Using Election Forecasts to Understand the Potential Influence of Campaigns, Media, and the Law in U.S. Presidential Elections

Peter K. Enns
Cornell Center for Social Sciences

Julius Lagodny
Cornell University Department of Government

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Using Election Forecasts to Understand the Potential Influence of Campaigns, Media, and the Law in U.S. Presidential Elections

PETER K. ENNS* & JULIUS LAGODNY**

How do campaigns, media, and voting laws influence the outcome of U.S. Presidential elections? Political scientists often argue that these factors influence outcomes much less than commonly thought. To illustrate this argument, we show that we can predict the presidential vote in each state with a high degree of accuracy. Specifically, between 2004 and 2016, we correctly predict 94% of all state presidential vote outcomes. Our predictions are based on a forecasting model of the Electoral College, based primarily on each state’s approval rating of the incumbent president (using almost 90,000 survey responses from June and July of election years), current economic conditions in each state, and state votes in the previous election. We use these forecasts to help establish the upper bounds of campaign and media effects. We argue that identifying the limits of these effects is a critical step when trying to estimate their impact. We also show how our forecasts can be used to test the aggregate effects of election-related laws, such as Florida’s Amendment 4—which enfranchised hundreds of thousands of Floridians who previously could not vote due to felony convictions—

* Peter K. Enns is professor of Government at Cornell University, co-director of the Cornell Center for Social Sciences, and executive director of the Roper Center for Public Opinion Research. Professor Enns may be reached via email at peterenns@cornell.edu.

** Julius Lagodny is a Ph.D. candidate in the Department of Government at Cornell University. Mr. Lagodny may be reached via email at jsl364@cornell.edu.
and voter ID laws, whose effects are notoriously difficult to study. We have made our data publicly available to facilitate further research on these topics.

INTRODUCTION .................................................................510
I. EXISTING EVIDENCE OF LIMITED PRESIDENTIAL CAMPAIGN
   EFFECTS ........................................................................512
II. A NEW FORECAST MODEL OF STATE PRESIDENTIAL
    ELECTION OUTCOMES ..................................................518
   A. How Does Our Forecast Model Work? .......................519
   B. Forecast Model Details ...........................................523
   C. Forecast Accuracy, 2004–2016 ...............................530
III. IMPLICATIONS FOR UNDERSTANDING WHAT SWINGS THE
    VOTE: DISENFRANCHISEMENT ......................................536
   A. Our Methodology ...................................................536
   B. Estimating the Effects of Disenfranchisement and
      Voter Registration Laws on Election Outcomes ............537
CONCLUSION ......................................................................544
TABLE OF FIGURES ..........................................................546

INTRODUCTION

U.S. presidential campaigns spend billions of dollars, run thousands of television advertisements, and develop highly sophisticated social media and micro-targeting campaigns.1 Seeking any possible

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competitive edge, these campaigns carefully navigate and respond to shifting campaign finance and election laws and to the rapidly changing media and information environment. As Holly Ann Garnett and Toby S. James conclude, “Elections are entering a new digital era in which there are new opportunities and threats for the conduct and contestation of elections.” With good reason, “What Swings the Vote: The Influence of the U.S. Legal System and the Media on Presidential Elections” was the focus of the University of Miami Law Review’s 2020 Symposium.

To better understand the potential influence of campaigns, media, and the legal system, we focus on understanding the limits of these effects. Although pundits and media often portray each aspect of the campaign—the conventions, debates, speeches, and even speaking gaffes—as having massive potential influence on voters and the election outcome, we build on political science research that shows presidential campaigns typically produce limited effects on election outcomes. The influence of the media and political campaigns is smaller than one would expect despite the vast amounts of time, money, and strategy involved.

advertisements that aired in the 2016 presidential election, “Team Hilary Clinton accounted for 75 percent of them”).


6 See STIMSON, supra note 5, at 93–94.
This analysis proceeds in three steps. Part I offers an overview of the political science literature on presidential campaign effects. This literature, which shows that campaign effects are often much more muted than typically thought, offers an important foundation for understanding the potential influence, or lack thereof, of presidential campaigns. With this background, Part II presents a model we developed to forecast how each state votes in U.S. presidential elections. This model, which is based primarily on economic conditions and presidential approval ratings in each state in June and July of election years, consistently predicts the national popular vote—and Electoral College outcomes—with a high degree of accuracy. The ability to predict state level outcomes sheds important light on the potential influence of campaigns. After all, if we can predict the outcome with a high degree of accuracy, the opportunity to influence votes must be limited. Part III discusses the implications of these findings for studying campaign effects and opportunities for future research. In particular, we show how the data we use in our analysis, which we have made publicly available, can be extended to evaluate the effects of various legal constraints on elections, such as felon disenfranchisement and voter registration laws.

I. EXISTING EVIDENCE OF LIMITED PRESIDENTIAL CAMPAIGN EFFECTS

Political scientists have long noted that a few fundamental variables, such as economic conditions and presidential approval ratings, predict the final vote share of U.S. presidential elections with

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7 See id. at 94.
9 Id.
a high degree of accuracy well in advance of the election.\textsuperscript{11} If the final vote is predictable months in advance,\textsuperscript{12} it seems unlikely that the campaign has substantial influence. To see why, consider someone who takes a practice test months before the actual exam. Then, following the practice test, this person studies every day until the actual exam. If we wanted to understand the effect of studying, we would look at the difference in scores between the practice test and the actual test. If the person did much better on the actual test than the practice test, we would have evidence consistent with the hypothesis that studying had a large positive impact on the exam. By contrast, if the scores were identical, we would have evidence that studying was not effective; it did not change the outcome. If the practice exam perfectly predicts the actual exam score (because they are the same), by definition, what came between the practice exam and actual exam did not change the result.\textsuperscript{13} The same intuition applies to election forecasts.\textsuperscript{14} It is hard to imagine that a campaign influenced many voters if knowing the fundamental variables months in advance can predict what percentage of the vote the Democratic and Republican candidates will receive on Election Day.

Theoretically, it is possible that the campaign gets an equal number of Democratic voters and Republican voters to switch their positions, implying large but completely offsetting effects of campaigning. In such a situation, we would still correctly predict the outcome, but we would not grasp the underlying vote switching. However, we know from panel data where the same respondents are interviewed in different elections that this type of vote switching


\textsuperscript{12} Gelman & King, supra note 5, at 409.

\textsuperscript{13} Of course, someone could argue that the person might have forgotten information and, therefore, would have performed worse had they not studied every day between the practice and actual exam. But we are comfortable asserting that the exertion of extreme effort, whether studying every day for a final or spending vast amounts of money on a campaign, is designed to change the outcome in a positive direction and the absence of this change implies minimal effects.

\textsuperscript{14} See id.
from election to election is very rare.\(^\text{15}\) Not surprisingly, when the same respondents are interviewed during an election, switching sides within an election campaign is also rare.\(^\text{16}\)

Based on the predictability of elections, Andrew Gelman and Gary King conclude that the primary effect of campaigns is getting voters to connect their vote choice to the above mentioned fundamentals.\(^\text{17}\) They argue that the reason vote intentions in surveys (often referred to as the “horse race polls”)\(^\text{18}\) fluctuate throughout the campaign, though the election is predictable, is because early in the campaign some voters have not yet connected their vote intentions to the fundamentals.\(^\text{19}\) As Election Day approaches, more and more of the electorate bases their vote intentions on the fundamentals, leading national surveys in the final week or so of the election to correspond very closely with the actual outcome.\(^\text{20}\)


\(^\text{17}\) See Gelman & King, supra note 5, at 449; PAUL F. LAZARSFELD ET AL., *THE PEOPLE’S CHOICE: HOW THE VOTER MAKES UP HIS MIND IN A PRESIDENTIAL CAMPAIGN* 73 (2d ed. 1948) (emphasizing “activation” of latent predispositions during campaigns); see also ERIKSON & WLEZIEN, supra note 5, at 2 (referring to “crystallization of voter preferences over [a] campaign timeline.”).


\(^\text{19}\) See Gelman & King, supra note 5, at 419, 436 (analyzing more “fundamental” variables, such as partisanship and demographic variables, than those related to economic conditions and presidential approval).

\(^\text{20}\) Id. Although surveys are not always viewed by the public as accurate, the record of high-quality national surveys prior to the election is incredibly strong. Miller & Tomoko Mitamura, *Are Surveys on Trust Trustworthy*, 66 SOC. SCI. Q. 62, 62 (2003); Claudia Deane et al., *A Field Guide to Polling: Election 2020*
While it is true that the fundamentals correlate more strongly with vote intentions as the election approaches, Peter K. Enns and Brian Richman provide substantial evidence that much of this shift is not a result of campaign effects or voter learning.\textsuperscript{21} They argue that most voters, even those who are not normally attuned to politics, do not need a campaign to know how to connect fundamental considerations like economic conditions, approval of the incumbent president, their partisan identity, or their race to whether to vote for the Republican or Democratic candidate.\textsuperscript{22} Enns and Richman argue that well in advance of the election, many survey respondents simply do not treat the survey question, which asks how they would vote if the election was held today, like the actual vote choice, which is still months or weeks away.\textsuperscript{23}

To understand their logic, imagine if someone asked what restaurant you wanted to go to three months from today. Three months probably seems like a long way off, so considerations like what restaurant seems new, exciting, or even extravagant might guide your response (perhaps you just read a restaurant review for a five-star restaurant or heard a recommendation from a friend with expensive tastes). Now imagine someone asked you what restaurant you wanted to go to tonight. More fundamental considerations like cost, location, and convenience would likely influence your response. In the first scenario, when the choice was three months away, it was not that you did not know how much money you had for dinner or that convenience mattered. It is just that when a choice feels like it


\textsuperscript{22} See Enns & Richman, supra note 21, at 804–07.

\textsuperscript{23} See id. at 808, 816.
is a long way away, different considerations often come to mind. As the choice gets closer, fundamental considerations are more likely to be considered. Enns and Richman argue the same process occurs during an election campaign. Early in the campaign, some survey respondents might express their vote intention based on the most recent headline, advertisement, or social media post they saw. However, as the election gets closer, survey respondents increasingly treat the survey question about who they would vote for like the actual election choice, relying on more fundamental considerations like partisanship, presidential approval, and economic conditions. As a result, we observe a closer alignment between the fundamentals and reported vote intentions. In other words, it is proximity to the election, not learning from the campaign, that matters.

This is not to say that U.S. presidential campaigns have no influence. Candidates and campaigns can make certain issues more salient to voters by emphasizing them more during the campaign, and these efforts can be heightened by emotional appeals. In some cases, voters may be persuaded to support a different candidate, although this tends to be difficult and rare. Negative campaigning can also influence the political environment by reducing the public’s

24 See id. at 806.
25 See id. at 804, 807.
26 See id. at 805–06, 816.
27 See id. at 805–06.
28 See id. at 806, 816.
29 See id. at 815–17. This conclusion aligns with evidence that when voters learn of candidates’ policy positions, voters are more likely to adopt the positions of their preferred candidate, not update which candidate they support. See Lenz, supra note 16, at 185, 196, 206–13.
sense of “political efficacy” and “trust in government.”

Campaigns can also have positive effects on voter turnout, although there is also debate in political science about how much increased turnout would alter typical presidential elections. In other words, presidential campaigns matter but much less than often thought. Indeed, in a series of fifty-nine real-time experiments over eight months leading up to the 2016 election, Alexander Coppock, Seth J. Hill, and Lynn Vavreck found only very small average effects of political advertising on voting behavior or even candidate likability.

Of course, it is important to recognize that in a close election anything could tip the final outcome. Donald Trump’s Electoral College victory in 2016 came down to less than 80,000 votes across three states. George W. Bush’s victory in 2000 came down to just 537 votes in Florida. As Barry Richard chronicled in his 2020 Symposium Keynote Address, the law certainly mattered for the

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35 See Ryan D. Enos & Anthony Fowler, Aggregate Effects of Large-Scale Campaigns on Voter Turnout, 8 Pol. Sci. Res. & Methods 1, 15–16 (2016). However, get-out-the-vote (“GOTV”) efforts may widen turnout disparities by mobilizing those more likely to vote more than underrepresented citizens who are less likely to vote. Ryan D. Enos et al., Increasing Inequality: The Effect of GOTV Mobilization on the Composition of the Electorate, 76 J. Pol. 273, 286 (2014).
38 See Coppock et al., supra note 16, at 5.
2000 election outcome in Florida and, therefore, nationally.\textsuperscript{42} Ballot design and felon disenfranchisement also clearly influenced many more than 537 votes in Florida.\textsuperscript{43} Nevertheless, it is important to recognize that the potential influence of campaigns is much less than often thought.\textsuperscript{44} To offer further insight into understanding the potential influence, or lack thereof, of campaigns, media, and the law in U.S. presidential elections, the following section presents a statistical model to forecast the presidential vote in each state, including Washington, D.C., more than three months prior to the election. This model helps establish the upper bounds on campaign and media influence and offers a path for further understanding the extent to which particular laws influence presidential election outcomes.

II. A NEW FORECAST MODEL OF STATE PRESIDENTIAL ELECTION OUTCOMES

As noted above, political scientists often emphasize the predictability of U.S. presidential elections.\textsuperscript{45} But this research focuses primarily on the predictability of the \textit{national} popular vote.\textsuperscript{46} To better

\begin{footnotesize}
\begin{enumerate}
\item See \textit{Richard L. Hasen, The Voting Wars: From Florida 2000 to the Next Election Meltdown} 16, 28–29 (2012). Of course, given the closeness of the 2000 election, myriad other factors mattered, too; one example is Vice President Gore’s advertising strategy may have cost him his home state of Tennessee. \textit{See id.; Daron R. Shaw, The Race to 270} 149–50 (2006).
\item See \textit{Mike Cummings, Political Ads Have Little Persuasive Power, Yale News} (Sept. 2, 2020), https://news.yale.edu/2020/09/02/political-ads-have-little-persuasive-power.
\item \textit{Gelman & King, supra} note 5, at 410–11, 448–49.
\end{enumerate}
\end{footnotesize}
understand the scope and limits of potential campaign effects, we present a model we developed to forecast how each state votes in U.S. presidential elections.47 Since the Electoral College, and not the popular vote, decides who will become the next president, predicting state-level outcomes circumvents this American peculiarity.48 This way, our model also aligns more closely with strategies of political campaigns that mostly concentrate their efforts on a handful of battle or swings states instead of the whole country.49

A. How Does Our Forecast Model Work?

This forecast model includes multiple variables based on theoretical and empirical considerations and our full analysis includes data back to 1980.50 However, to illustrate the logic of our forecast, we first consider a single variable (presidential approval) from a single year.51 In Figure 1, the top panel reports each state’s presidential approval rating during June and July 2012 on the x-axis.52 Higher values correspond with more support for the incumbent president. Presidential approval ranges from -20 to 30 because, as we explain in the next Part, we adjust the standard approval rating so values below zero imply an incumbent disadvantage and values above zero

48 SHAW, supra note 43, at 125.
50 See Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.
51 See infra Figure 1.
52 Id.
imply an incumbent advantage. On the y-axis, we graph the percentage of the two-party Democratic vote share in 2012 for each state. In 2012, the Democratic candidate, Barack Obama, was the incumbent President. We see that Utah had the lowest approval rating of and the lowest vote support for President Obama. Washington, D.C., by contrast, had the highest approval rating and the highest percentage of votes for President Obama. The other states (not labeled) are scattered around the linear regression line, which represents the best fitting line to the data (e.g., the line that minimizes the distance between the dots and a linear line through the dots). Furthermore, the slope of the line is positive, relatively steep, and the values of the states are very close to the best fitting line. These patterns indicate a strong and positive relationship between presidential approval and vote choice in 2012.

53 See Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-2.
54 Infra Figure 1. The two-party Democratic vote share is estimated as follows: % Democrats / (% Democrats + % Republicans) in each state.
56 See Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1, for a discussion of state-level approval data. For other state approval data, see Jeffrey M. Jones, Thirteen States and D.C. Give Obama Majority Approval, GALLUP (Aug. 1, 2012) [hereinafter Jones, Thirteen States and D.C. Give Obama Majority Approval], https://news.gallup.com/poll/156389/thirteen-states-give-obama-majority-approval.aspx (“His highest ratings by state were in Hawaii (63%) and Rhode Island (58%), in addition to the 83% approval from District of Columbia residents. In 16 states, his approval rating averaged below 40%, with residents of Utah, Wyoming, and Alaska least approving.”); Live Election Results: Utah, 270 TO WIN, https://www.270towin.com/states/Utah (last visited Dec. 17, 2020); and Figure 1.
57 See Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1 for a discussion of state-level approval data. For other state approval data, see Jones, Thirteen States and D.C. Give Obama Majority Approval, supra note 56 and infra Figure 1.
58 See infra Figure 1.
59 Id.
This Figure uses the relationship between presidential approval and state vote in 2012 to forecast Wisconsin’s 2016 vote based on presidential approval.

Figure 1: A Simplified Illustration of Our Forecast Approach.
Still focusing on the top panel, we highlight Wisconsin, which had an adjusted approval rating of 1.2 (shown on the x-axis), meaning just above what we would consider no incumbent advantage (when adjusted, approval = 0).61 On the y-axis, we see that in 2012, President Obama received 53.5% of the two-party vote in Wisconsin.62

Now, focusing on the bottom panel (which repeats the regression line and the dot for Wisconsin from the top panel), we use Wisconsin to illustrate how we can use this information to forecast the expected Democratic vote share in 2016 for Secretary Hillary Clinton.63 In 2016, the adjusted presidential approval rating for President Obama from June and July 2016 had dropped to -3.2 (vertical dashed line).64 The diagonal line is identical to the top panel and still represents the relationship between presidential approval and vote choice in 2012 (e.g., the previous election).65 We can now use the information about the relationship between presidential approval and vote choice in 2012 and the information about presidential approval in June and July 2016 to predict the November 2016 election outcome. Note, this prediction does not use any information after July, more than three months before the election.

First, we need to consider the presidential approval rating in June and July 2016, which is lower (e.g., the vertical dashed line is to the left of the Wisconsin dot) than in 2012.66 This suggests we should expect Secretary Clinton to get a lower vote share than President Obama did in 2012. To determine how much, we follow the

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61 See supra Figure 1.
62 See id.
63 See id.
64 See id.
65 See id.
arrow down to the regression line. The point at which Wisconsin’s 2016 approval rating\(^{67}\) (-3.2, vertical dashed line) intersects with the regression line from 2012 represents our 2016 prediction for Wisconsin.\(^ {68}\) In this simple model, 100 days before the election, we would predict that Secretary Clinton would receive 45.4% of the two-party vote; she ended up receiving 49.6%.\(^ {69}\) Although this simple model correctly predicts that Secretary Clinton would lose Wisconsin,\(^ {70}\) our prediction is a notable 4% off. Thus, our actual models include additional relevant variables and additional years of prior data.\(^ {71}\) However, the logic of the forecast model remains the same: when including multiple variables, we estimate the relationship between these variables and vote outcomes in each state in prior years.\(^ {72}\) We then use these estimated relationships (represented by the regression line in Figure 1) and actual variable values through July of the next election to predict each state’s presidential vote.\(^ {73}\) We detail our model’s variables below.

**B. Forecast Model Details**

Although national election forecasts are the most common, scholars have developed important forecast models of state vote

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\(^{68}\) See supra Figure 1.


\(^{70}\) Based on two-party vote share (% Clinton / (%Clinton+%Trump). *Id.*

\(^{71}\) See *id.*

\(^{72}\) See Enns & Lagodny, *Supplementary Appendix,* supra note 47, at Online A-3–A-4.

\(^{73}\) See Enns & Lagodny, *Forecasting the 2020 Electoral College Winner,* supra note 8, at 1; supra Figure 1.

\(^{73}\) Enns & Lagodny, *Supplementary Appendix,* supra note 47, at Online A-4–A-5.
outcomes. Our approach differs from existing approaches in three important ways. First, in contrast to previous state-level election forecasts, we measure approval of the incumbent president at the state level. Prior forecasts, even those forecasting state-level outcomes, have focused on national-level approval ratings. Second, we use the Federal Reserve Bank of Philadelphia’s monthly index of coincident economic indicators to measure economic conditions in each state. This index is advantageous in our forecast model because it combines multiple economic measures and, therefore, incorporates multiple aspects of the economy. 

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75 Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-2; Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1; see, e.g., Gelman & King, supra note 5, at 419; Forecasting the US Elections, supra note 46; How the Economist Presidential Forecast Works, supra note 46.


78 Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-2–A-3; Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.

79 State Coincident Indexes, supra note 77; see Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.
two measures leads to a much more parsimonious model, which is our third advantage. Where past state-level forecast models range between thirteen and nineteen variables, our model predicts past elections as well or better with just nine variables. The parsimony of our model highlights how just a few key variables can predict the election outcome and avoids overfitting our model, which can make predictions worse.

Another notable feature of our forecast is that we make it more than three months prior to the election, using economic data available through June of election year and presidential approval data available through June and July of election year. Thus, our forecasts are made around the time of or before the Republican and Democratic nomination conventions, prior to the presidential and vice-presidential debates, and before the onset of the most salient campaign activities and media coverage. This timing implies that if we are able to make accurate predictions, the influence of these subsequent activities must be limited, or at least mostly offsetting,
since by definition, our model does not take them into account and only looks at the underlying fundamentals.\(^87\) If campaign activities, media, and social media were influencing votes and the election outcome, we would not be able to predict each state’s vote accurately.

As indicated above, while most political science election forecasts include presidential approval,\(^88\) a key contribution of our approach is estimating the percent approving of the president in each state.\(^89\) Building on our earlier work,\(^90\) we use a statistical technique called multi-level regression with poststratification (“MRP”) to estimate state-level public opinion from national surveys.\(^91\)

MRP is a three-step approach that involves estimating a multilevel model to identify the relationship between demographic categories and the probability of survey response (in this case indicating approval of the president’s handling of the job of president), using these estimates to predict the probability of approval for each demographic-geographic [category] (e.g., African American females, age 30-44, with some college education, in Texas [or White males, age 65+, with no high school degree in New York]),

\(^{87}\) See supra Part I; Enns & Lagodny, *Forecasting the 2020 Electoral College Winner*, supra note 8, at 1.

\(^{88}\) Enns & Lagodny, *Forecasting the 2020 Electoral College Winner*, supra note 8, at 1–2; Enns & Lagodny, *Supplementary Appendix*, supra note 47, at Online A-2.

\(^{89}\) Enns & Lagodny, *Forecasting the 2020 Electoral College Winner*, supra note 8, at 1.


and then using census data to poststratify (i.e., weight) the responses to match actual state population values. MRP has repeatedly been shown to recover valid state-level measures of public opinion from national surveys.92

Our MRP estimates of state presidential approval use seventy surveys with almost 90,000 respondents from June and July of each election year.93 We follow past research for national-level approval and “subtract a constant [from this value] so that when our approval variable equals zero, it is roughly equivalent to having no incumbent advantage” after we estimate the percentage of voters in each state who approve of the president.94 In a second step, we multiply the approval rating by -1 when the incumbent is a Republican because our outcome of interest is Democratic vote share.95

Because presidential election outcomes also reflect economic conditions,96 we measure each state’s economic conditions with the Federal Reserve Bank of Philadelphia’s monthly index of coincident economic indicators.97 These data begin in January 1979, so 1980 is the first election included in the analysis.98 This index uses four separate economic components, “nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate . . . , and wage and salary disbursements,” to measure current economic


93 We accessed the survey data from the Roper Center for Public Opinion Research at Cornell University (with one survey from Gallup Analytics), as explained in Enns & Lagodny, *Forecasting the 2020 Electoral College Winner*, *supra* note 8, at 1; Enns & Lagodny, *Supplementary Appendix*, supra note 47, at Online A-2–A-4, Online A-10–A-17.


95 See Hummel & Rothschild, *supra* note 74, at 126.

96 *Id.* at 124.

97 Enns & Lagodny, *Forecasting the 2020 Electoral College Winner*, *supra* note 8, at 1; see *State Coincident Indexes*, *supra* note 77.

conditions in each state. We calculate the cumulative percentage change in coincident indicators through June of election year, weighting months closer to the election more heavily.

The model also includes each state’s past presidential vote, measured as the deviation from the national vote in the past election, home state of the presidential candidate, the home state of the presidential candidate in the previous election (to account for the return to typical voting levels in that state in the subsequent election), and the vice presidential candidate’s home state. The forecast model also controls for the percentage of the vote in each state that went to influential third-party candidates in the previous election and a binary indicator for the formerly Confederate states, capturing their Republican lean during the analysis period.

Figure 2 presents the model including all data from 1980 through 2016. Values greater than zero mean that the estimated relationship between the variable and the percentage Democratic vote is positive. Negative numbers imply a negative relationship. All variables show the theoretically expected direction. The horizontal lines around the point estimates represent the 95% confidence interval. This is a measure of uncertainty. None of the 95%
confidence intervals overlap zero, indicating that all variables in the model are statistically significant.\textsuperscript{110}

All variables have been rescaled to range from 0 to 1, so the coefficients reported in Figure 2 are directly comparable.\textsuperscript{111} Not surprisingly, the percentage of the two-party vote that the Democratic candidate received in a state in the previous presidential election is the biggest predictor of that state’s vote share in the current election.\textsuperscript{112} This relationship indicates that voting outcomes in states tend not to vary too much from election-to-election. State presidential approval and state economic conditions show the next largest relationships.\textsuperscript{113} Substantively, these relationships suggest that if a state went from the lowest to the highest approval rating, we would expect about a 22\% shift in Democratic vote share (+/- about 2.5\%). The magnitude for a similar shift in economic conditions is about the same, but the uncertainty around this estimated relationship is much greater. Model fit is excellent, with about 90\% of the variance in the dependent variable explained by the model.\textsuperscript{114}

\begin{footnotesize}
\begin{enumerate}
\item See id.\textsuperscript{110}
\item See id.\textsuperscript{111}
\item See id.; Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1–2.\textsuperscript{112}
\item See infra Figure 2.\textsuperscript{113}
\item Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.\textsuperscript{114}
\end{enumerate}
\end{footnotesize}
Figure 2: Estimated Relationship (and 95% Confidence Intervals) Between Forecast Model Variables and Percent Democratic Vote in Each State, 1980–2016.

C. Forecast Accuracy, 2004–2016

To generate our forecasts, we first estimate the relationship between the above variables and the percent of votes for the Democratic candidate (out of the votes received by each of the two major parties) in each state in prior elections. As described above, we then combine information from these relationships with data through July of election year to forecast the vote in each state. Our data begin in 1980, which is when the first election for which the

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115 *Id.* at 1–2. Most election forecasts focus on two-party vote share because the winner of the two-party vote is what ultimately matters in a majoritarian system, and this avoids the confounding effect of third parties. See *HPR 2020 Presidential Election Forecast*, HARV. POL. REV. (Nov. 2, 2020), https://harvardpolitics.com/hpr-2020-presidential-election-forecast/. The decision to focus on Democratic vote share is arbitrary; the Republican vote share would produce identical conclusions.

state-level index of coincident indicators data are available. Thus, our 2004 forecast was based on the model from 1980 through 2000 and data through July 2004. Our 2008 forecast was based on a model using data from 1980 through 2004 and data through July 2008. Using these model estimates that are based on previous elections and information on model variables available through July of election year, we forecast the election. Because all information is from before the election, we refer to these as “before-the-fact” forecasts.

In this section, we discuss our forecasts from 2004 through 2016. While our forecast model does well in all years, we are particularly interested in the four most recent presidential elections because they include the elections that would be most influenced by social media campaigns and the new digital era. These years also ensure we have enough year-state data points from prior elections to make reliable and stable forecasts, and they allow us to compare our forecast with other prominent forecasts of state-level presidential vote outcomes.

Figure 3 presents our before-the-fact forecast for each state (and Washington, D.C.) for each of these elections (y-axis) along with

117 Id. These data are first available in January 1979. Id.; Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-3. Because we use a weighted cumulative average, having only 6 quarters of data for 1980 (instead of 14) does not pose a problem (average for 1980 is based on 6 quarters instead of 14). Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-3 (discussing full details on this economic measure).

118 Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-2, Online A-10–A-15.

119 Id.

120 Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.

121 Id.

122 Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-4. See Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1 (discussing earlier forecasts from our model).

123 See Garnett & James, supra note 3, at 112.

124 Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-7–A-8 (listing relevant comparison data); see Berry & Bickers, supra note 74, at 672 tbl.3; Hummel & Rothschild, supra note 74, at 136; Forecasting the 2012 US Presidential Election: Lessons from a State-by-State Political Economy Model, supra note 74, at 666 tbl.3; State-Level Forecasts for the 2016 US Presidential Elections: Political Economy Model Predicts Hillary Clinton Victory, supra note 74, at 683 tbl.2; Klarner, supra note 74, at 660 tbl.4.
the actual percentage of the two-party vote the candidate received in each state in each of these elections (x-axis). If we perfectly predicted each state’s vote share, all dots would align on top of the gray forty-five-degree diagonal line. While perfect predictions are, of course, implausible, the predictions follow the line quite closely indicating a very high degree of accuracy. We predict the winner correctly in 94% of states during this period.

Figure 3: Before-the-fact Forecasts and Actual Vote Share, 2004–2016.

To get a more concrete sense of the accuracy of our forecasts, Figure 4 compares our forecasts with other prominent forecasts of

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125 See infra Figure 3.
126 Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.
U.S. state presidential votes. The left side of the figure compares the absolute mean error across states for each forecast of the 2012 election. Our average error was the lowest across models and just over 2% in 2012. The bottom panel compares our 2016 before-the-fact forecast with that of Bruno Jerôme and Véronique Jerôme-Speziari (the other scholars did not report 2016 state forecasts). Again, our model does quite well in a comparative sense.

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127 Infra Figure 4; Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-4, Online A-7; see Hummel & Rothschild, supra note 74, at 133–34; Forecasting the 2012 US Presidential Election: Lessons from a State-by-State Political Economy Model, supra note 74, at 665–66 tbls.2–3; State-Level Forecasts for the 2016 US Presidential Elections: Political Economy Model Predicts Hillary Clinton Victory, supra note 74, at 682–85; Klarner, supra note 74, at 660–61 tbl.4; Berry & Bickers, supra note 74, at 673 tbl.3.

128 Supra Figure 3.

129 See Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 3 tbl.2.

130 Supra Figure 3; see Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1; Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-7–A-8; State-Level Forecasts for the 2016 US Presidential Elections: Political Economy Model Predicts Hillary Clinton Victory, supra note 74, at 682–83.

131 See Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1, 3; Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-7–A-8; State-Level Forecasts for the 2016 US Presidential Elections: Political Economy Model Predicts Hillary Clinton Victory, supra note 74, at 682–83.
Figure 4: \footnote{Values closer to the left indicate less error.} Absolute Mean Error of Our Model and Other State-Level Forecast Models in 2012 (top panel) and 2016 (bottom panel). \footnote{Enns & Lagodny, \textit{Forecasting the 2020 Electoral College Winner}, supra note 8, at 3 tbl.2.}
Remember that our model only uses information available about 100 days prior to the election.134 The most important variables in the model are the fundamentals (economic conditions and presidential approval) and how the state voted in the previous election.135 With these, and a few other variables (candidates’ state of residence, whether the state was part of the former Confederacy, and the percent of the vote previously received in the state by prominent third-party candidates), we are able to forecast each state’s vote with an average error of about +/- 2% in 2012 and about +/- 3% in 2016.136 In a close election, 2 or 3% can obviously swing the outcome.137 But recall that we correctly predict the winner in 94% of the states in our analysis.138 Further, this appears to be the upper bound of potential influence. It is possible that if we added additional variables or data to our forecast model, we could improve the forecasts even more.

Candidates, political parties, and organized interest groups spend hundreds of millions of dollars and vast amounts of time and energy on campaigns.139 Yet, the outcome of the election in each state—both in terms of who wins and the percent of votes received—ends about where we would have expected before most of this took place. This continued to be the case in 2020. Based on data from 104 days before the 2020 election, our model correctly predicted every state outcome, except for one.140

134 Id. at 1.
135 Id.
136 See Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-3–A-4.
138 Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.
140 Peter K. Enns & Julius Lagodny, We Predicted the States Biden Would Win 100 Days Before the Election, WASH. POST (Nov. 12, 2020, 7:00 a.m. EST),
III. IMPLICATIONS FOR UNDERSTANDING WHAT SWINGS THE VOTE: DISENFRANCHISEMENT

A. Our Methodology

Popular media stories often imply that a candidate’s rhetorical missteps or behavioral subtleties like “wishful thinking” or “complacency” can swing the election outcome. However, if we truly want to understand what swings the vote, we must understand how much the vote can actually swing. We have argued that the potential for political campaigns, candidate debates, and traditional and new media to influence U.S. presidential elections is more limited than often thought. Our argument builds on the longstanding view in political science that national presidential election outcomes can be predicted with a high degree of accuracy based on a few fundamental variables, such as economic conditions and approval of incumbent presidents.

We extended this literature by presenting our state-level forecasting model to predict the Electoral College using only data available in June and July of the election year. Our mean error in 2012 is about 2%, and in 2016, it was less than 3%. From 2004 to 2016, we accurately predict the winner of 94% of all states, and our forecast was even more accurate in 2020. The main implication of these findings is that campaigning and media attention seem to contribute surprisingly little to the overall outcome of elections since very little variation is “left” to be explained. Of course, the


143 See supra Part I.

144 See Hummel & Rothschild, supra note 74, at 123-24; Enns & Richman, supra note 21, at 815–17; Gelman & King, supra note 5, at 419, 436.

145 Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.

146 Id. at 3 tbl.2.


148 See supra Part I; see, e.g., STIMSON, supra note 5, at 93–95; ERIKSON & WLEZIEN, supra note 5, at 7.
millions of dollars spent on the campaign trail, vast social media campaigns, and micro-targeting matter some; however, we must remember that the fundamentals matter most, and there is relatively little vote shifting that results from the campaign.

In addition to helping understand the bounds or limits of campaign effects, our forecast approach also offers a potential path for understanding how states’ policies and the law influence presidential elections. Specifically, we propose using the variation in the accuracy of forecasts to evaluate the effect of state laws.

B. Estimating the Effects of Disenfranchisement and Voter Registration Laws on Election Outcomes

Almost six million individuals in the United States are disenfranchised because they have been convicted of a felony. These disenfranchisement laws vary dramatically, however, both across states and over time. Vermont and Maine do not limit voting in any way for those convicted of a crime. There, everyone has the right to vote, even those currently in prison. Kentucky and Virginia law, by contrast, permanently disenfranchise anyone with a felony conviction. Alabama, Arizona, Florida, Mississippi,
Tennessee, and Wyoming are slightly less strict, having eliminated voting rights for some felony convictions.\(^{156}\) Election forecasts might help explain how these laws influence election outcomes.

Our state forecasts are generally quite accurate,\(^ {157}\) but these forecasts do differ from the actual outcomes, and a handful of states differ by a fair amount (e.g., more than 5%).\(^ {158}\) While numerous factors account for these forecast errors, prohibiting those who have been released from prison from voting may be an important potential factor. Recall that presidential approval ratings in each state are one of the most important predictors in our forecast model.\(^ {159}\) These approval estimates come from nearly 90,000 randomly selected adults, reweighted to represent the demographic composition within each state.\(^ {160}\) Thus, presidential approval corresponds to the entire (non-institutionalized) adult population of each state, even though some states prohibit individuals from voting because of past felony convictions—even after they have served time in prison.\(^ {161}\) As a result of this mismatch, we might expect larger forecast errors in states that have disenfranchised a greater proportion of the population.\(^ {162}\)

\(^{156}\) See Felony Disenfranchisement Laws (Map), supra note 151.

\(^{157}\) See Felony Disenfranchisement Laws (Map), supra note 151.

\(^{158}\) Between 2004 and 2016, just twenty-three states (or 11% of all state forecasts) have a forecast error greater than 5% with the highest forecast error being Arkansas, just under 11% in 2008.


\(^{160}\) Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.


\(^{162}\) See Felon Voting Rights, supra note 161.
who tend to lean strongly Democratic, we might expect to over-predict Democratic support in these states because our presidential approval ratings include these individuals, who cannot vote. Accordingly, vote outcomes would not mirror projected Democratic support because of disenfranchisement laws.

The negative relationship between our southern state variable and Democratic vote share in Figure 2 may provide preliminary support for this hypothesis. We code the formerly Confederate states as “Southern,” which are among the most restrictive in terms of disenfranchisement. It may be that part of the reason our model over-estimates Democratic vote share in these states (as indicated by the negative relationship on this variable) is that those who are most likely to be disenfranchised by the criminal legal system are most likely to support Democratic candidates. To further test this hypothesis, future research might add a variable to the forecast model to control for the portion of the state population that is ineligible to vote due to disenfranchisement laws. A decrease in forecast error when this variable is included in the model would provide evidence

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164 See Felony Disenfranchisement Laws (Map), supra note 151.

165 See supra Figure 2.

166 See Felon Voting Rights, supra note 161. Specifically, our Southern variable includes Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia. See id.; Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-4. All these states prohibit voting until after parole ends, which is considered part of the sentence. Felon Voting Rights, supra note 161; see also State Elections Legislation Database, NAT’L CONF. STATE LEGISLATURES (Oct. 5, 2020), https://www.ncsl.org/research/elections-and-campaigns/elections-legislation-database.aspx (provides an up-to-date database of election laws in fifty states).

of how disenfranchising those convicted of felonies influences presidential election outcomes.

Recent changes in state law and policy offer another analytic approach. For example, in November 2018, Floridians voted to restore voting rights of those convicted of felonies (except for murder or sexual offenses) after they completed all terms of their sentences, including parole or probation.168 Initially, up to 1.4 million Floridians were expected to gain the right to vote from Amendment 4.169 However, the number able to vote in 2020 was closer to 800,000 because Florida Governor Ron DeSantis and the Republican-controlled legislature passed legislation to require that “all court-imposed fees, restitution and other financial obligations” be paid before those who regained their right to vote through Amendment 4 can register to vote.170

Although the exact number of new Floridians eligible to vote is less than originally thought after Amendment 4 passed, the number is still substantial.171 Most scholars argue that Florida’s permanent disenfranchisement of those who have committed a felony has been a pivotal factor in past elections,172 but there is some debate on that

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171 Id.
Our forecast model offers a direct method of estimating the effects of Amendment 4. Specifically, since those with felony convictions who have been released from prison have always been eligible to participate in the surveys that estimate Floridians’ presidential approval, we would expect our forecast in Florida to become more accurate as more of these individuals become eligible to vote. Of course, there are other sources of forecast error that also vary from year-to-year, such as uncertainty around economic conditions (recall that state economic conditions are also in our forecast model). However, all else equal, less forecast error in 2020 would be consistent with evidence of Amendment 4 influencing Florida’s presidential vote.

Similar analyses could be done in other states that have restored voting rights. For example, as noted above, while Virginia law still permanently prohibits those with a felony conviction from ever voting, Governors Terry McAuliffe and Ralph Northam have restored approximately 200,000 voters through executive action. Shifts in other laws related to voting, such as voter ID laws, whose effects are notoriously difficult to study, can also be studied by comparing the size of forecast errors over time. If changes in voter

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174 See Enns & Lagodny, Supplementary Appendix, supra note 47, at Online A-2–A-4 (discussing variables within model).
175 Id.
178 Margaret Barthel, Nearly 200,000 Formerly Incarcerated Virginians Have Their Voting Rights Back. Will They Use Them?, WAMU88.5 (Nov. 5, 2019), https://wamu.org/story/19/11/05/nearly-200000-formerly-incarcerated-virginians-have-their-voting-rights-back-will-they-use-them/.
ID laws have a disproportionate effect on turnout, we would expect our forecast errors to increase after the implementation of such a law, as certain groups are less likely to turn out in the subsequent elections, adding some bias to forecasts in those states.180 Evaluating forecast errors across states and time allows a direct test of the aggregate effects of state laws that affect who votes.181 To facilitate these types of analyses, we have made all our forecast data publicly available.182 When scholars conduct these types of analyses, several factors must be kept in mind. First, the proposed research design to use forecasts can only identify aggregate effects: If re-enfranchising citizens or increased voter restrictions push the election outcome in one direction, but another factor pushes the vote in the opposite direction, the aggregate result will be offsetting and will appear like no effect—even though the effect was real.183 Second, the effects of these laws could differ from election to election, which would complicate the proposed analysis.184 For example, the effects might differ depending on whether the election outcome was expected to be close.185 Third, scholars must remember that many unobserved factors influence forecast error.186 Thus, we propose that researchers evaluate whether a change in election-related law led to a vote outcome beyond what we would have expected based on the

182 Enns & Lagodny, Replication Data, supra note 10.
185 See id.
186 See Marc Meredith & Neil Malhotra, Convenience Voting Can Affect Election Outcomes, 10 ELECTION L.J. 227, 228 (2011); Johannas Tang Kristensen, Factor-Based Forecasting in the Presence of Outliers: Are Factors Better Selected and Estimated by the Median Than by the Mean?, 18 STUD. NONLINEAR & ECONOMETRICS 309, 310, 330 (demonstrating that "outliers" are important to account for in factor-based forecasting).
distribution of potential forecast outcomes in that particular state.\textsuperscript{187} That is, researchers should seek to identify whether a shift in a state’s law corresponds with a statistically significant shift in forecast error. States that did not have an election-related law change can be used as a placebo analysis because we would expect no corresponding divergence between forecasts and outcomes in states that did not have changes in election-related laws.\textsuperscript{188}

Importantly, even if future works find limited or no effects on election outcomes, there are still numerous reasons to challenge laws that disenfranchise citizens or limit voter turnout. First, as noted above, effects may be real but offset by other factors, or the effects may be moderated by the election context, such as how close the outcome is expected to be.\textsuperscript{189} Second, our proposed analysis focuses on U.S. presidential elections. It is possible, perhaps even likely, that effects are more pronounced in state-level and local elections. Third, even if election outcomes remain the same, there are legal and moral considerations for increasing access to vote.\textsuperscript{190} Finally, evidence suggests that re-enfranchising those who have been convicted of a felony carries social benefits, such as reduced recidivism and positive economic outcomes.\textsuperscript{191} It is important to understand how election-related laws influence election outcomes, but

\textsuperscript{187} See Enns & Lagodny, Forecasting the 2020 Electoral College Winner, supra note 8, at 1.

\textsuperscript{188} See State Felon Voting Laws, supra note 181.

\textsuperscript{189} See What Affects Voter Turnout Rates, supra note 184.


this is not the only criterion that should be used to evaluate these laws.

CONCLUSION

We have extended past work on the predictability of U.S. presidential elections by presenting a forecast model of each state’s presidential vote. The accuracy of these “before-the-fact” forecasts offer several insights into U.S. elections. First, the accuracy of forecasts helps establish an upper bound for the potential of campaigns, traditional media, and even social media to influence election outcomes. Our average state forecast error was between 2 and 3%, suggesting that the potential to swing the vote is quite limited. Our 2020 forecast correctly predicted the winner in all but one state. That being said, recent U.S. presidential elections have seen a few thousand votes in specific states (as in 2016) or even a few hundred votes in one state (as in 2000) determine the final outcome. In these types of elections, almost anything can tip the final outcome.

However, even when elections are this close, we have shown how forecasts offer an additional analytic tool for estimating the effects of election-related laws, such as legal or policy changes relating to enfranchising those who have been convicted of felonies or laws increasing restrictions on voter ID requirements. While

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193 See id. at 1.
194 See supra Part I.
195 See Enns & Lagodny, *Forecasting the 2020 Electoral College Winner*, supra note 8, at 3 tbl.2.
196 See Enns & Lagodny, supra note 140.
198 See Catanese, supra note 197; November 7, 2000 General Election Official Results: President of the United States, supra note 197.
199 See supra Part III.A.
estimating these effects are notoriously difficult, we believe forecasts offer an additional analytic strategy. Thus, we have made our data and replication code publicly available to support these efforts.\textsuperscript{200}

\textsuperscript{200} Enns & Lagodny, \textit{Replication Data}, supra note 10.
TABLE OF FIGURES

Figure 1: A Simplified Illustration of Our Forecast Approach...521
Figure 2: Estimated Relationship (and 95% Confidence Intervals) Between Forecast Model Variables and Percent Democratic Vote in Each State, 1980–2016 .................................530
Figure 3: Before-the-fact Forecasts and Actual Vote Share, 2004–2016.............................................................................532
Figure 4: Absolute Mean Error of Our Model and Other State-Level Forecast Models in 2012 (top panel) and 2016 (bottom panel)..........................................................534