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Evaluating Competing Explanations for The Midterm Gap: A Unified Econometric Approach with Microfoundations*

Abstract

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 electoral penalty by voters in midterm elections against the President's party, (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.

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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 may have a preference for the opposition and express this preference in the voting booth. Second, there may be a surge and decline in voter turnout, with supporters of the President 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 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 an econometric 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. These decisions over participation and the choice of candidates are linked in the following natural way: voters are assumed to receive a higher benefit from participating if they have strong preferences over the set of the candidates. Candidates differ in terms of their quality and their ideology, and voters differ in their ideology, with a preference for like-minded candidates. To accommodate the first hypothesis, we allow for a simple preference to vote against the President's party in midterm years. To accommodate the second hypothesis, we allow for differences in quality between Presidential candidates, leading to a surge in turnout among supporters of the high quality candidate and a subsequent decline in turnout during the midterm year. Finally, to accommodate the third hypothesis, we allow for the distribution of voter ideology to

change between Presidential and midterm years.

The 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 underlying mechanisms are removed from the model, and these simulations demonstrate that each factor makes an sizeable contribution towards the observed midterm gap.

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 an econometric 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 at least three 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. 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. In his study, he finds that the decline in votes for the president's party during midterm years is smaller if the electorate is more satisfied with the president and the economy is performing well. Second, according to the negative voting hypothesis, Kernell (1977) argues that voters who disapprove of the President's policies will turn out to vote disproportionately more than voters who approve of the President's policies. By focusing on the turnout margin, negative voting is

also related to the surge and decline mechanism to be discussed next. Third, 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]

A second theory that tries to explain midterm gaps 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 candi-

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

date. 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 in midterm years, leading to a loss in support for the President's party.

The third theory that we address involves a reversion to the mean in voter ideology. According to this view, voter ideology shifts over time, 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.

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

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, 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 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. Finally, 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 econometric 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. Unlike my paper, however, they do not 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. 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 election

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 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:

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

where ω^P captures the importance of ideology, relative to quality, for voters in the Presidential election. We normalize candidate ideologies such that they are centered around zero. That is, $i_R = -i_D = \kappa_P/2$. Then, defining Δ_v^P as the utility difference between electing the Republican and electing the Democrat for voter v and defining relative quality as $\Delta q^P = q_R - q_D$, we have that:

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

As shown, this difference is increasing in the quality difference between the 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:

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

As shown, as the quality of the Republican candidate, relative to the Democrat, increases, Democratic voters are cross-pressured and must trade off ideology and quality. In this case, the ideology of the indifferent voter shifts to the left. Likewise, as the relative quality of the Republican candidate decreases, Republican voters are cross-pressured, and the ideology of the indifferent voter shifts to the right.

Likewise, this logic can be reversed by solving for the difference in Presidential quality as a function of the ideology of the indifferent voter:

$$\Delta q^P = -\omega^P \kappa^P i_v^*$$

Thus, if the indifferent voter has ideology zero, then we can infer that the candidates are of equal quality. If the indifferent voter is right-leaning (positive ideology), then we can infer that Republican voters were cross-pressured and thus the Democratic candidate is of higher quality. Finally, if the indifferent voter is left-leaning (negative ideology), then we can infer that the Republican is of higher quality.

3.2 Candidate choice in House elections

Consider next the voter's choice, again conditional on participating, between House candidates $h \in \{D,R\}$. 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 $\Delta q^H = 0$. 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:

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

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 $P \in \{0, 1\}$ indicate whether the 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:

$$\Delta_v^H = \omega^H \kappa^H i_v + \rho(2P - 1)$$

As shown, when the President is a Republican, the willingness to support Republican House candidates falls. In this case, right-leaning voters are cross-pressured in the sense that they must trade off ideology and a preference for the opposition party. Likewise, when the President is a Democrat, the willingness of voters to support Republican House candidates increases, and left-leaning voters are cross-pressured.

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. 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. In this case, the expressive benefits to voting in a House and Presidential election are given by the intensity of preference for the favored candidate. These are represented by $|\Delta_v^H|$ and $|\Delta_v^P|$, respectively.

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 (i.e. $|\Delta_v^H| < c_v$) and choose to participate ($A = 0$) if $|\Delta_v^H| > c_v$.

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 some weight β on expressing their opinion in the Presidential election, relative to the gain from expressing their opinion in the House election. More formally, we assume that voters participate if and only if the following condition holds:

$$|\Delta_v^H| + \beta|\Delta_v^P| > c_v$$

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 $\beta > 0$. 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 Summary of voting behavior

Then, the behavior of eligible voters in a midterm year can be summarized as the probabilities of three distinct outcomes: abstaining, voting for the Republican and voting for the Democrat:

$$\begin{aligned}
\Pr(A &= 1) = \Pr(|\Delta_v^H| < c_v) \\
\Pr(R^H &= 1) = \Pr(|\Delta_v^H| > c_v,\ \Delta_v^H < 0) \\
\Pr(R^H &= 0) = \Pr(|\Delta_v^H| > c_v,\ \Delta_v^H > 0)
\end{aligned}$$

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:

$$\begin{aligned}
\Pr(A &= 1) = \Pr(|\Delta_v^H| + \beta|\Delta_v^P| < c_v) \\
\Pr(R^H &= 1, R^P = 1) = \Pr(|\Delta_v^H| + \beta|\Delta_v^P| > c_v, \Delta_v^H > 0, \Delta_v^P > 0) \\
\Pr(R^H &= 0, R^P = 0) = \Pr(|\Delta_v^H| + \beta|\Delta_v^P| > c_v, \Delta_v^H < 0, \Delta_v^P < 0) \\
\Pr(R^H &= 1, R^P = 0) = \Pr(|\Delta_v^H| + \beta|\Delta_v^P| > c_v, \Delta_v^H > 0, \Delta_v^P < 0) \\
\Pr(R^H &= 0, R^P = 1) = \Pr(|\Delta_v^H| + \beta|\Delta_v^P| > c_v, \Delta_v^H < 0, \Delta_v^P > 0)
\end{aligned}$$

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 and centered at zero 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 (1) there is no Presidential penalty in midterm years ($\rho = 0$), (2) there is no difference in quality between the two Presidential candidates ($\Delta q^P = 0$), and (3) the distribution of voter ideology is stable across Presidential and midterm

years. Then, the indifferent voter in all cases 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. In Presidential years, voters receive two such benefits, and this combined benefit is given by the dashed line. Voters then choose to participate 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, Republicans 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 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 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. 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. To summarize, Figure 2 illustrates that a simple preference for voting against the President's party generates a midterm gap.

Figure 3 illustrates the case in which a midterm gap is generated by a surge

and decline. 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 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 4 illustrates the case in which a midterm gap is generated by a 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 relax assumption (3) by allowing 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.

To summarize, the model nests three long-standing hypothesized mechanisms underlying the midterm gap. We next turn to an empirical evaluation of this model and the decomposition of the midterm gap into these hypothesized mechanisms.

4 Empirical Approach

Our empirical approach relies on individual-level turnout, candidate choices, 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 an econometric 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:

$$\Delta_{vt}^{H} = \theta^{H} i_{vt} + \rho(2P_t - 1)$$

where θ^H is a parameter to be estimated and, in the context of the model, can be interpreted 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:

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

where β^H is a parameter to be estimated and captures the importance of the expressive benefits of voting in determining turnout decisions.

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:

$$\begin{aligned}
\Delta_{vt}^{H} &= \theta^{H} i_{vt} \\
\Delta_{vt}^{P} &= \Delta q_t^{P} + \theta^{P} i_{vt}
\end{aligned}$$

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 Presidential elections. 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:

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

where β^P is the weight placed on the expressive benefits of voting in the Presidential election. To generate an analytic expression for these probabilities, we assume that voting costs are both unobserved and normally distributed. Likewise, unobserved preferences for Republican candidates in the two elections are assumed to be distributed bivariate normal with a non-zero correlation. 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 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. 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.

4.2 Data

Our data comes from the American National Election Survey, which as 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 measures of voter ideology is not measured 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.[4] We require a measure of ideology that is comparable

[4] 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,

across years in our counterfactual simulations that isolate the role of mean reversion, and we need a measure that is time-varying to allow for high-frequency, temporary changes in voter ideology. 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 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 $[-100, 100]$, and then convert this measure to the $[-1, 1]$ 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. We also exclude

and thus will not capture high frequency change in ideology underlying the reversion to the mean hypothesis.

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 these 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 1 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.

As shown in Table 1, roughly 70 percent of respondents in both samples 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 suggests that voters tend to be left-of-center on average, with more voters identifying as Democrats than Republicans. The thermometer scores, by contrast, suggest that voters tend to be right-of-center on average, with voters giving higher scores on average to conservatives than to liberals.

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.[5]

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. Nonetheless, the correlation between the ANES midterm gap and the actual midterm gap across the years of Figure 1 is 0.76, and the average midterm gaps are similar, with the actual midterm gap averaging 3.0 percent and the ANES midterm gap averaging 3.6 percent.

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

5 Results

Table 2 provides the 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 voters, when compared 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 column (1) of Table 3, it is clear that the expressive benefits of voting in both the Presidential election and the House election increase voter turnout, with the benefits from expressing

support in the House election playing a somewhat stronger role.

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 for eligible voters in Presidential years. 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 benefit of voting in the Presidential election is 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.[6] 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

[6] 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.

the two parties in Presidential elections.

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.

6 Midterm Gap Simulations

Using these parameter estimates, we next use the 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. 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.

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 mean reversion 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. 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.

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. Thus, 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.

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.

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, negative voting, and voter preferences for balancing. Third, the analysis does not incorporate the possibility of 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.

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 this 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.

References

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. 1996. "A theory of divided government". Econometrica 64(6): 1311-1341.

Bafumi, Joseph, Robert S. Erikson, and Christopher Wlezien. 2010. "Balancing, generic polls and midterm congressional elections." Journal of Politics 72(3): 705-719.

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.

Brennan, Geoffrey and Hamlin, Alan. 1998. "Expressive voting and electoral equilibrium." Public Choice 95(1): 149–175.

Campbell, Angus. 1960. "Surge and decline: a study of electoral change." Public Opinion Quarterly 24(3): 397-418.

Campbell, James E. 1987. "The revised theory of surge and decline." American Journal of Political Science 31(4): 965-979.

Degan, Arianna and Merlo, Antonio. 2011. "A structural model of turnout and voting in multiple election." Journal of the European Economic Association 9(2): 209–245.

Erikson, Robert S. 2010. "Explaining midterm loss: the tandem effect of withdrawn coattails and balancing." Paper prepared for the 2010 Meeting of the American Political Science Association, Washington, D.C.

Flemming, Gregory N. 1995. "Presidential coattails in open-seat elections." Legislative Studies Quarterly 20(2): 198-211.

Fiorina, Morris P. 1976. "The voting decision: instrumental and expressive aspects." Journal of Politics 38(2): 390–413.

Folke, Olle, and James M. Snyder, Jr. 2012. "Gubernatorial midterm slumps". American Journal of Political Science 56(4): 931-948.

Halberstam, Yosh and Pablo Montagnes. 2012. "Information Contagion, Presidential Coattails and Policy Skewness", working paper.

Hill, Seth, 2010. 'The Persuasion Region: A Theory of Electoral Change." Working Paper.

Hinkley, Barbara, 1967. "Interpreting House Midterm Elections: Toward a Measurement of the In-Party's "Expected" Loss of Seats." American Political Science Review 63(3): 694–700.

Kernell, Samuel. 1977. "Presidential popularity and negative voting: an alternative explanation of the midterm congressional decline of the President's party." American Political Science Review 71(1): 44-66.

Levitt, Steven. 1994. "An Empirical Test of Competing Explanations for the Midterm Gap in the US House." Economics and Politics 6(1): 25–37.

McDonald, Michael D and Best, Robin. 2006. "Equilibria and restoring forces in models of vote dynamic." Political Analysis 14(4): 369–392.

Mebane, Jr., Walter. 2000. "Coordination, moderation, and institutional balancing in American Presidential and House elections." American Political Science Review 94(1): 37-57.

Mebane, Jr., Walter, and Jasjeet S. Sekhon. "Coordination and policy moderation at midterm." American Political Science Review 96(1): 141-157.

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

Scheve, Kenneth, and Michael Tomz. 1999. "Electoral surprise and the midterm loss in US congressional elections." British Journal of Political Science 29: 507-521.

Tufte, Edward R. 1975. "Determinants of the outcomes of midterm congressional elections." American Political Science Review 69(3): 812-826.

Figure 1: Baseline scenario with no midterm gap

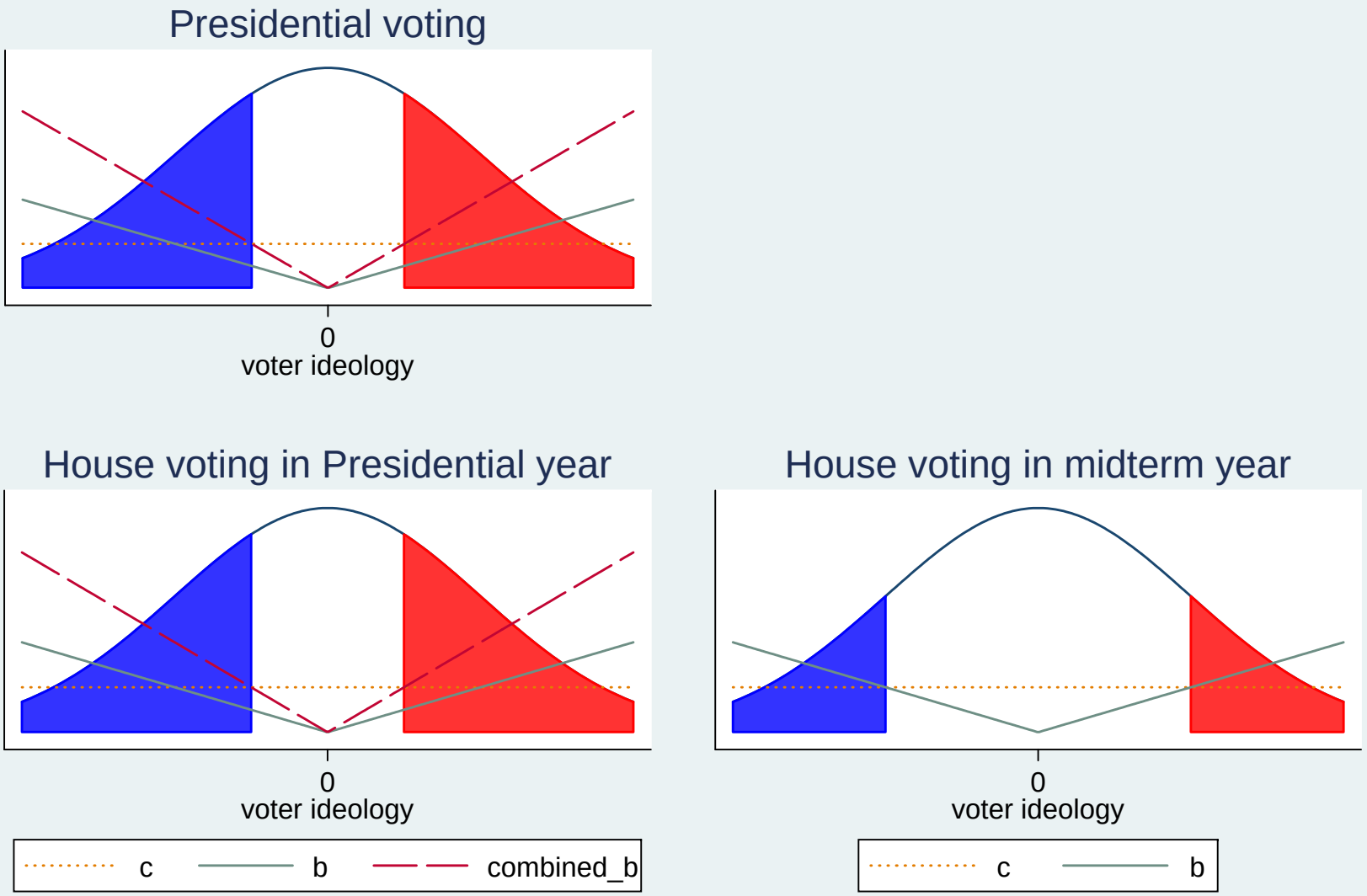


Figure 2: Midterm Penalty with a Republican President

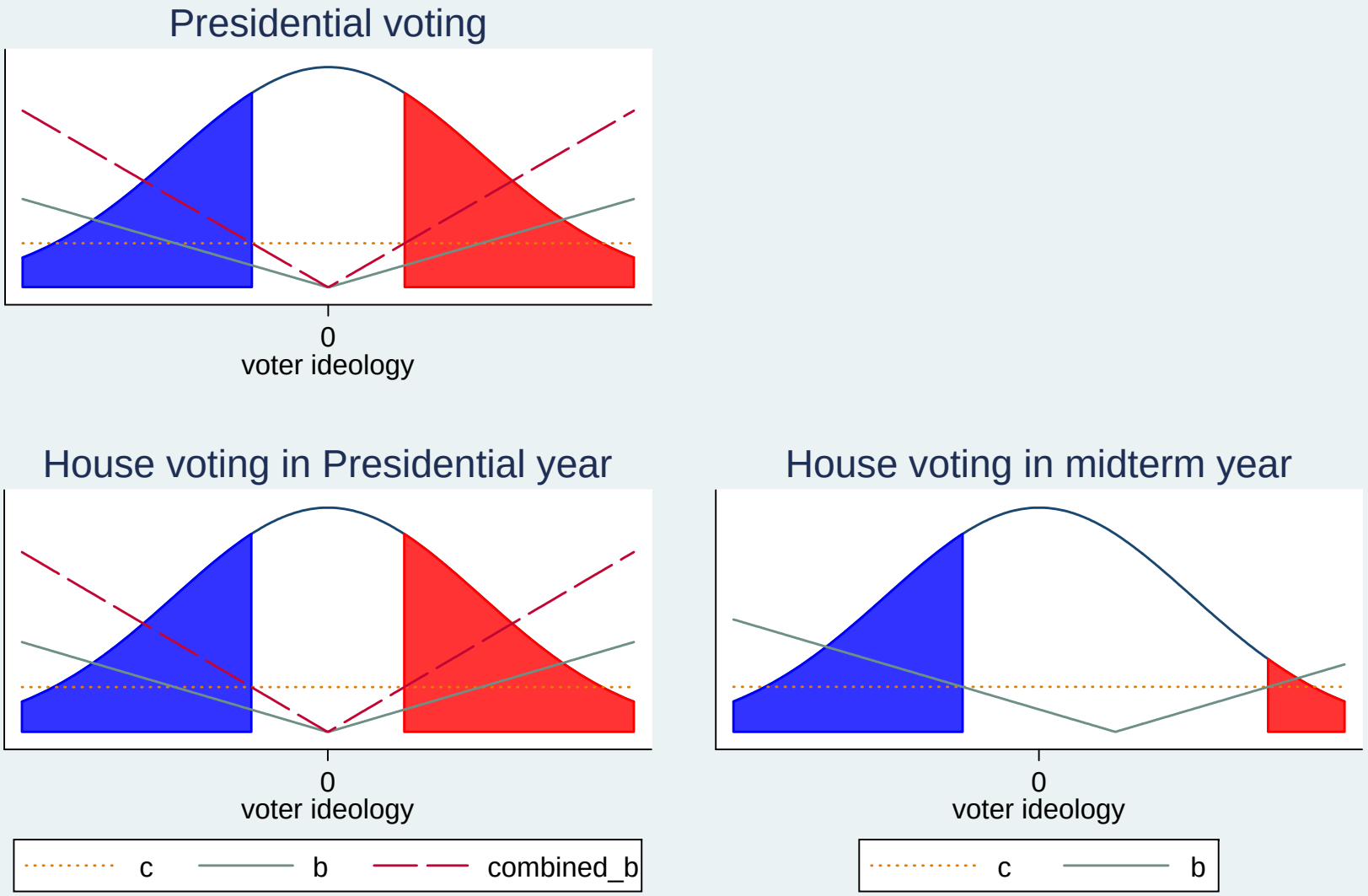


Figure 3: Surge and Decline

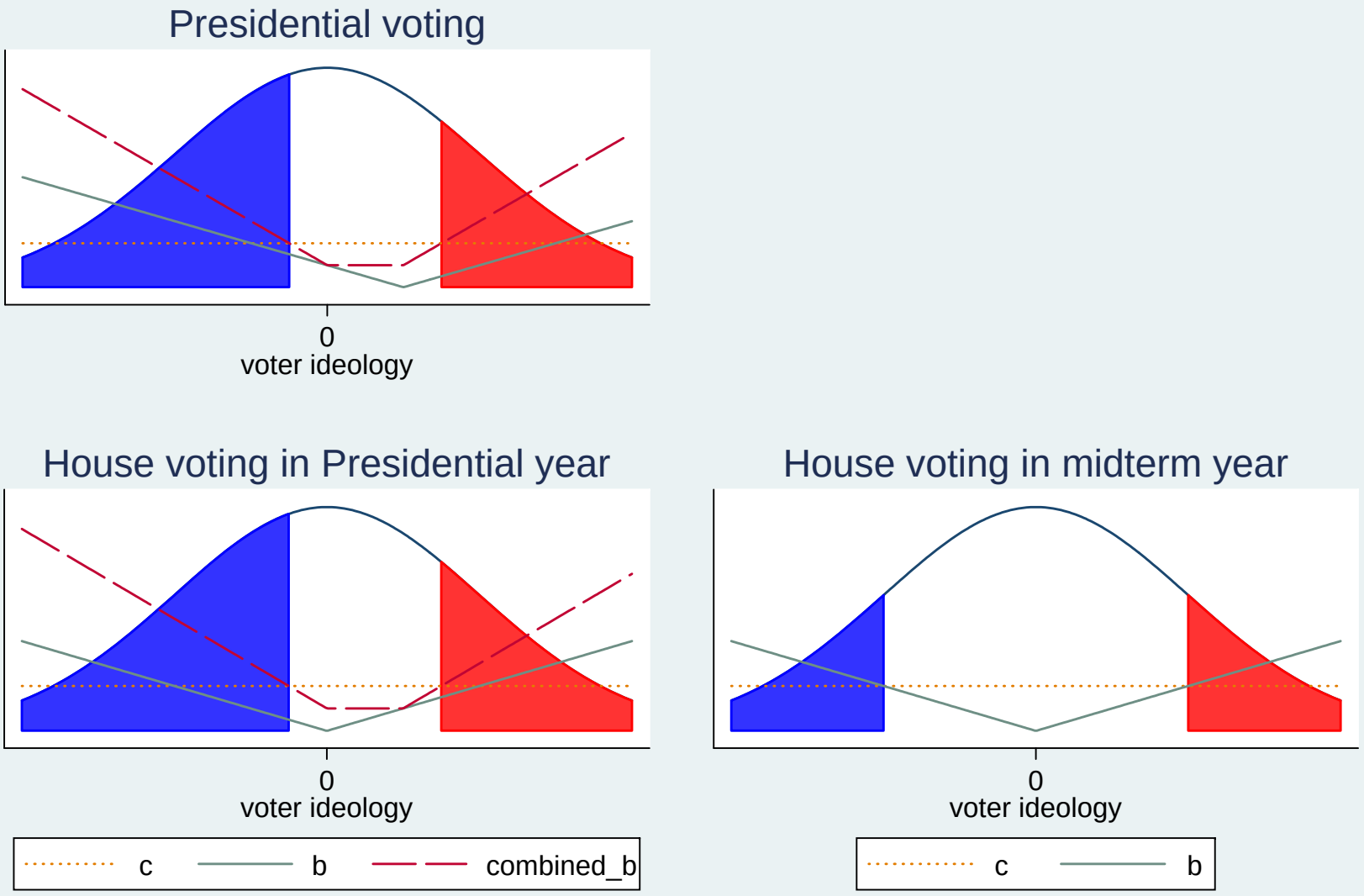
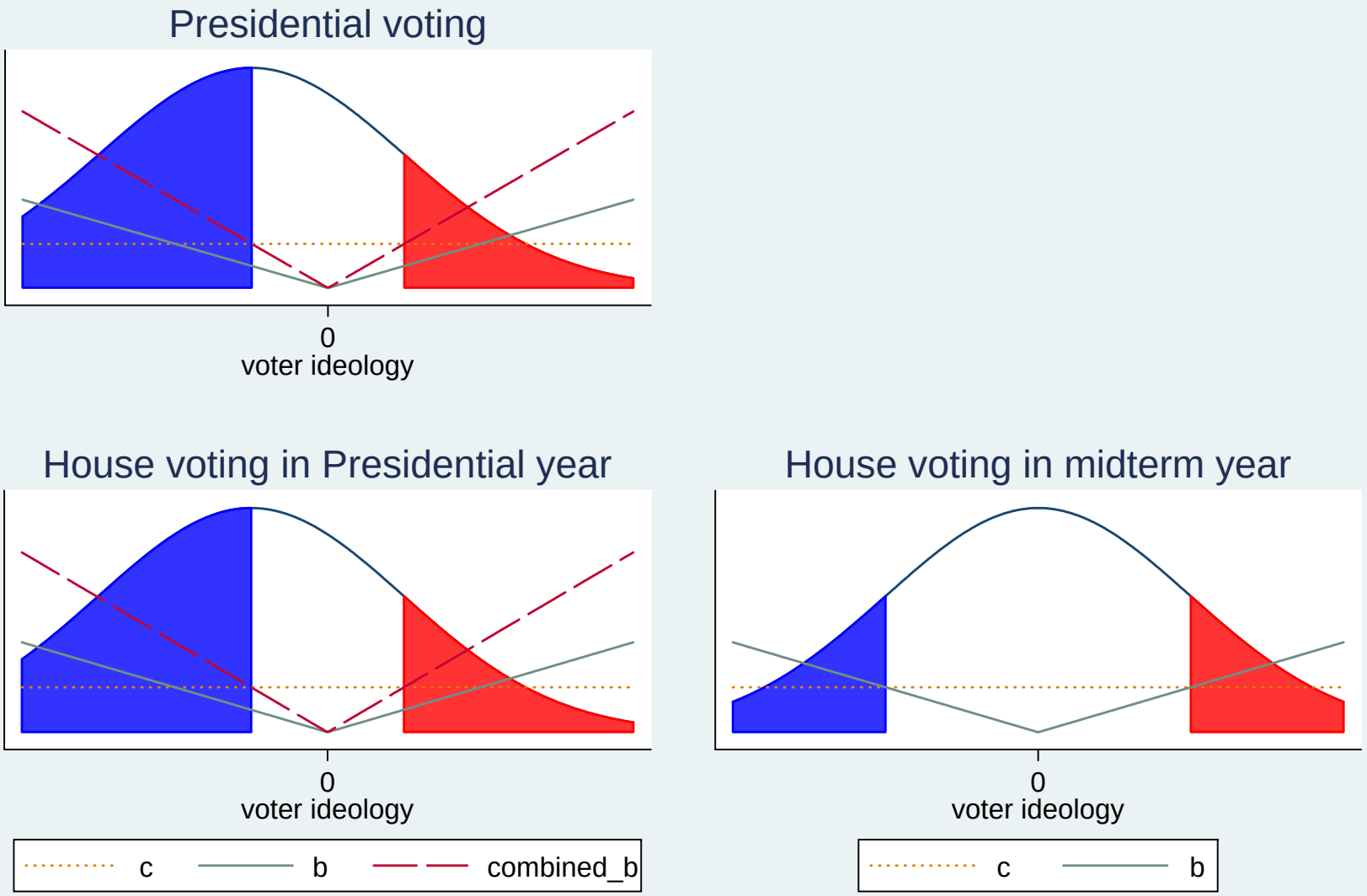


Figure 4: Reversion to the Mean in Voter Ideology



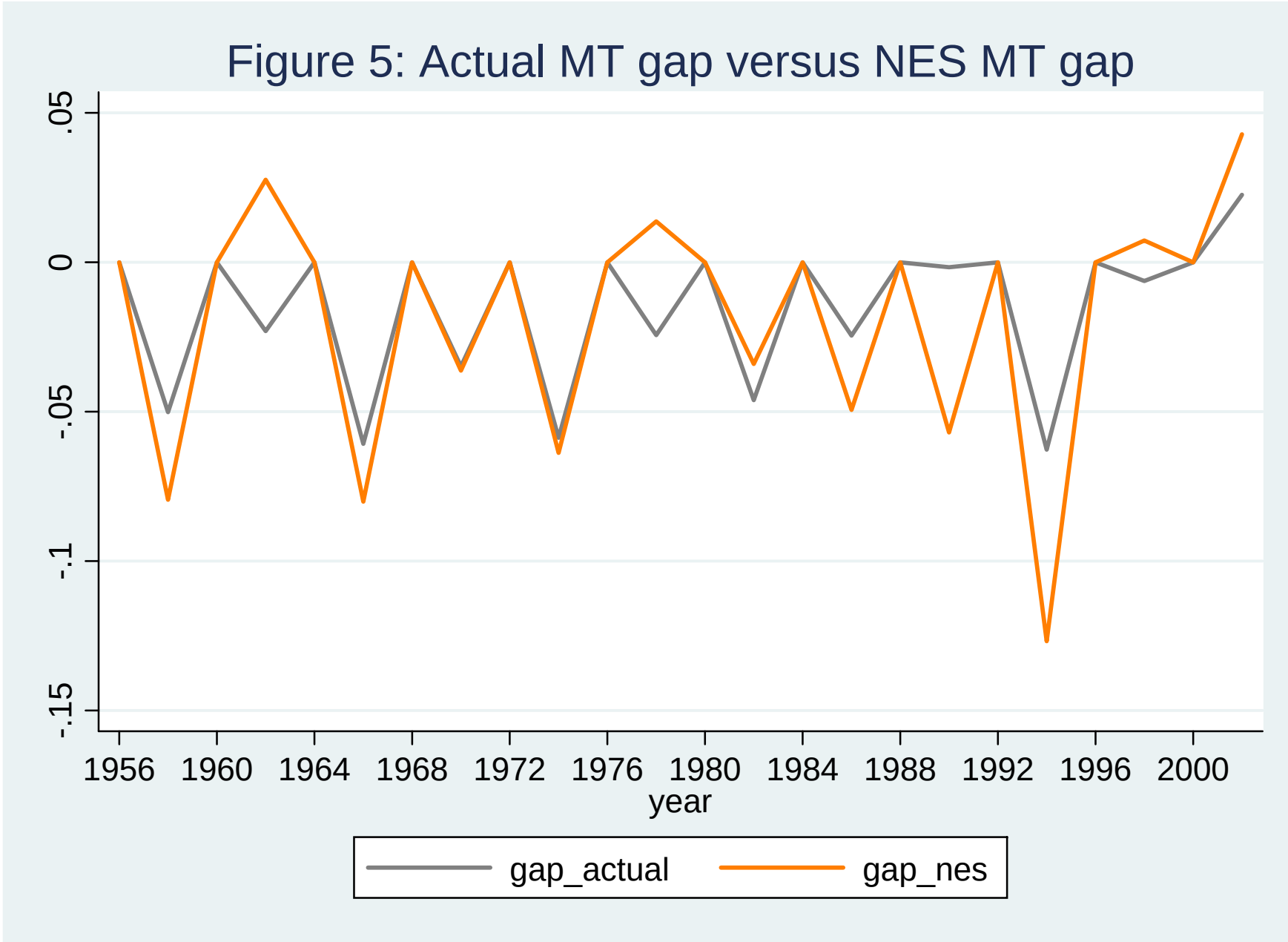
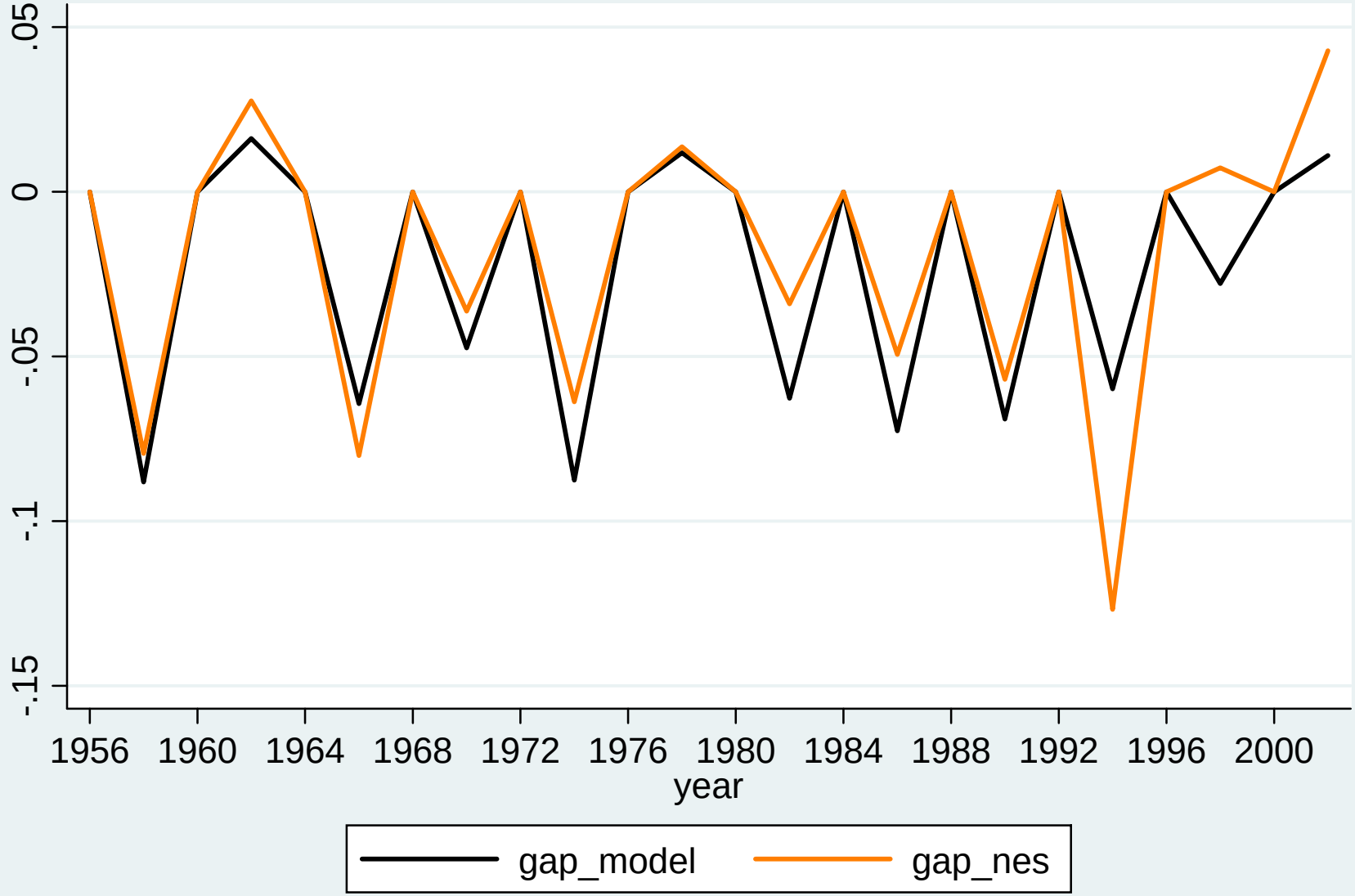


Figure 5: Actual MT gap versus NES MT gap
.05
0
-.05
-.1
-.15
1956
1960
1964
1968
1972
1976
1980
1984
1988
1992
1996
2000
year
gap_actual
gap_nes

Figure 6: NES MT gap versus model predicted MT gap



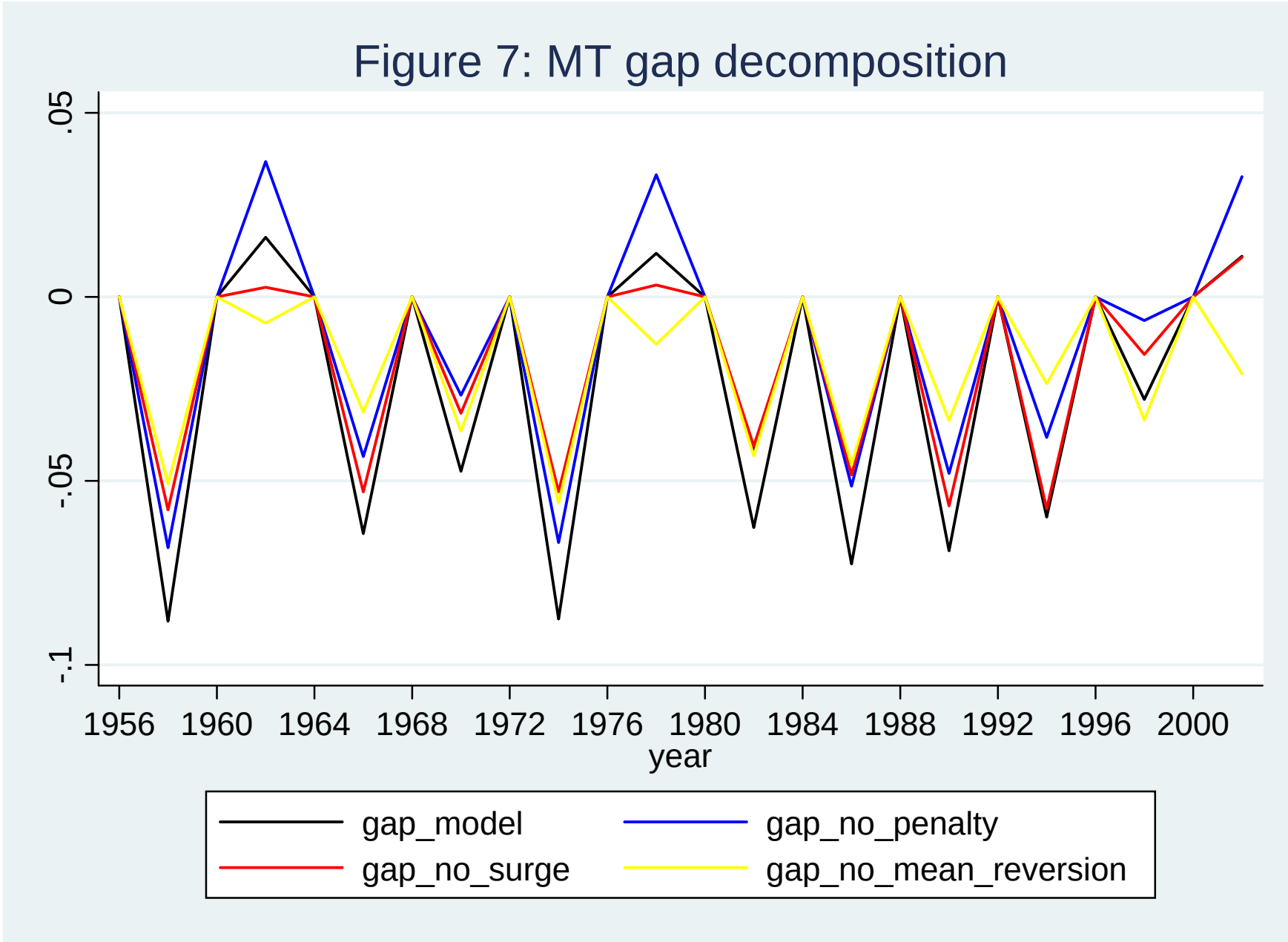


Figure 7: MT gap decomposition
.05
0
-.05
-.1
1956
1960
1964
1968
1972
1976
1980
1984
1988
1992
1996
2000
year
gap_model
gap_no_penalty
gap_no_surge
gap_no_mean_reversion

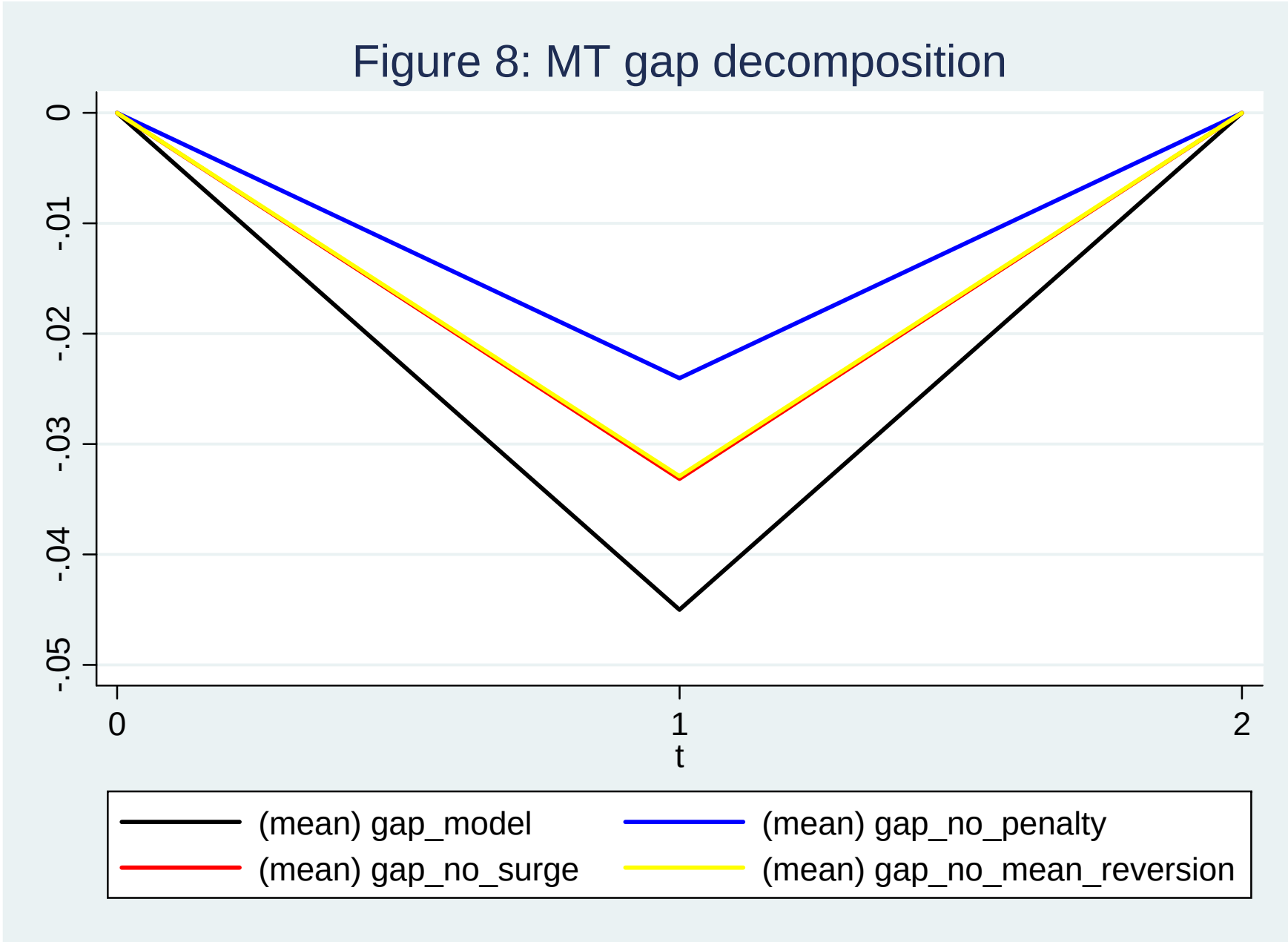


Figure 8: MT gap decomposition
0
-.01
-.02
-.03
-.04
-.05
0
1
2
t
(mean) gap_model
(mean) gap_no_penalty
(mean) gap_no_surge
(mean) gap_no_mean_reversion

Figure 9: MT gap decomposition with alternative ideology

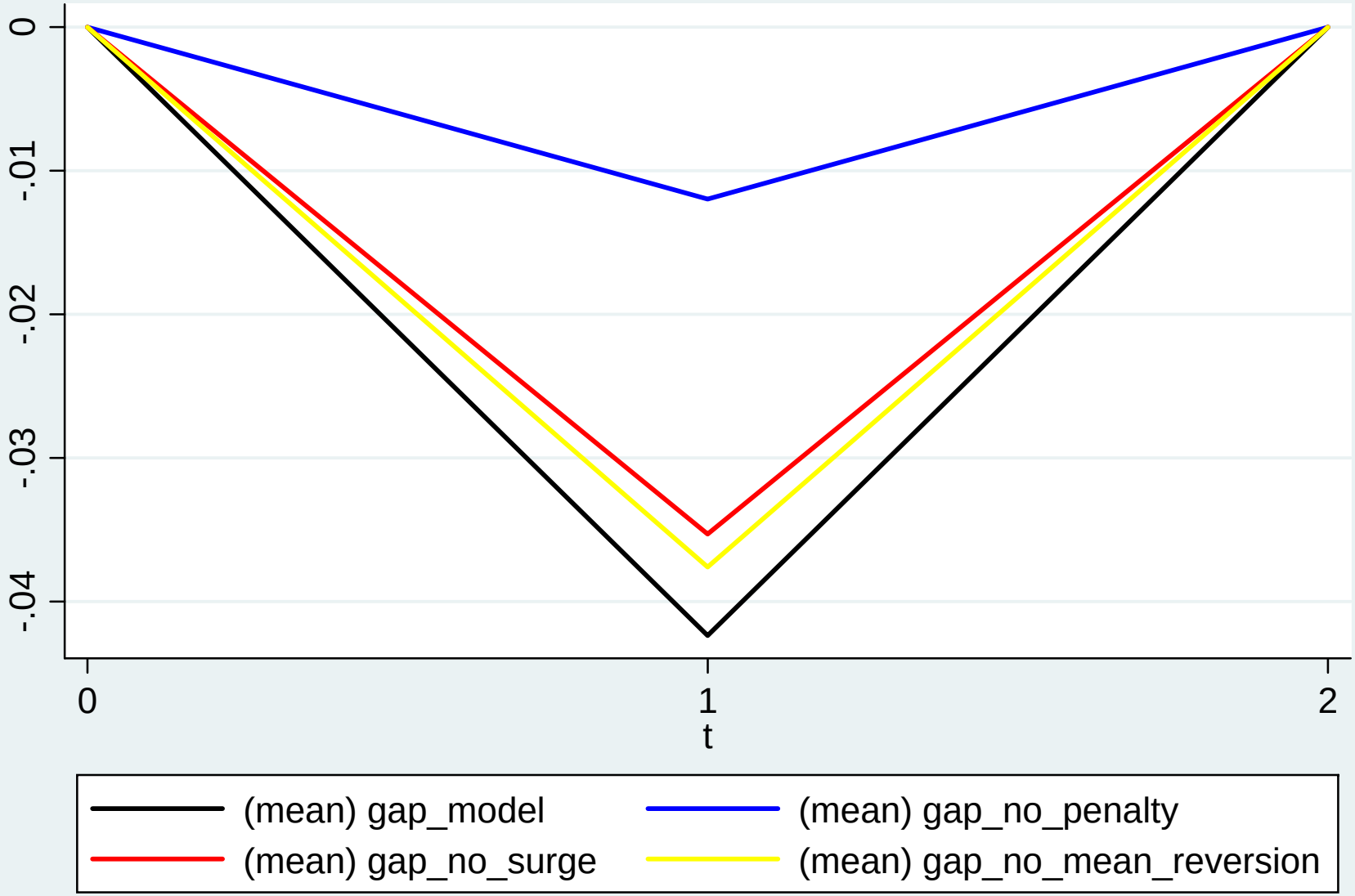


TABLE 1: SUMMARY STATISTICS (means with standard deviations in parentheses)

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 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***	0.6063***		
	(0.0218)	(0.0258)		
absolute preference difference President	0.3972***	0.2195***		
	(0.0138)	(0.0229)		
squared preference difference House			0.3124***	0.3918***
			(0.0178)	(0.0208)
squared preference difference President			0.2115***	0.1018***
			(0.0107)	(0.0111)
presidential year		0.265***		0.3508***
		(0.0266)		(0.0196)
constant	-0.3080***	-0.4268***	-0.088***	-0.2573***
	(0.0165)	(0.0215)	(0.0125)	(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	0.1438***		
	(0.0315)	(0.0379)		
absolute preference difference President	0.5347***	0.294***		
	(0.0246)	(0.0307)		
squared preference difference House			-0.0382	0.125***
			(0.0240)	(0.0276)
squared preference difference President			0.2385***	0.1079***
			(0.0187)	(0.0161)
presidential year		0.3056***		0.4132***
		(0.0254)		(0.0201)
constant	0.1875***	0.0272	0.2715***	0.0513***
	(0.0150)	(0.0210)	(0.0107)	(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.