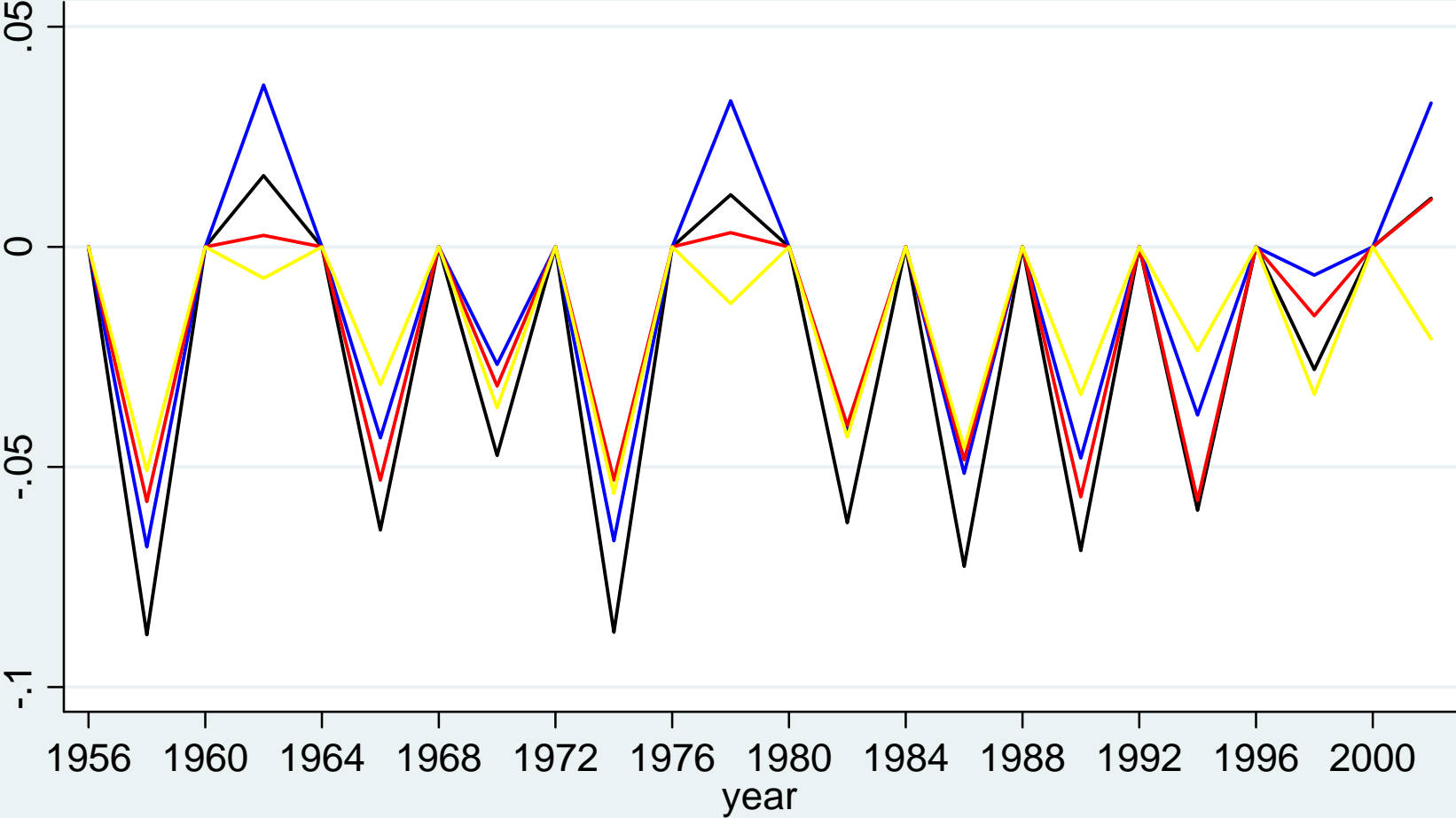
(mean) gap_model — (mean) gap_no_penalty
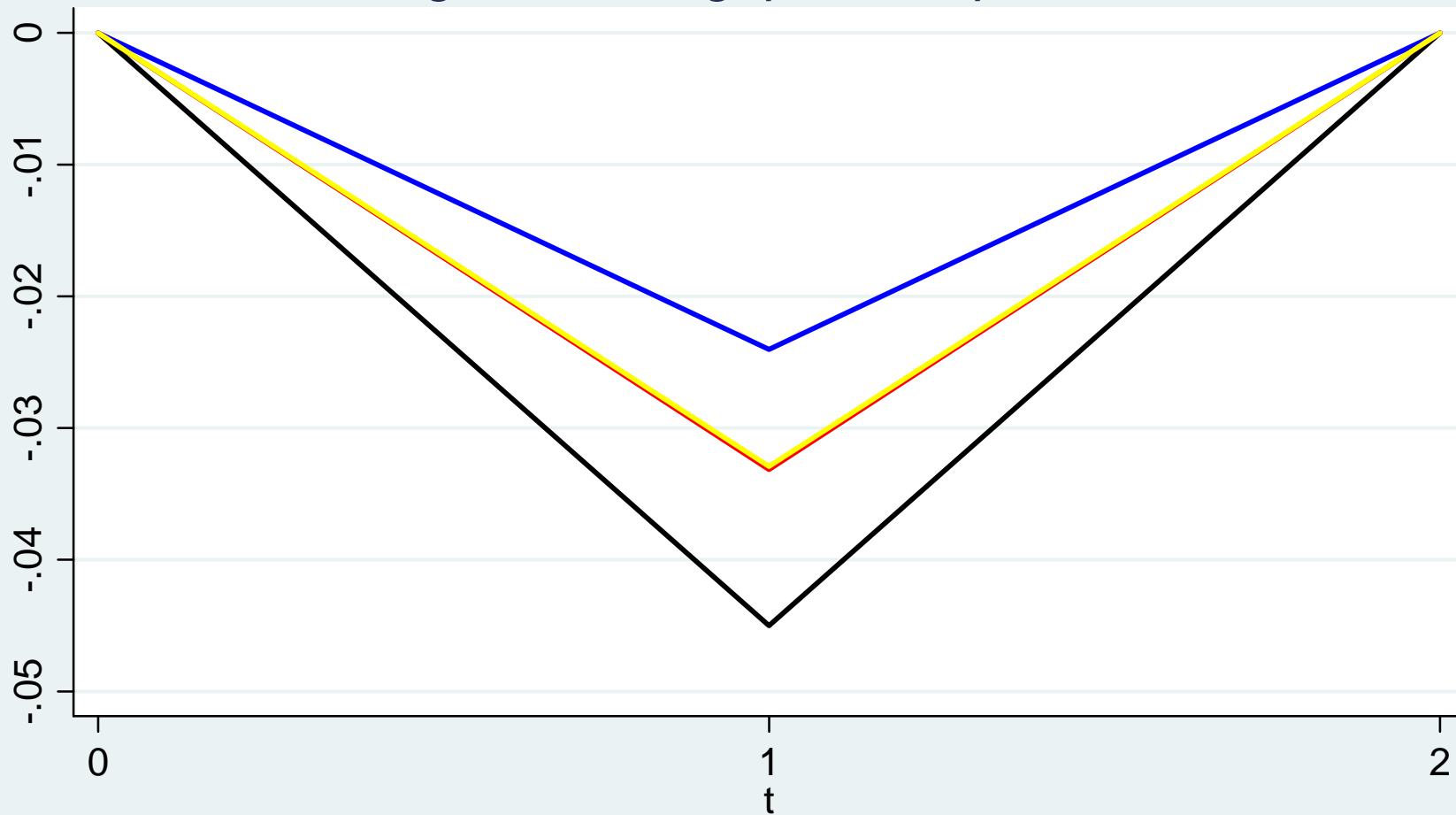(mean) gap_no_surge — (mean) gap_no_mean_reversion

Figure 9: MT gap decomposition with alternative ideology
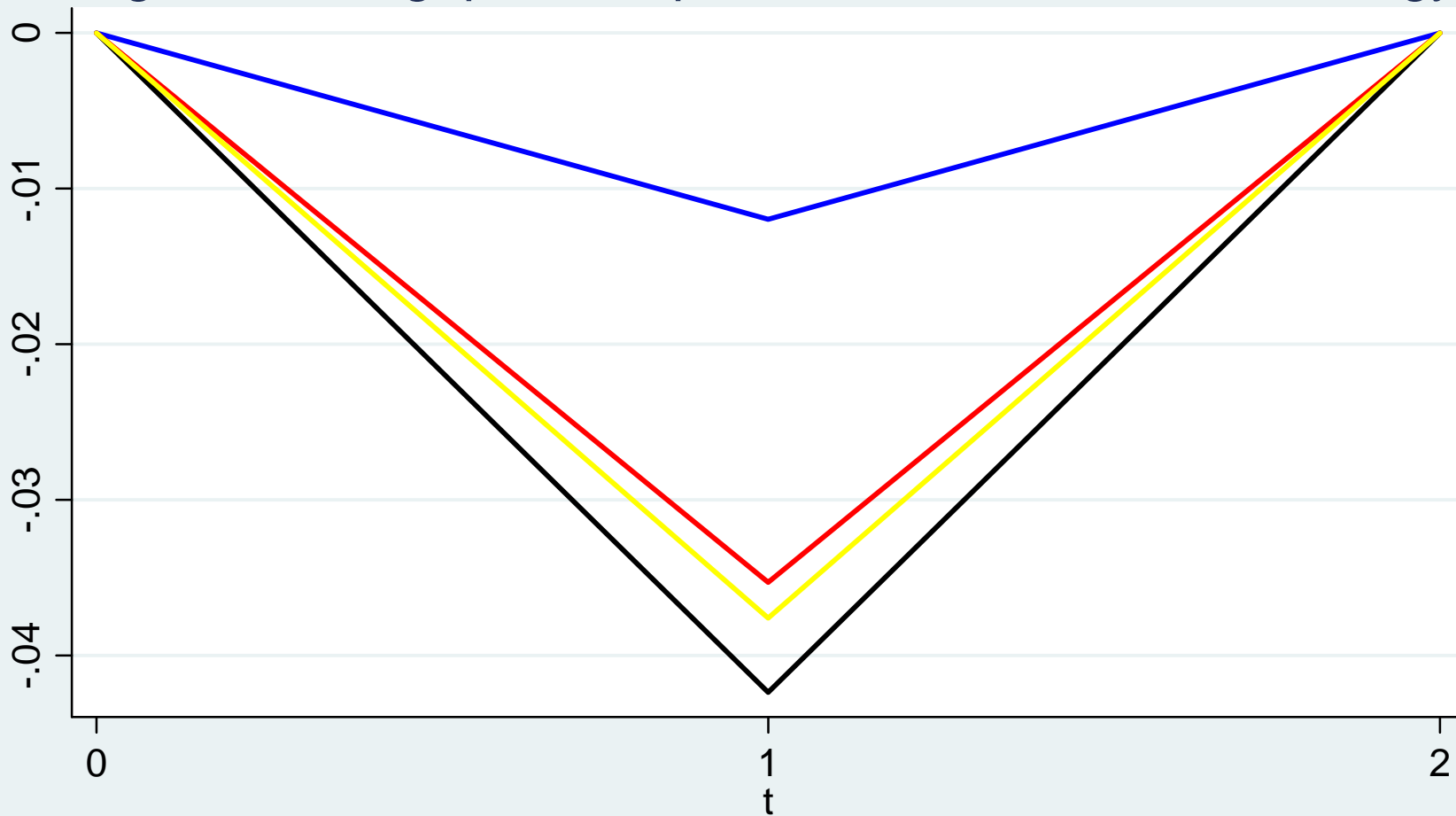
TABLE 1a: BASIC SUMMARY STATISTICS (means with standard deviations in parentheses)

voter ideology measure	party affiliation sample	conservative/liberal thermometer sample
PANEL A: PRESIDENTIAL YEARS		
participation	0.6993 (0.4586)	0.7149 (0.4515)
voted for Republican for House	0.4509 (0.4976)	0.4508 (0.4976)
voted for Republican for President	0.5118 (0.4999)	0.5065 (0.5000)
ideology	-0.1110 (0.7004)	0.0625 (0.3076)
PANEL B: MIDTERM YEARS		
participation	0.5198 (0.4996)	0.5351 (0.4988)
voted for Republican for House	0.4300 (0.4951)	0.4466 (0.4972)
ideology	-0.1403 (0.6818)	0.0668 (0.3175)

TABLE 1b: VOTER BEHAVIOR ACCORDING TO PARTY AFFILIATION

party affiliation	fraction participating	fraction supporting House Republicans	fraction supporting Presidential Republicans
Strong Democrat	73.00%	9.12%	8.48%
Weak Democrat	56.12%	20.99%	27.33%
Independent - leaning Democrat	53.96%	24.20%	19.53%
Independent - Independent	35.88%	47.02%	59.94%
Independent - leaning Republican	61.52%	70.66%	87.59%
Weak Republican	64.52%	75.56%	85.98%
Strong Republican	82.39%	88.42%	97.56%

TABLE 2: ANALYSIS OF CANDIDATE CHOICE AMONG VOTERS IN PRESIDENTIAL AND HOUSE ELECTIONS

voter ideology measure	party affiliation	conservative/liberal thermometer
PANEL A: HOUSE EQUATION		
voter ideology	1.248***	1.5891***
	(0.0153)	(0.0373)
presidential penalty in MT elections	-0.0586***	-0.0865***
	(0.0164)	(0.0190)
constant	-0.0582***	-0.2592***
	(0.0106)	(0.0113)
PANEL B: PRESIDENTIAL EQUATION		
voter ideology	1.6335***	2.6746***
	(0.0226)	(0.0660)
year 1952	0.5861***	
	(0.0473)	
year 1956	0.6186***	
	(0.0472)	
year 1960	0.2616***	
	(0.0647)	
year 1964	-0.2774***	-0.5748***
	(0.0584)	(0.0405)
year 1968	0.3331***	-0.1234***
	(0.0543)	(0.0432)
year 1972	0.7633***	0.2926***
	(0.0471)	(0.0404)
year 1976	0.1867***	-0.1794***
	(0.0480)	(0.0408)
year 1980	0.4896***	-0.0498
	(0.0556)	(0.0510)
year 1984	0.4956***	0.1471***
	(0.0421)	(0.0400)
year 1988	0.2383***	-0.1136***
	(0.0457)	(0.0387)
year 1992	-0.0535	-0.3049***
	(0.0429)	(0.0389)
year 1996	-0.2906***	-0.5662***
	(0.0542)	(0.0476)
year 2000	-0.0235	-0.2551***
	(0.0550)	(0.0501)
year 2004	-0.0225	-0.1472***
	(0.0597)	(0.0509)
year 2008	-0.0648	-0.3307***
	(0.0561)	(0.0457)
House/Presidential correlation	0.5404	0.7214

Notes: bootstrap standard errors (in parentheses). Stars denote statistical significance, with *** denoting $p<0.01$, ** denoting $p<0.05$, and * denoting $p<0.1$. 38,121 observations in second column, 26,781 observations in third column. ANES weight VCF0009a.

TABLE 3: TURNOUT DECISION WITH PARTY AFFILIATION MEASURE OF IDEOLOGY

absolute preference difference House	0.5136*** (0.0218)	0.6063*** (0.0258)		
absolute preference difference President	0.3972*** (0.0138)	0.2195*** (0.0229)		
squared preference difference House			0.3124*** (0.0178)	0.3918*** (0.0208)
squared preference difference President			0.2115*** (0.0107)	0.1018*** (0.0111)
presidential year		0.265*** (0.0266)		0.3508*** (0.0196)
constant	-0.3080*** (0.0165)	-0.4268*** (0.0215)	-0.088*** (0.0125)	-0.2573*** (0.0170)

Notes: bootstrap standard errors (in parentheses). Stars denote statistical significance, with *** denoting $p<0.01$, ** denoting $p<0.05$, and * denoting $p<0.1$. 38,121 observations. Preference difference measures for President set to zero during midterm election years. Preference difference measures inferred from column 2 of Table 2. ANES weight VCF0009a.

TABLE 4: TURNOUT DECISION WITH CONSERVATIVE-LIBERAL THERMOMETER MEASURE OF IDEOLOGY

absolute preference difference House	-0.0394 (0.0315)	0.1438*** (0.0379)		
absolute preference difference President	0.5347*** (0.0246)	0.294*** (0.0307)		
squared preference difference House			-0.0382 (0.0240)	0.125*** (0.0276)
squared preference difference President			0.2385*** (0.0187)	0.1079*** (0.0161)
presidential year		0.3056*** (0.0254)		0.4132*** (0.0201)
constant	0.1875*** (0.0150)	0.0272 (0.0210)	0.2715*** (0.0107)	0.0513*** (0.0156)

Notes: bootstrap standard errors (in parentheses). Stars denote statistical significance, with *** denoting $p<0.01$, ** denoting $p<0.05$, and * denoting $p<0.1$. 29,671 observations. Preference difference measures for President set to zero during midterm election years. Preference difference measures inferred from column 3 of Table 2. ANES weight VCF0009a.