

# Close Contests and Future Voter Turnout\*

Rebecca Lessem<sup>†</sup>, Carly Urban<sup>‡</sup>, Erica VanSant<sup>§</sup>

March 29, 2018

## Abstract

Voter turnout is persistent across election cycles. However, few studies explore the factors that change persistent voting behavior. This paper asks how close state contests in United States presidential elections influence future voting behavior, and how these close margins differentially affect those who supported losers, winners, or those who did not vote in the previous election. Using data from the American National Election Studies and within state variation in Electoral College closeness from 1948-2012, we analyze individual voting behavior across election cycles. Our findings suggest that those who report not voting in the previous election are more likely to vote than those who did not vote in states where the contest for electoral votes was not close. Further, females and low-income individuals who voted for non-victors in close states were less likely to participate in the subsequent election than those who chose a victor in the previous close contest.

Keywords: voter turnout; close elections; voting persistence

---

\*The authors thank Mark Anderson, Wilson Law, Brock Smith, and participants of the Public Choice Annual Conference.

<sup>†</sup>Assistant Professor of Economics, Tepper School of Business, Carnegie Mellon University

<sup>‡</sup>Corresponding Author: Associate Professor of Economics, Department of Agricultural Economics & Economics, Montana State University, 406-994-2005, [carly.urban@montana.edu](mailto:carly.urban@montana.edu).

<sup>§</sup>Carnegie Mellon University

# 1 Introduction

In the United States, recent presidential election years have experienced low voter turnout: 65% of eligible individuals voted in the 2016 election and that number was only slightly higher at 67% in 2012.<sup>1</sup> At an international level, the turnout in the United States is low compared to most developed nations, as seen in Figure 1. Researchers have long studied the reasons for voting and abstaining. Many studies suggest that a series of contemporaneous activities, such as advertising (Ashworth and Clinton 2007; Coate and Conlin 2004; Goldstein and Freedman 2002; Krasno and Green 2008; Gordon and Hartmann 2013), close contests (Shachar and Nalebuff 1999; Stromberg 2008), campaign spending (Gerber 1998; Levitt 1994), economic conditions (Brunner et al. 2011; Burden and Wichowsky 2014), and specific candidate characteristics (Washington 2006; Jones 2017) may influence voter behavior. A growing literature seeks to understand how past occurrences from previous electoral cycles affect persistence in electoral participation, examining whether election outcomes today can affect a person’s likelihood of voting in subsequent elections (Coppock and Green 2016). In this paper, we take a new perspective on this question by exploring how close state contests in Presidential elections can affect future voter turnout. In particular, we study if these close contests differentially affect those who supported losers, winners, or those who did not vote in the previous presidential election.

Instead of looking at the overall closeness of the election as a predictor of future voting behavior, we exploit a unique feature of the U.S. Presidential Election system: the electoral college system. Since candidates must win enough state contests to secure an electoral victory, they campaign and focus their effort in close contests where the predicted margin of victory between the two parties is relatively small. While this campaign activity may impact the likelihood that individuals vote in the contemporaneous election, it is also possible that ex-post closeness may have an effect on individual behavior in subsequent elections. These behaviors may differ based on who the individual supported in the ex post close state contest and whether or not that individual showed up to vote. Ignoring

---

<sup>1</sup>Statistic from International IDEA Institute for Democracy and Electoral Assistance <https://www.idea.int/data-tools/question-countries-view/522/295/ctr>.

states that are close in the subsequent election, we explore the extent to which realized close state contests in presidential elections affect future presidential voting behavior.

There are two mechanisms through which a particularly close election may influence future voting behavior that depend on previous voter behavior. First, if individuals exhibit loss aversion (Tversky and Kahneman 1991; Kahneman and Thaler 1991), the utility loss from supporting losers may be greater than the utility gain from supporting winners, deterring future political participation for those who supported losing candidates. This effect may be amplified in close elections, where the predicted outcome is closer to random. In these close contests, individuals may have more emotional reactions than to those that are won by wide margins.<sup>2</sup> If loss aversion does not exist in close contests, individuals who supported winners in close elections may decide to continue participating in future elections at equal or higher rates, as their participation resulted in their preferred outcome. Second, people may choose not to vote because of beliefs of zero probabilities of affecting elections outcomes. After a close election, people may update their beliefs that they can affect the outcome of the election, which increases the likelihood of voting in future elections. This would result in previous nonvoters heading to the polls the next election cycle.

We use individual-level voting behavior data from the American National Election Survey (ANES), from 1952-2012, to study how future voting behavior in presidential elections is affected by past election outcomes. In particular, we study how a “close” election today affects the likelihood of voting in the next election, splitting the results for those who voted for the victor, those who voted for the non-victor, and those who did not vote. We define the closeness of elections using the outcomes from each state’s electoral contest. We further examine how these effects differ across demographics. Age, gender and income may affect the incentives to vote. Since close elections in one year may result in similarly close elections in the following election cycle, we are careful to exclude all individuals who contemporaneously live in states with close electoral contests. Thus, we are able to identify the impact of ex-post close elections on turnout in the

---

<sup>2</sup>This is similar to a finding in Card and Dahl (2011), though they look at immediate actions, acts of domestic violence, and close upsets in football games based on expected win margins.

next election. In all models, we include state and time fixed effects to ensure that our comparisons are within a state, as states have distinct electoral environments, and to control for any differences across national election environments that may affect both previous and subsequent turnout.

Our findings suggest that those who report not voting in the previous election are more affected by realized close state electoral contests. Those who did not vote in close contests (but were eligible to vote) were 3.5 percentage points more likely to vote than those who did not vote in states where the contest for electoral votes was not close.<sup>3</sup> The magnitude of this effect on previous non-voters is largest for the youngest (22-29) and the oldest (aged 65 or older) cohorts. For these groups, the results suggest that those who skipped participating in an election were more likely to participate in the subsequent election when the previous contest was close, perhaps suggesting a level of guilt. The results for the young population are in line with the effects found in Meredith (2009), where individuals just eligible to participate in national elections were 7 percentage points more likely to participate in subsequent elections. The estimates were close to zero in magnitude for the middle (age 30-64) cohort. While there is no average effect on subsequent voting for those who chose non-victors, females who voted for a loser in states with slim margins of victory were 3 percentage points less likely to participate in the subsequent election than those who chose a victor in the previous close contest. This effect is even larger (11 percentage points) for low-income eligible voters.<sup>4</sup> These results are robust to a variety of measures of closeness.

Our study primarily contributes to two strands of existing literature. First, we add to previous work explaining factors that may affect persistent voting behaviors. A recent review of the literature by Coppock and Green (2016) discusses shows that shocks to voting have long-run effects on voting habit formation. Previous research could be compartmentalized into three categories: experimental GOTV effects (Green and Gerber 2002; Michelson et al. 2003; Gerber et al. 2003), regression discontinuities based on

---

<sup>3</sup>In this specification, we define a close election as one where the margin was within 5 percentage points. The paper uses alternate definitions of closeness for robustness.

<sup>4</sup>In our data, low-income is defined by those earning within the 16 percentile of the income distribution.

whether or not a national election occurred in the year the individual became eligible to vote (Meredith 2009), and quasi-experimental settings shocking voter behavior (Franklin and Hobolt 2011; Atkinson and Fowler 2014; Denny and Doyle 2009; Green and Shachar 2000). Nearly all of these studies support the fact that shocks to voting have persistent effects. An additional literature uses a more theoretic approach to understanding persistent turnout. Shachar (2003) develops a model where one's current utility depends on previous voting decisions. He estimates the model using data from the 1972 and 1976 US presidential elections and finds that this type of habit formation model fits the data better than a simple party preference model. Shachar (2003) also shows that persistent voting for the same party over time decreases with voter age. We also consider a different type of shock to habit in this paper, by specifically examining how initial vote decisions during particularly close contests differentially affect behavior depending on vote choice in the previous election.

The effect of previous elections on subsequent turnout has been investigated via the spillover effects of gubernatorial races on presidential elections. Erikson et al. (2015) use a regression discontinuity design to show that governors who won by close margins negatively affected vote shares for the subsequent presidential candidate of the same party's election. They attribute this to a balancing of ideology. We instead focus on competitiveness of the same election, but variation in state's relative influence in the potential election via close Electoral College contests within a state in one year and not the subsequent year.

Second, we contribute to a literature on the predicted closeness of elections. This strand of literature generally finds that elections that are expected to be close increase participation, often through politician effort. Shachar and Nalebuff (1999) develop and structurally estimate a model that assumes US presidential candidates expend effort based on the predicted closeness of an election. Their results suggest that a 1 percent increase in the predicted closeness of a race increases turnout by 0.3 percent. Stromberg (2008) similarly shows that a model where candidates attempt to maximize the probability of winning the presidential election given the complex electoral college system (electoral

college votes and predicted closeness of each race) generates similar predictions to actual candidate campaign strategies. Lipsitz (2009) finds that battleground status early in a campaign leads to slightly increased voter turnout; however, their results do not include state fixed effects to account for differences across states in voter turnout. Thus, there could be omitted variable bias remaining due to state unobservable characteristics giving states higher propensities to be battleground states as well as have higher turnouts.<sup>5</sup> Some research has tried to explain this small battleground effect via voting norms (Doherty et al. 2017).

In contrast with the existing literature that finds a link, albeit small, between predicted closeness and turnout, Gerber et al. (2017) find that voters perceive races to be closer than polls would suggest, and that perceived closeness has a minimal, if any, effect on voter turnout. We contribute to this literature by looking at closeness in a different way. Understanding that voters often perceive a contest to be closer than polls would suggest (Gerber et al. 2017), when a contest is realized to be close after the election concludes, do voters change their participation behavior in the following election? A realized close election may affect voter behavior if polls are noisy and voters perceive them to be unreliable measures of how close the race is. These completed elections with slim margins of victory may also particularly resonate with individuals in ways that are specifically tied to their own decisions.

## 2 Data

Our empirical strategy relies on two sources of data: individual level voter data and the closeness of state electoral college contests in presidential elections over time. We detail the data collection of each below.

We use data from the American National Election Studies (ANES) from 1952-2012 to understand individual voting behavior, exploiting an underused question regarding who

---

<sup>5</sup>With a similar question, Enos and Fowler (2016) examine the “battleground effect” by looking at media markets that span battleground and non-battleground states to determine the relative impact of non-media campaigning. However, this operates under the assumption that close elections do not affect voter turnout, as the battleground state and its non-battleground bordering state differ in perceived and ex post closeness.

the individual voted for in the previous presidential election. We analyze election voting behavior in subsequent presidential elections to see if closeness of the previous election impacts voting behavior four years later. For the presidential election analysis, we use data for each presidential election from 1952-2012.<sup>6</sup> Most states have 15 presidential elections in our data, except for Alaska and Hawaii which did not become states until 1959, and DC whose residents did not receive the right to vote until 1961 under the twenty-third amendment.

We separately collect data on the closeness of each state election for electoral votes from 1948-2008 to determine if the margin of victory is small enough to have a race where the winner is *ex ante* uncertain. Data on state margin of victories and electoral votes are from the American Presidency Project (APP).<sup>7</sup> The margins of victory (margin) are state-specific for each election and defined as the difference between the percent of the state popular vote garnered by the winner of the state electoral college votes and the percent of the state popular votes received by the runner-up.

There are several elections that complicate the calculation of the margin. From 1944 to 1964, unpledged electors were listed as a candidate on ballot in the South. An unpledged elector is an individual who is nominated as an elector but not tied to a specific candidate. The presence of unpledged electors on ballots in southern states arose due to differences in the Democratic party over segregation and civil rights.<sup>8</sup> Due to the difference in political platform and the fact that the votes for these unpledged electors did not go to the nominated Democratic candidates, we treat unpledged electors as a third party.

Occasionally all of the state electoral votes are not awarded to one candidate. In these instances, we consider the state with the majority of the electoral votes to be the victor.<sup>9</sup> This number is positive for voters of the victor of the state electoral college votes

---

<sup>6</sup>1984 is excluded from our analysis since individuals were not asked about previous voting behavior.

<sup>7</sup>The APP is hosted at the University of California, Santa Barbara and is a collaboration between John T. Woolley (UCSB) and Gerhard Peters (Citrus College). <http://www.presidency.ucsb.edu>

<sup>8</sup>For more on Southern Democrats during this period, see Kuziemko and Washington (2018).

<sup>9</sup>Specifically, each instance of this follows: In 1948, Strom Thurmond, a Dixiecrat, won one electoral vote in Tennessee, while Harry Truman, a Democrat, won the other eleven electoral votes. We consider this state to be won by Democrats. In 1960, in Alabama, five electoral votes were awarded to the Democratic candidate, John F. Candidate, while six were awarded to unpledged electors. We consider a third party to have won this election, with the Democratic party as the runner up. The same year, in Oklahoma, seven electoral votes were awarded to the Republican candidate, Richard Nixon, while one was

and negative for voters of the non-victor. For example, in Pennsylvania in 2012, Barack Obama won 51.97% of the votes, while Mitt Romney won 46.59% of the votes. The margin of victory for this state and year is 5.39%. Those who voted for Obama in Pennsylvania in 2016 would have a margin of 5.39% and those who voted for Romney would have a margin of -5.39%. These margins would be used to determine voting behavior in the following midterm election in 2014, and presidential election in 2016. The ANES data do not do not reveal for whom an individual voted if she did not vote for the Democrat or Republican, just that she voted for “other.” For this reason, we exclude from our analysis those who voted for “other” in the previous election. Third party candidates are still essential to our analysis, as they are present in the margin calculations if a third party candidate wins the state electoral votes or is the runner-up.

We focus on two main measures of closeness of elections in our analysis: margins less than 5% and continuous margins. Continuous margins are the absolute value of the margin of victory. In lieu of a negative sign on the margin when voting for the non-victor, an interaction term between margin and an voting for a non-victor accounts for voting for a non-victor in a close election. We use two additional measures of closeness for robustness: margins of less than 1% and margins of less than 10%. Appendix Tables 8 and 9 show the specific number of close elections and the number of consecutive close election by state for each measure of closeness we define, respectively. As seen in these tables, the same states are not competitive every year, and few states are competitive consecutively across years. Indeed, the probability of a subsequent close election in a given state conditional on having a close election the previous presidential cycle is 0.23, which is not very different than the probability of having a close election given that the

---

awarded to unpledged electors. We consider the victor of this state to be Nixon. In 1968, North Carolina split its electoral votes: with 12 going to Richard Nixon, the Republican candidate, and one going to the Independent candidate, George Wallace. We consider this election a win for Nixon. Similarly, in 1972, 11 of Virginia’s electoral votes were awarded to Nixon, while one was awarded to John Hospers, a Libertarian. We consider this a Republican victory. In 1976, in Washington, eight electoral votes went to Gerald Ford, the Republican candidate, while one elector voted for Ronald Reagan. We identify this as a Republican victory. In 1988, in West Virginia, Michael Dukakis, the Democratic candidate, won five electoral votes, with the sixth elector voting for Lloyd Bentsen who was the Democratic vice presidential nominee. We consider this state to be won by Democrats. In 2004, Minnesota awarded 9 electoral votes to John Kerry, the Democratic candidate, with one faithless elector voting for John Edwards, the Democratic vice presidential nominee. We consider this a Democratic victory.



state was not close the previous cycle (0.18).

Table 1 reports the probability of voting for president given that an individual voted for a victor, voted for a non-victor or did not vote in the previous presidential election. We report these conditional probabilities for all elections, and separately for those in states with close (or not close) elections in the previous presidential election.

It is possible that states that were close last election cycle are more likely to be close in the current election cycle. If so, our results may capture the effect of contemporaneous closeness on voter participation. We report the frequency of repeat close elections in Appendix Table 9 and see little consecutive overlap within state. We further note that the probability of a close election given the last presidential election was close is 0.23. However, our results could still show that individuals are rationally choosing to participate for the first time in close elections since they may be more likely to influence the state electoral decision. To avoid this, we exclude all states that have close elections in the year individuals are surveyed (based on our 5% margin definition) and reproduce Table 1 with all states that are not close in the current year. Table 1 further reports the probability of voting for president given that an individual voted for a victor, a non-victor or did not vote in the previous presidential election for this sample.

Table 2 aims to descriptively explain persistence in individual voting behavior, though we include state and year fixed effects in each regression to account for cross state and over time differences in preferences. Column (1) reports that those who voted in previous presidential elections are roughly 50 percentage points more likely to vote again the subsequent presidential election. This is a large amount given that the average voter turnout is 68 percent for presidential elections. This suggests that previous participation is a strong predictor of subsequent electoral participation. Column (2) shows that controlling for self-reported interested in politics only slightly decreases the magnitude of the coefficient on previous presidential voting, suggesting that habit formation of voter turnout is not simply based on an individual's utility generated from politics. Column (3) includes individual demographics to better explain turnout and how demographics interact with previous voter participation to predict contemporaneous turnout. White individuals who

voted in the previous election are more likely to participate in the subsequent election than non-white individuals who voted previously. Further, young individuals (those under 35) who voted in a previous election were less likely to participate in a subsequent election than older individuals who voted last election. While low income voters who did not participate last cycle are less likely to participate again than middle income individuals who did not vote, there is no difference in low and middle income individuals who voted last election cycle. Surprisingly, those in the highest part of the income distribution who voted last election are less likely to vote again than middle income individuals who previously participated.

### 3 Methodology

The closeness of the presidential election in a given state can inform an individual's future voting behavior through several potential mechanisms. First, the closeness of the state electoral contest can ex-post inform an individual on the probability of influencing the outcome of the state election. Individuals who did or did not participate in a close election may be more likely to participate in subsequent elections if they think they are more likely to be pivotal in the future. The second potential mechanism is behavioral in nature. If an individual did not vote in an election that ended up being close, that person may feel remorse and be more likely to participate in the subsequent presidential election. Similarly, individuals who voted for a non-victor in a close election may be less likely to vote again if they feel as if their votes were not influential and those who voted for a victor in a close election may be more likely to vote again if they feel as if their votes were pivotal.

We exploit variation in the closeness of state electoral votes in the previous presidential election across individuals and individuals' past voting behavior to explain their likelihood of participating in the subsequent presidential election. Our identification strategy relies on quasi-random within state variation in the closeness of the previous election. Specifically, we estimate Equation 1, where  $Y_{ist}$  equals one if individual  $i$  in state  $s$  in year  $t$  voted in the current election election cycle, No Vote equals one if the individual did

not vote in the previous presidential election and zero otherwise, and Voted Non-Victor equals one if the individual voted for a loser of the state’s electoral votes in the last election and zero otherwise. Close entails one of the four measures of closeness explained above, where our preferred specification is a dummy variable equal to one if the state electoral college contest was within five percentage points and zero otherwise. Our main coefficients of interest are  $\alpha_4$  and  $\alpha_5$ , which capture the interaction between closeness and previous voter behavior.

$$\begin{aligned}
Y_{ist} = & \alpha_0 + \alpha_1 \text{No Vote}_{ist} + \alpha_2 \text{Voted Non-Victor}_{ist} \\
& + \alpha_3 \text{Close}_{st} + \alpha_4 \text{No Vote} \times \text{Close}_{ist} \\
& + \alpha_5 \text{Voted Non-Victor} \times \text{Close}_{ist} + \delta_s + \gamma_t + \varepsilon_{ist}
\end{aligned} \tag{1}$$

In Equation 1, we further include state fixed effects ( $\delta_s$ ) to account for differences across states in persistent political participation and the state electoral environment and year fixed effects ( $\gamma_t$ ) to control for changes in participation and the evolution of electoral contests over time. These fixed effects allow our identification strategy to make cross state comparisons in changes in within state closeness over time. This, for example, accounts for the different political preferences in Arkansas and Colorado and the fact that participation in politics was different in 1974 than 2008. We are careful to cluster our standard errors at the state level throughout and provide standard errors adjusted for heteroskedasticity.<sup>10</sup> In order to avoid capturing any effects of recurrent close elections, we focus our analysis only on those that are not close in the current year, dropping those states that have close current electoral elections. Here we define not close elections as those with margins greater than 5%.

---

<sup>10</sup>We do not use the ANES weights in our analysis due to inconsistencies in the weights across years. For the midterm election analysis, for the five years of data, weights are only reported for 1958 and in this year, are only reported as values 1 or 2. In the rest of the years, weights are not reported in the codebooks, and the aggregate data reports a 1 for each individual. For the presidential election analysis, seven years (1952, 1956, 1964, 1968, 1972, 1980 and 1988) are missing weights, while years 1960 and 1976 have anomalous weights.

## 4 Results

We seek to document the effect of close previous elections on the persistence in voter turnout for the sample of elections that are not close in the current year. Table 3 shows the effects by measure of closeness of previous election. First, we find that those who did not vote in the previous election were more likely to participate in the subsequent presidential election if the previous state electoral contest was close across all measures. The magnitude suggests that when compared to those voting for victors in close states in the previous presidential election, those who did not vote were 5 to 6 percentage points more likely to participate in the following presidential election, which is roughly 8% of the mean. This effect is statistically different from zero for all measures of closeness for the previous election. This suggests that non-voters are affected by previous state electoral contests and the perception of influencing an election, suggesting that there is some guilt or remorse from not voting in previous close contests. There is no difference in the persistence across those who voted for victors and non-victors in the previous election. The effects are similar if we use the continuous measure of vote margin, where smaller margins increase participation for previous non-voters.

The effect of the previous election year's closeness on current participation for non-voters in Table 3 could be caused by young people voting for the first time after not being eligible in the previous election year. Table 4 drops individuals ages 18-21 from the specification, since they were previously ineligible to vote. The results show that focusing only on those who were eligible to vote slightly reduces the effect of the previous election year's closeness on current participation for nonvoters. This effect is still statistically different from zero for all measures except for the 1% measure of closeness, though that specification has less power and its magnitude is not different in magnitude than the other magnitudes in the specifications of closeness.

We now explore heterogeneity in our main effect from Table 4 by gender, age, and income to determine which segments of the population are most affected by close elections.<sup>11</sup> For these results, we focus on our 5% measure of closeness and our continuous measures,

---

<sup>11</sup>We find no statistically different effects across race.

though our results are robust to the other measures and these results are reported in the Appendix. Table 5 separates the results by gender, where we see that females are more affected by close margins than males. In addition, females who supported losing candidates were less likely to vote in a subsequent presidential election than those who supported winners in similarly close races. While this effect may suggest that females supporting non-victors in close elections are less likely to vote next election cycle, this result is only marginally significant at the 10 percent level and not statistically different from the average effect in Table 4.<sup>12</sup> This evidence could loosely support research suggesting that females exhibit loss aversion more than men (Eckel and Grossman 2002). The fact that females and males respond differently to ex-post close elections is similar to their differences in responses to advertising strategies found in Galasso and Nannicini (2013).

Table 6 shows the effects by age groups, where we find that some of the effect is coming from the young voters. Young individuals who did not vote in the previous election were more likely to participate in the subsequent presidential election if the previous state electoral contest was close across all measures, except using the 1% margin level (see Appendix Table 12). These results are excluding those 18-21 who are voting for the first time, as they were not eligible to vote in the previous election. This result suggests that closeness matters in engaging young voters for the first time and can potentially make voting a habit. This population has the lowest average rate of voter turnout (56%) with the effect roughly 14 percent of the mean at the 5% margin level. While some may argue that young people are the most likely to move, Brown et al. (2013) report that 82% of 18 year olds reside in the same state at age 29. In Column (5), we see that those over 65 are more likely to participate in the subsequent presidential election if the previous state electoral contest was close, though this result is not robust across measures of closeness.

While the overall effect on previous non-voters is not statistically different from the average effect when we split our sample based on income, we find evidence across measures that low-income individuals who voted for losing candidates last election season in close

---

<sup>12</sup>The results for the other measures of closeness and including individuals age 18-21 are included in Appendix Tables 10 and 11, respectively.

contests are less likely to participate in subsequent presidential elections than those who supported winners (Table 7). These effects on low-income individuals—those below the 16th percentile of income—are important in magnitude and statistical significance. Low-income individuals have lower average rates of voter turnout, where roughly 54 percent of low income individuals surveyed voted in the given presidential contest. Thus, the effects reported represent an 11.6 percentage point decrease in subsequent turnout, or approximately one-fifth of mean turnout. Learning to target low-income individuals who previously voted for losing candidates can have important implications for participation among this group and inform campaigns on who to appropriately target in subsequent elections. This effect is not statistically significant at the 1% or 10% margin but the sign is consistent (see Appendix Table 13). Further, for non-low income individuals, those who did not vote in a close election are more likely to vote if the previous election was close. This is not true of low income individuals. The fact that low-income individuals are susceptible to shocks in turnout is comparable to literature finding that low-income and less educated individuals are more greatly affected by stricter voter id laws (Alvarez et al. 2007). However, as Hodler et al. (2015) find, decreasing the cost of voting may increase participation among groups who are less educated and politically aware, which could actually decrease lower expenditures on welfare.<sup>13</sup>

## 5 Discussion

While our results suggest that previous closeness is an important determinant for the persistence in voting, there are several caveats to mention with this research. First, given the nature of the data, measurement error can occur such that participants are likely to report voting in previous elections when they did not. Shachar and Eckstein (2007) show that in the Israeli context, 23 percent of voters misreport their previous electoral behavior. For this to be a threat to our identification strategy, reporting will need to vary by close and not close state electoral contests. Research suggesting potential bandwagon

---

<sup>13</sup>Garmann (2016) uses a natural experiment in Germany to show that making local elections concurrent increases turnout, though he cautions that this could again increase participation among the least informed voters.

effects in vote choice imply that this would shift more voters to state that they supported the winner (Morton et al. 2015). Shachar and Eckstein (2007) further find that voters are more likely to report past voting to make it more consistent with current choices.<sup>14</sup> If that is the case, this would still need to vary by close and not close elections for it to bias the results. Assuming that this misreporting is more likely to happen in close elections, this would suggest that if people were more likely to report supporting the winner in the previous election, they may also be more likely to state that they voted again in the present election. This would make the effect of not voting in close contests relatively conservative. In addition, since the bulk of our findings are for those who reported not voting in the previous election and average effects for those who did and did not support the winning candidate do not differ, we think our estimates likely understate the true effect.

Another potential concern may be that we measure closeness at the conclusion of the race. Using an ex-post measure of closeness allows us to use additional years of data for which reliable polling information is not available. Research has found that both election markets and polls are good predictors of election outcomes, with their predictive power rising as the election nears (Wolfers and Zitzewitz 2004; Berg et al. 2008). Although predictive closeness is a strong measure of ex-post closeness, it is possible that a poll incorrectly predicts closeness or a state is competitive for a short period in a contemporaneous election; to the extent that contemporaneous predicted closeness affects mobilization (Shachar 2003), this could increase voter turnout in that state.<sup>15</sup> Since we exclude states with contemporaneous ex-post close elections, this would only bias our results if this inaccurate polling occurs in states that were close at some point in the previous presidential election. We argue that our least restrictive competitiveness measure—races within 10 percentage points—allows us to rule out that a state was at one point close in the current election, did not end up within a 10 point margin, and saw an

---

<sup>14</sup>Shachar (2003) reports that two out of three individuals vote for the same party in subsequent elections.

<sup>15</sup>In a study of Swiss referenda, Bursztyn et al. (2017) find that closer elections only increase turnout where polls exist. In the US context, it is plausible that competitive states are more likely to have their own polls.

increase in turnout due to the closeness at one point in the campaign.

An additional constraint is the lack of reliable survey weights in the data over time to correct for the bias in who decides to complete the survey. If more people in the sample are more likely to turnout and complete the survey, our results may not be generalizable to other populations. Figure 2 plots the voting rates in each presidential election, for the ANES data and using national voting statistics. Although the two series do not match exactly, the trends are similar. We do see that ANES respondents have higher voting rates than in the voting statistics. If we drop each year one at a time in a leave-one-out approach, none of our results are statistically different from the average effect.<sup>16</sup> To look at this more carefully, we next look at the percent of people in each state who vote in each presidential election. Figure 3 compares the percent of people in each state who voted, in the ANES data and in voting statistics and then correlates that to the competitiveness in that state's prior election. Each observation is the difference (Actual-ANES) in a given state and year, where the x-axis shows the margin of victory. Since the difference provides a negative estimate in most cases, the ANES data provides an overstatement of voter turnout. However, fitting a line between the difference and competitiveness results in a flat slope, suggesting the two are uncorrelated. We repeat this by year in Figure 4, where the relatively flat slope holds up in most years, with the exception of 1992 and 2008. In addition, we formally test that the difference in turnout measures is not dependent on closeness in Table 15. Here, we include state and year fixed effects, as we do in our primary specifications. In all cases, the effect of closeness on the difference in measures is not statistically different from zero at the ten percent level. The magnitudes are also relatively close to zero, reflecting between a 1 percentage point difference in measures based on the 5% closeness measure.

Finally, while we find interesting subgroups through which we expect the effects of closeness to operate (close states, females, the young, and low-income individuals), we cannot pin down the precise mechanisms through which previous close elections affect previous non-voters. For example, it could be that since presidential campaigns operate

---

<sup>16</sup>These results are available upon request.



more heavily in contested states, these activities remain memorable for individuals even if they did not vote. Given research on the limited duration of the effects of advertising (Gerber et al. 2011; Hill et al. 2013), it is unlikely that these effects could persist over four years.<sup>17</sup>

## 6 Conclusion

In this paper, we explore how close state electoral contests can affect future voter turnout. In particular, we study if these close contests differentially affect those who supported losers, winners, or those who did not vote in the previous electoral contest. Using individual-level voting behavior data, we study how future voting behavior in presidential elections is affected by past election outcomes. Our findings suggest that those who report not voting in the previous election are most affected by realized close state electoral contests. Those who did not vote in close contests (but were eligible to vote) were 3.5 percentage points more likely to vote than those who did not vote in states where the contest for electoral votes was not close. The magnitude of this effect on previous non-voters is largest for the youngest (22-29) and the oldest (aged 65 or older) eligible voters. While there is no average effect on subsequent voting for those who chose a non-victor, females who voted for the loser of a contest in states with slim margins of victory were 3 percentage points less likely to participate in the subsequent election. This effect is even larger (11 percentage points) for low-income (< 16 percentile) eligible voters.

Our results have implications for a broader literature studying how persistent voter behavior responds to external forces. While others have examined the effects of close contemporaneous contests on voter behavior, few studies investigate voter behavior for contests that are not close. While these results might not be directly relevant for a presidential election, where candidates only campaign in states that are contemporaneously close, the findings are important for down-ballot candidates. If inactive voters are more likely to show up to the polls in presidential years following a previous close presidential contest, candidates for local office should internalize that behavior in their campaign

---

<sup>17</sup>Hill et al. (2013) find that the rate of decay is at most six weeks for presidential elections.

strategies. Candidates for Congress, governor, or local office should further consider that certain individuals—women and low-income voters who chose the losing candidate in a previous close state presidential election—may be less likely to show up, even though they did in the past. Mobilizing these groups may require more effort on the part of campaigns due to potential loss aversion. Local candidates should re-consider their campaign strategies based on this information.

## Bibliography

- Alvarez, R.M., Bailey, D., Katz, J., 2007. The effect of voter identification laws on turnout. VIP Working Paper No. 57.
- Ashworth, S., Clinton, J.D., 2007. Does advertising exposure affect turnout? *Quarterly Journal of Political Science* 2:1, 27–4.
- Atkinson, M.D., Fowler, A., 2014. Social capital and voter turnout: Evidence from saint’s day fiestas in mexico. *British Journal of Political Science* , 41–59.
- Berg, J., Forsythe, R., Nelson, F., Rietz, T., 2008. Results from a dozen years of election futures markets research. *Handbook of experimental economics results* 1, 742–751.
- Brown, M., van der Klaauw, W., Wen, J., Zafar, B., 2013. Financial education and the debt behavior of the young. *Federal Reserve Bank of New York Staff Report Number* 634.
- Brunner, E., Ross, S., Washington, E., 2011. Economics and policy preferences: Causal evidence of the impact of economic conditions on support for redistribution and other ballot proposals. *Review of Economics and Statistics* 93, 888–906.
- Burden, B.C., Wichowsky, A., 2014. Economic discontent as a mobilizer: Unemployment and voter turnout. *The Journal of Politics* 76, 887–898.
- Bursztyn, L., Cantoni, D., Funk, P., Yuchtman, N., 2017. Polls, the press, and political participation: the effects of anticipated election closeness on voter turnout. *Technical Report*. National Bureau of Economic Research.

- Card, D., Dahl, G.B., 2011. Family violence and football: The effect of unexpected emotional cues on violent behavior. *The Quarterly Journal of Economics* 126, 1–41.
- Coate, S., Conlin, M., 2004. A group rule utilitarian approach to voter turnout: Theory and evidence. *American Economic Review* 94(5), 1476–1504.
- Coppock, A., Green, D.P., 2016. Is voting habit forming: New evidence from experiments and regression discontinuities. *American Journal of Political Science* 60 (4), 1044–1062.
- Denny, K., Doyle, O., 2009. Does voting history matter? analysing persistence in turnout. *American Journal of Political Science* 53, 17–53.
- Doherty, D., Dowling, C.M., Gerber, A.S., Huber, G.A., 2017. Are voting norms conditional? how electoral context and peer behavior shape the social returns to voting. *The Journal of Politics* 79, 1095–1100.
- Eckel, C.C., Grossman, P.J., 2002. Sex differences and statistical stereotyping in attitudes toward financial risk. *Evolution and Human Behavior* 23, 281–295.
- Enos, R.D., Fowler, A., 2016. Aggregate effects of large-scale campaigns on voter turnout. *Political Science Research and Methods* , 1–19.
- Erikson, R.S., James M. Snyder, J., Folke, O., 2015. A gubernatorial helping hand? how governors affect presidential elections. *Journal of Politics* 77, 491–504.
- Franklin, M.N., Hobolt, S.B., 2011. The legacy of lethargy: How elections to the european parliament depress turnout. *Electoral Studies* 30, 67–76.
- Galasso, V., Nannicini, T., 2013. Men vote in mars, women vote in venus: A survey experiment in the field. IZA DP No. 7483.
- Garmann, S., 2016. Concurrent elections and turnout: Causal estimates from a german quasi-experiment. *Journal of Economic Behavior & Organization* 126, 167–178.
- Gerber, A., 1998. Estimating the effect of campaign spending on senate election outcomes using instrumental variables. *American Political Science Review*, 92(2), 401-411. .

- Gerber, A., Hoffman, M., Morgan, J., Raymond, C., 2017. One in a million: Field experiments on perceived closeness of the election and voter turnout. National Bureau of Economic Research Working Paper January.
- Gerber, A.S., Gimpel, J., Green, D.P., Shaw, D.R., 2011. How large and long-lasting are the persuasive effects of televised campaign ads? results from a randomized field experiment. *American Political Science Review* 105.
- Gerber, A.S., Green, D.P., Shachar, R., 2003. Voting may be habit-forming: Evidence from a randomized field experiment. *American Journal of Political Science* 47, 540–550.
- Goldstein, K., Freedman, P., 2002. Campaign advertising and voter turnout: New evidence for a stimulation effect. *Journal of Politics* 64, 721–740.
- Gordon, B., Hartmann, W., 2013. Advertising effects in presidential elections. *Marketing Science* 32, 19–35.
- Green, D.P., Gerber, A.S., 2002. The downstream benefits of experimentation. *Political Analysis* 10, 394–402.
- Green, D.P., Shachar, R., 2000. Habit formation and political behaviour: Evidence of consuetude in voter turnout. *British Journal of Political Science* 30 (4), 561–573.
- Hill, S.J., Lo, J., Vavreck, L., Zaller, J., 2013. How quickly we forget: The duration of persuasion effects from mass communication. *Political Communication* 30, 521–547.
- Hodler, R., Luechinger, S., Stutzer, A., 2015. The effects of voting costs on the democratic process and public finances. *American Economic Journal: Economic Policy* 7, 141–71.
- Jones, D., 2017. How female candidates affect voter turnout. Working Paper .
- Kahneman, Daniel, J.L.K., Thaler, R.H., 1991. Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives* 5, 193–206.
- Krasno, J.S., Green, D.P., 2008. Do televised presidential ads increase voter turnout? evidence from a natural experiment. *The Journal of Politics* 70, 245–261.

- Kuziemko, I., Washington, E., 2018. Why did the democrats lose the south? bringing new data to an old debate. *American Economic Review* Forthcoming.
- Levitt, S., 1994. Using repeat challengers to estimate the effect of campaign spending on election outcomes in the U.S. house. *Journal of Political Economy* 102, 777–798.
- Lipsitz, K., 2009. The consequences of battleground and “spectator” state residency for political participation. *Political Behavior* 31, 187–209.
- Meredith, M., 2009. Persistence in political participation. *Quarterly Journal of Political Science* 4, 187–209.
- Michelson, M.R., Bedolla, L.G., McConnell, M.A., 2003. Heeding the call: The effect of targeted two-round phone banks on voter turnout. *The Journal of Politics* 71, 1549–1563.
- Morton, R.B., Muller, D., Page, L., Torgler, B., 2015. Exit polls, turnout, and bandwagon voting: Evidence from a natural experiment. *European Economic Review* 77, 65–81.
- Shachar, R., 2003. Party loyalty as habit formation. *Journal of Applied Econometrics* 18, 251–269.
- Shachar, R., Eckstein, Z., 2007. Correcting for bias in retrospective data. *Journal of Applied Econometrics* 22, 657–675.
- Shachar, R., Nalebuff, B., 1999. Follow the leader: Theory and evidence on political participation. *The American Economic Review* 89 (3), 525–547.
- Stromberg, D., 2008. How the electoral college influences campaigns and policy: The probability of being florida. *American Economic Review* 98(3), 769–807.
- Tversky, A., Kahneman, D., 1991. Loss aversion in riskless choice: A reference-dependent model. *The Quarterly Journal of Economics* 106, 1039–1061. doi:10.2307/2937956.
- Washington, E., 2006. How black candidates affect voter turnout. *Quarterly Journal of Economics* 121, 973–998.

Wolfers, J., Zitzewitz, E., 2004. Prediction markets. *Journal of economic perspectives* 18, 107–126.

## 7 Tables

Table 1: Probability of Voting for President

	all elections	close previous elections	not close previous elections
All elections			
Voted for Winner in Previous Election	0.8233 (0.0035)	0.8180 (0.0071)	0.8250 (0.0040)
Voted for Non-Victor in Previous Election	0.8249 (0.0039)	0.8095 (0.0076)	0.8311 (0.0046)
Did not Vote in Previous Election	0.3305 (0.0049)	0.3546 (0.0101)	0.3225 (0.0057)
Number of Observations	30,506	7,883	22,623
Non-close elections			
Voted for Winner in Previous Election	0.8252 (0.0040)	0.8046 (0.0087)	0.8315 (0.0045)
Voted for Non-Victor in Previous Election	0.8202 (0.0045)	0.7987 (0.0091)	0.8282 (0.0052)
Did not Vote in Previous Election	0.3348 (0.0057)	0.3683 (0.0116)	0.3235 (0.0065)
Number of Observations	23,085	5,785	17,300

Notes: Standard errors in parentheses. Close elections are defined as those with a margin of victory less than 5%. The means in columns (2) and (3) are statistically different at the 5% significance level, except for those who voted for a winner in the previous election in the sample of all elections.

Table 2: Probability of voting in next election

	(1)	(2)	(3)
voted in previous pres. election	0.482*** (0.00851)	0.442*** (0.00845)	0.509*** (0.0115)
some interest in politics		0.157*** (0.00962)	
very interested in politics		0.218*** (0.00944)	
female			-0.00688 (0.0118)
white			0.00752 (0.0122)
young			0.116*** (0.00985)
low income			-0.0828*** (0.0107)
high income			0.116*** (0.0428)
voted × female			-0.00722 (0.0110)
voted × white			0.0259* (0.0137)
voted × young			-0.196*** (0.0122)
voted × low income			0.0134 (0.0124)
voted × high income			-0.0933** (0.0413)
Mean DV	0.678	0.677	0.678
Number of Years	15	15	15
Number of States	51	51	51
Observations	30506	29323	30506

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . All columns include year and state fixed effects and have standard errors that are clustered at the state level.

Table 3: Probability of voting for president in next election: for not close elections

	< 1%	< 5%	< 10%	continuous
didn't vote in pres. election	-0.476*** (0.00990)	-0.490*** (0.0104)	-0.500*** (0.0110)	-0.447*** (0.0143)
voted for non-victor	0.00580 (0.00589)	0.00909 (0.00751)	0.0102 (0.00844)	-0.00676 (0.00903)
close margin	-0.00294 (0.0199)	-0.0208* (0.0121)	-0.0117 (0.00839)	
didn't vote $\times$ close	0.0490** (0.0229)	0.0644*** (0.0122)	0.0608*** (0.0132)	
voted for non-victor $\times$ close	-0.00000917 (0.0291)	-0.00933 (0.0156)	-0.00678 (0.0130)	
margin of victory				-0.0395 (0.0464)
didn't vote $\times$ margin				-0.183*** (0.0661)
voted for non-victor $\times$ margin				0.0989 (0.0651)
Mean DV	0.677	0.677	0.677	0.677
Number of Years	15	15	15	15
Number of States	51	51	51	51
Observations	23085	23085	23085	23085

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . 'Close margin' and 'close' is defined as margin of victory less than 5%. Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level.



Table 4: Probability of voting for president in next election: for not close elections for age 22+

	< 1%	< 5%	< 10%	continuous
didn't vote in pres. election	-0.496*** (0.00878)	-0.508*** (0.00922)	-0.514*** (0.0104)	-0.471*** (0.0137)
voted for non-victor	0.00584 (0.00587)	0.00918 (0.00742)	0.00983 (0.00814)	-0.00701 (0.00923)
close margin	-0.00290 (0.0194)	-0.0215* (0.0128)	-0.0145 (0.00894)	
didn't vote $\times$ close	0.0437 (0.0279)	0.0562*** (0.0142)	0.0476*** (0.0154)	
voted for non-victor $\times$ close	-0.00312 (0.0278)	-0.0107 (0.0161)	-0.00667 (0.0131)	
margin of victory				-0.0307 (0.0450)
didn't vote $\times$ margin				-0.153** (0.0624)
voted for non-victor $\times$ margin				0.0990 (0.0648)
Mean DV	0.688	0.688	0.688	0.688
Number of Years	15	15	15	15
Number of States	51	51	51	51
Observations	21928	21928	21928	21928

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . 'Close margin' and 'close' is defined as margin of victory less than 5%. Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level.

Table 5: Probability of voting for president in next election: for not close elections by gender for age 22+

	female		male	
	(1)	(2)	(3)	(4)
didn't vote in pres. election	-0.512*** (0.0105)	-0.469*** (0.0164)	-0.497*** (0.0119)	-0.476*** (0.0177)
voted for non-victor	0.0110 (0.00938)	-0.0119 (0.0144)	0.00868 (0.0116)	-0.00175 (0.0151)
close margin	-0.0361** (0.0139)		-0.000796 (0.0195)	
didn't vote $\times$ close	0.0502** (0.0208)		0.0617*** (0.0194)	
voted for non-victor $\times$ close	-0.0291* (0.0171)		0.00636 (0.0241)	
margin of victory		0.00381 (0.0623)		-0.0763 (0.0645)
didn't vote $\times$ margin		-0.208*** (0.0740)		-0.0431 (0.0971)
voted for non-victor $\times$ margin		0.110 (0.0920)		0.0873 (0.0938)
Mean DV	0.668	0.668	0.711	0.711
Number of Years	15	15	15	15
Number of States	51	51	51	51
Observations	11991	11991	9937	9937

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . 'Close margin' and 'close' in columns (1) and (3) is defined as margin of victory less than 5%. Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level.

Table 6: Probability of voting for president in next election: for not close elections by age

	22-29		30-64		65+	
	(1)	(2)	(3)	(4)	(5)	(6)
didn't vote in pres. election	-0.381*** (0.0279)	-0.308*** (0.0286)	-0.531*** (0.0103)	-0.518*** (0.0140)	-0.595*** (0.0156)	-0.561*** (0.0343)
voted for non-victor	0.0230 (0.0224)	0.0219 (0.0308)	-0.0000395 (0.00895)	-0.0146 (0.0129)	0.0312** (0.0155)	0.0114 (0.0224)
close margin	-0.0239 (0.0415)		-0.0200 (0.0173)		-0.0188 (0.0343)	
didn't vote $\times$ close	0.0815* (0.0445)		0.0175 (0.0258)		0.0943** (0.0369)	
voted for non-victor $\times$ close	-0.00945 (0.0468)		-0.00390 (0.0224)		-0.0301 (0.0300)	
margin of victory		0.0483 (0.150)		-0.0741 (0.0457)		0.100 (0.0963)
didn't vote $\times$ margin		-0.360** (0.142)		-0.0516 (0.0648)		-0.0836 (0.179)
voted for non-victor $\times$ margin		0.00469 (0.148)		0.0992 (0.0887)		0.0928 (0.112)
Mean DV	0.559	0.559	0.709	0.709	0.723	0.723
Number of Years	15	15	15	15	15	15
Number of States	50	50	51	51	50	50
Observations	3486	3486	14512	14512	3930	3930

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . 'Close margin' and 'close' in columns (1) and (3) is defined as margin of victory less than 5%. Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level.

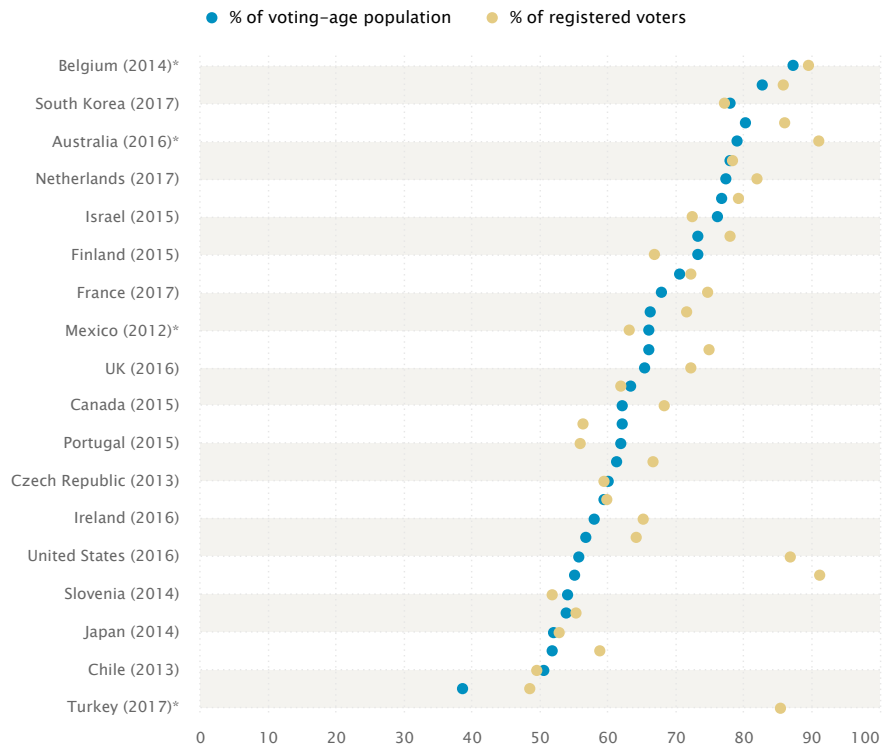
Table 7: Probability of voting for president in next election: for not close elections by income for age 22+

	low income		not low income	
	(1)	(2)	(3)	(4)
didn't vote in pres. election	-0.509*** (0.0184)	-0.487*** (0.0270)	-0.486*** (0.0107)	-0.454*** (0.0157)
voted for non-victor	0.0509** (0.0194)	-0.0287 (0.0243)	0.00482 (0.00849)	0.000239 (0.0103)
close margin	0.0322 (0.0334)		-0.0284* (0.0142)	
didn't vote $\times$ close	0.00816 (0.0396)		0.0458** (0.0179)	
voted for non-victor $\times$ close	-0.116*** (0.0298)		0.000360 (0.0199)	
margin of victory		-0.0786 (0.121)		-0.00806 (0.0503)
didn't vote $\times$ margin		-0.137 (0.111)		-0.147* (0.0766)
voted for non-victor $\times$ margin		0.380*** (0.132)		0.0322 (0.0701)
Mean DV	0.539	0.539	0.725	0.725
Number of Years	15	15	15	15
Number of States	50	50	51	51
Observations	3554	3554	17191	17191

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . 'Close margin' and 'close' in columns (1) and (3) is defined as margin of victory less than 5%. Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level. Low income is defined as those with incomes from 0 to 16 percentile, as reported by ANES.

## 8 Figures

Figure 1: Voter turnout in recent national elections



Source: Pew Research Center (2017) <http://www.pewresearch.org/fact-tank/2017/05/15/u-s-voter-turnout-trails-most-developed-countries/>

Figure 2: Percent that vote in presidential elections

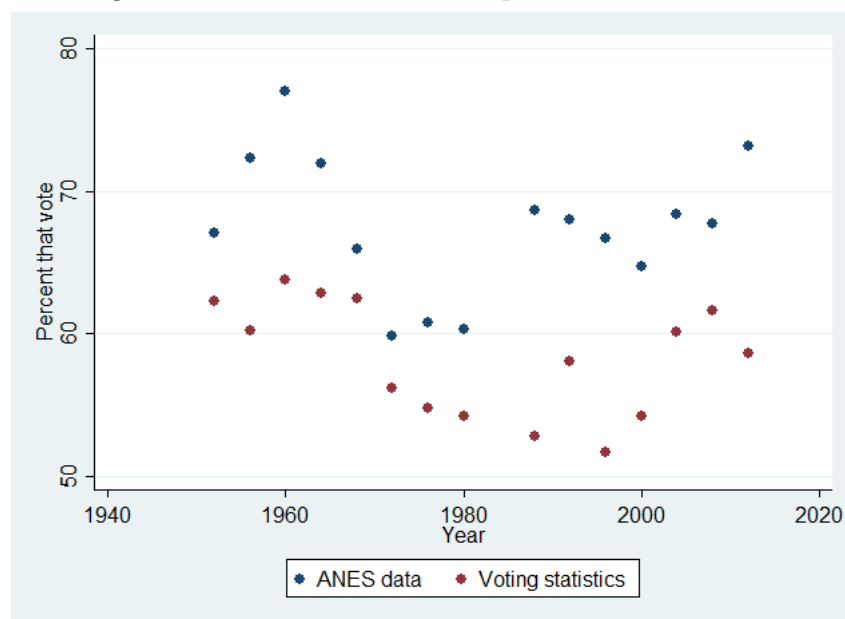


Figure 3: State voting in ANES and CPS and Competitiveness

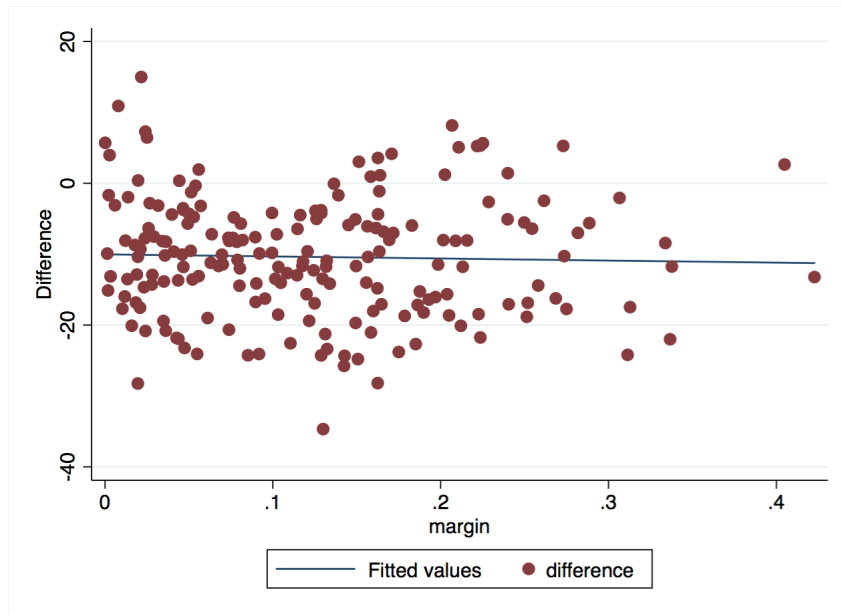
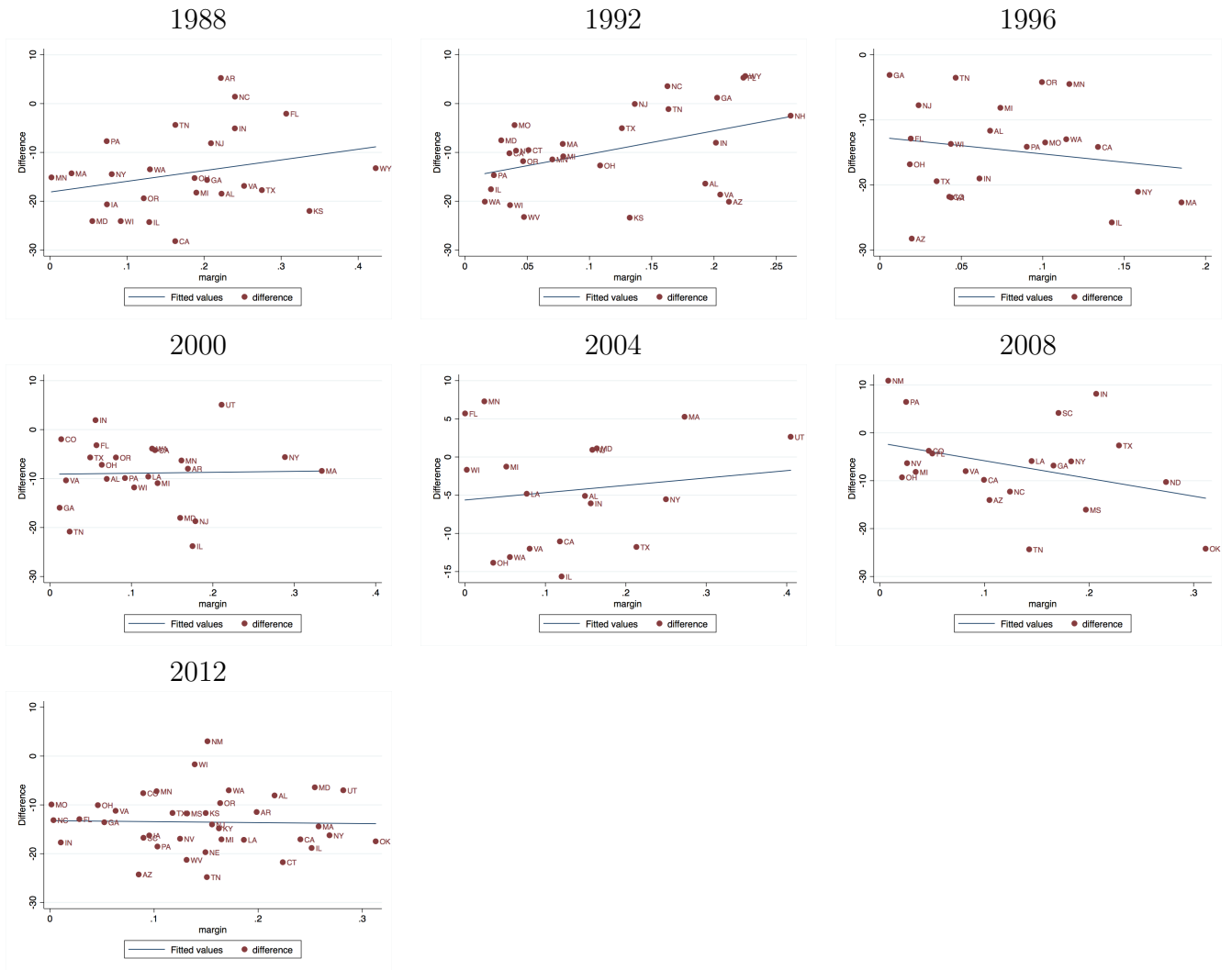


Figure 4: State voting in ANES and CPS and Competitiveness by year







## A Appendix

Table 8: Number of Close Presidential Elections

State	Number of Elections	Close margin		
		< 1%	< 5%	< 10%
AK	13	0	2	3
AL	16	0	1	3
AR	16	1	1	6
AZ	16	1	3	6
CA	16	2	5	6
CO	16	0	3	9
CT	16	0	1	7
DC	12	0	0	0
DE	16	0	5	8
FL	16	1	5	9
GA	16	1	2	4
HI	13	1	3	5
IA	16	2	4	7
ID	16	0	2	3
IL	16	2	5	7
IN	16	1	2	5
KS	16	0	0	4
KY	16	2	4	8
LA	16	0	1	5
MA	16	1	2	5
MD	16	0	4	7
ME	16	1	2	5
MI	16	0	3	9
MN	16	1	5	8
MO	16	3	8	11
MS	16	0	3	5
MT	16	0	4	8
NC	16	2	6	8
ND	16	0	0	4
NE	16	0	0	2
NH	16	0	3	8
NJ	16	1	5	6
NM	16	3	5	7
NV	16	0	7	8
NY	16	1	4	7
OH	16	2	7	9
OK	16	0	1	4
OR	16	2	5	10
PA	16	0	7	12
RI	16	0	2	3
SC	16	0	3	7
SD	16	0	4	7
TN	16	3	7	8
TX	16	0	5	6
UT	16	0	0	3
VA	16	0	3	9
VT	16	0	1	4
WA	16	0	4	9
WI	16	2	9	11
WV	16	0	3	7
WY	16	0	1	2

Table 9: Number of Consecutive Close Presidential Elections

State	Number of Consecutive Elections	Close margin		
		< 1%	< 5%	< 10%
AK	12	0	0	0
AL	15	0	0	1
AR	15	0	0	2
AZ	15	0	1	2
CA	15	0	0	0
CO	15	0	1	5
CT	15	0	0	2
DC	11	0	0	0
DE	15	0	1	2
FL	15	0	1	6
GA	15	0	1	1
HI	12	0	1	1
IA	15	1	1	2
ID	15	0	0	1
IL	15	0	0	2
IN	15	0	0	1
KS	15	0	0	0
KY	15	0	1	4
LA	15	0	0	1
MA	15	0	1	2
MD	15	0	0	3
ME	15	0	1	2
MI	15	0	0	3
MN	15	0	2	4
MO	15	1	2	6
MS	15	0	1	2
MT	15	0	1	2
NC	15	0	2	3
ND	15	0	0	0
NE	15	0	0	0
NH	15	0	1	4
NJ	15	0	0	0
NM	15	1	1	4
NV	15	0	3	3
NY	15	0	1	3
OH	15	0	2	4
OK	15	0	0	1
OR	15	0	1	5
PA	15	0	1	8
RI	15	0	0	0
SC	15	0	0	1
SD	15	0	1	3
TN	15	1	3	4
TX	15	0	1	1
UT	15	0	0	1
VA	15	0	1	5
VT	15	0	0	0
WA	15	0	0	4
WI	15	1	3	7
WV	15	0	0	2
WY	15	0	0	0

1984 is included in the table, but ANES did not ask about previous election voting history in that year.

Table 10: Probability of voting for president in next election: for not close elections by gender for age 22+

	female		male	
	< 1%	< 10%	< 1%	< 10%
didn't vote in pres. election	-0.501*** (0.0101)	-0.521*** (0.0125)	-0.485*** (0.0113)	-0.499*** (0.0136)
voted for non-victor	0.00335 (0.00821)	0.00687 (0.0119)	0.00865 (0.00961)	0.0127 (0.0125)
close margin	0.00650 (0.0278)		-0.0129 (0.0265)	
didn't vote × close	0.0325 (0.0360)		0.0595 (0.0358)	
voted for non-victor × close	-0.0299 (0.0354)		0.0222 (0.0317)	
close margin		-0.0176 (0.0122)		-0.0102 (0.0113)
didn't vote × close		0.0492** (0.0209)		0.0406** (0.0195)
voted for non-victor × close		-0.00796 (0.0198)		-0.00469 (0.0171)
Mean DV	0.668	0.668	0.711	0.711
Number of Years	15	15	15	15
Number of States	51	51	51	51
Observations	11991	11991	9937	9937

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level.

Table 11: Probability of voting for president in next election: for not close elections by gender

	female		male	
	(1)	(2)	(3)	(4)
didn't vote in pres. election	-0.494*** (0.0120)	-0.443*** (0.0177)	-0.479*** (0.0127)	-0.452*** (0.0173)
voted for non-victor	0.0118 (0.00970)	-0.0105 (0.0140)	0.00785 (0.0114)	-0.00286 (0.0150)
close margin	-0.0356** (0.0138)		-0.000161 (0.0185)	
didn't vote $\times$ close	0.0675*** (0.0188)		0.0584*** (0.0207)	
voted for non-victor $\times$ close	-0.0273 (0.0172)		0.00687 (0.0235)	
margin of victory		-0.00786 (0.0626)		-0.0815 (0.0647)
didn't vote $\times$ margin		-0.235*** (0.0759)		-0.0839 (0.105)
voted for non-victor $\times$ margin		0.108 (0.0911)		0.0911 (0.0947)
Mean DV	0.658	0.658	0.699	0.699
Number of Years	15	15	15	15
Number of States	51	51	51	51
Observations	12632	12632	10453	10453

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level.

Table 12: Probability of voting for president in next election: for not close elections by age

	22-29		30-64		65+	
	< 1%	< 10%	< 1%	< 10%	< 1%	< 10%
didn't vote in pres. election	-0.365*** (0.0244)	-0.406*** (0.0279)	-0.526*** (0.00971)	-0.528*** (0.0112)	-0.576*** (0.0159)	-0.616*** (0.0199)
voted for non-victor	0.0171 (0.0235)	0.000924 (0.0265)	-0.00147 (0.00800)	0.00599 (0.0103)	0.0245* (0.0133)	0.0234 (0.0161)
close margin	-0.00159 (0.0585)	-0.0628* (0.0333)	0.00472 (0.0203)	0.000453 (0.0116)	-0.0395 (0.0739)	-0.0323 (0.0226)
didn't vote $\times$ close	0.0859 (0.0682)	0.108*** (0.0362)	-0.00368 (0.0446)	0.00352 (0.0178)	0.0448 (0.108)	0.101*** (0.0287)
voted for non-victor $\times$ close	0.0130 (0.0907)	0.0483 (0.0352)	-0.000165 (0.0263)	-0.0157 (0.0172)	-0.0227 (0.0701)	0.00256 (0.0254)
Mean DV	0.559	0.559	0.709	0.709	0.723	0.723
Number of Years	15	15	15	15	15	15
Number of States	50	50	51	51	50	50
Observations	3486	3486	14512	14512	3930	3930

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . All columns include year and state fixed effects and have standard errors that are clustered at the state levels

Table 13: Probability of voting for president in next election: for not close elections by income for age 22+

	low income		not low income	
	< 1%	< 10%	< 1%	< 10%
didn't vote in pres. election	-0.506*** (0.0163)	-0.526*** (0.0197)	-0.477*** (0.0103)	-0.490*** (0.0128)
voted for non-victor	0.0262 (0.0183)	0.0427* (0.0217)	0.00373 (0.00681)	0.00533 (0.00904)
close margin	0.0216 (0.0609)	0.00481 (0.0290)	-0.00826 (0.0225)	-0.0164* (0.00966)
didn't vote × close	-0.0550 (0.0776)	0.0449 (0.0390)	0.0544 (0.0392)	0.0362* (0.0203)
voted for non-victor × close	-0.0626 (0.0723)	-0.0445 (0.0331)	0.00725 (0.0315)	-0.000564 (0.0142)
Mean DV	0.539	0.539	0.725	0.725
Number of Years	15	15	15	15
Number of States	50	50	51	51
Observations	3554	3554	17191	17191

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . 'Close margin' and 'close' in columns (1) and (3) is defined as margin of victory less than 5%. Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level. Low income is defined as those with incomes from 0 to 16 percentile, as reported by ANES.

Table 14: Probability of voting for president in next election: for not close elections by income

	low income		not low income	
	(1)	(2)	(3)	(4)
didn't vote in pres. election	-0.490*** (0.0202)	-0.453*** (0.0303)	-0.470*** (0.0114)	-0.436*** (0.0158)
voted for non-victor	0.0496** (0.0192)	-0.0293 (0.0251)	0.00438 (0.00837)	-0.000311 (0.00987)
close margin	0.0270 (0.0347)		-0.0263** (0.0129)	
didn't vote $\times$ close	0.0363 (0.0409)		0.0452*** (0.0162)	
voted for non-victor $\times$ close	-0.112*** (0.0287)		0.000633 (0.0192)	
margin of victory		-0.0807 (0.126)		-0.0200 (0.0489)
didn't vote $\times$ margin		-0.195 (0.125)		-0.156** (0.0727)
voted for non-victor $\times$ margin		0.384*** (0.132)		0.0335 (0.0690)
Mean DV	0.529	0.529	0.716	0.716
Number of Years	15	15	15	15
Number of States	50	50	51	51
Observations	3857	3857	17909	17909

Notes: Standard errors reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . 'Close margin' and 'close' in columns (1) and (3) is defined as margin of victory less than 5%. Victors are winners of the electoral votes within a state. All columns include year and state fixed effects and have standard errors that are clustered at the state level. Low income is defined as those with incomes from 0 to 16 percentile, as reported by ANES.

Table 15: ANES Turnout Data and Actual Turnout Data do not Differ Based on Closeness

Dependent Variable = Actual State Voter Turnout - ANES State Voter Turnout				
	(1)	(2)	(3)	(4)
Close Margin (1%)	4.140 (2.553)			
Close Margin (5%)		1.072 (0.975)		
Close Margin (10%)			0.717 (1.172)	
Margin				-1.795 (6.789)
<i>N</i>	195	195	195	195

Notes: Standard errors clustered at the state level reported in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . ‘Close Margin’ is a dummy variable in all cases equal to one if the previous state electoral contest was within the given margin of error and zero otherwise. Margin is continuous. The dependent variable is the difference between the actual state voter turnout from the CPS and ANES state voter turnout for the given state and year pair.