

US Presidential Election Forecasting

Introduction

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The 2012 United States presidential contest ushered in a revolution in election forecasting. While serious efforts to forecast American elections have been around for more than 30 years, suddenly things have changed. Competing news agencies and election prediction websites proliferated to satisfy the public's appetite for forecasts during the campaign. And in terms of forecasting approaches, a new generation of dynamic modeling has emerged.

The elevated profile of election forecasting offers us the opportunity to consider what this means for the credibility, theory, and ultimately the future of election forecasting. Early election prediction models were met with the criticism that such forecasts were simply fun and games, not "real" political science, although these models were based on established election theory, public opinion polling techniques, and econometric estimation (Fair 1978; Lewis-Beck and Rice 1982, 1984; Rosenstone 1983; Sigelman 1979). Since the publication of these seminal works, model modifications have put our established election theories to the test. Through this process, we have learned much.¹ With these advances, and the increased demand for forecasts from campaigns and news consumers, election forecasting finally is gaining the respect that it deserves.

In this symposium, we offer 16 articles that tackle the task of election prediction. These pieces, written by leaders in the fields of election forecasting and commentary, are accessible presentations that examine a particular method or problem. The approaches to forecasting represented here can be grouped into four types: Structuralists, Aggregators, Synthesizers, and Judges. Next, we look at these forecasting types in practice. Then, we explore advances and obstacles in forecasting theory, and end with how that bears on election theory.

APPROACHES

The four forecasting types drawn on here can be distinguished by their uses of theory, data, time, and inference. Structuralists

(e.g., Abramowitz, Campbell, Lewis-Beck and Stegmaier, Norpoth) estimate, via standard regression techniques, single-equation explanatory voting models at the national level of analysis. Commonly, these models begin with a core political economy explanation, something like $\text{vote} = f(\text{presidential popularity, economic growth})$. Generally these models offer a unique, final preelection forecast. Aggregators (e.g., Berg and Rietz, Blumenthal, Jackman, Traugott) examine vote intention directly (or indirectly) through national opinion data. A leading example, that of *Real Clear Politics*, summarizes the preferences from likely voters, over multiple polls. While these poll results are intended by the polling houses as snapshots of opinion at the moment, they are frequently used by election watchers to aid in election prediction, as Blumenthal discusses. Jackman's model-based poll aggregation approach exemplifies this innovation.² Taking a different slant from the polls themselves, the *Iowa Electronic Markets* summarize the election predictions of market traders. These Aggregators offer repeated forecasts during the campaign. Both of these approaches—Structuralist or Aggregator—base their inferences on quantitative methods.

Synthesizers combine properties of Structuralists and Aggregators. That is, they begin with an explanation in political economy form, and embed aggregated and updated polling preferences. The data, analyzed either at the national level (e.g., Erikson and Wlezien) or the state level (e.g., Linzer), are subjected to rigorous quantitative modeling. These models bring together election theory and the powers of aggregation and dynamic updating. A similar approach was widely followed in the run-up to the 2012 presidential election in the media examples from Nate Silver at the *New York Times*.

The foregoing forecasting approaches are distilled by thoughtful campaign observers (e.g., Cook and Wasserman, Rothenberg), who effectively act as Judges. This judging does not necessarily remain inside a positivist quantitative framework. These experts go further, weighing the sometimes conflicting claims of the polls, models, and markets, putting in their own admittedly qualitative assessment of the horse-race and following their own rules of thumb. In this way, they promise added value like the local weather forecasters who use their expertise of local conditions and patterns to adjust their forecasts against those of the Numerical Weather Prediction models (Novak et al. 2011).

ELECTION FORECASTING THEORY: ADVANCES AND OBSTACLES

The newest election forecasting models, exemplified by Linzer's work, look more like theoretically and technically sophisticated physical science forecasting models, such as those used in meteorology (Lewis-Beck and Stegmaier). They are based on a political economy theory of election outcomes, a theory tested against massive amounts of geographically appropriate observations (i.e., on the states), with these data and their predictions updated until the election occurs. In the 2012 presidential contest, such models correctly forecasted the Electoral College winner in all but one or two states.

How should these models, and others, be evaluated as forecasting instruments? In the literature, we earlier offered the following evaluation criteria: accuracy, lead, parsimony, and replication (Lewis-Beck 2005). The work of the Aggregators and Synthesizers, with their frequent updating, make clear that the word "dynamic" should be added to the list of criteria for several reasons. For one, as Sides remarks, updating the forecast "engages the campaign narrative." For another, a forecasting instrument works better, to the extent that it can be updated on a regular (even daily) basis up to Election Day. This more or less continuous release of forecasts from one

and other forms of combining (such as poll averaging) mask the problem of the differential quality among the models or polls. Rothenberg and Traugott, in their commentaries, raise the particular issue of poll quality, Rothenberg with respect to partisan polls, Traugott with respect to interactive voice response (IVR) polls.

The idea of combining either models or polls raises the other evaluation issues—parsimony and replication (i.e., transparency). Take parsimony first. The meaning of a parsimonious model becomes opaque when the predictions of many models or polls are averaged, especially if the unit of analysis is the state. When the unit of analysis is the nation, as used to be routine, the parsimony question had an easier answer. For one, these earlier models were based on such a small sample that parsimony was a practical necessity. One encouraging technique, which may allow more clarity and parsimony at both state and national levels of analysis, is the *uniform swing* idea, as applied by Jackman.

Turning to the problem of replication, the issue of opacity becomes greater. In particular, it is impossible for an interested investigator to replicate the results of a proprietary (i.e., classified) poll or model. This lack of transparency undercuts a canon of scientific research. As Linzer remarks, statistical

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overarching model has been labeled by some as *nowcasting* (Lewis-Beck and Stegmaier).

What about the first four evaluation criteria? In the popular mind, accuracy looms as most important. Updating, combining polls, using state-level measures, are all techniques that have helped improve accuracy. But, as the Campbell article suggests, accuracy alone is not enough. To take the extreme case, while a poll of voters exiting the voting booth might be highly accurate, it can only tell us something we will know in a few hours. The intrinsic attraction of forecasting comes from its ability to see into the future, when the future stands far away. Blumenthal, in his article, argues that more focus on the accuracy of early polls is needed. With respect to a specific time horizon, Linzer emphasizes the need to generate early forecasts, perhaps three to four months before Election Day. In this regard, Erikson and Wlezien, and Lewis-Beck and Stegmaier, tout the forecasting ability of early campaign perceptions of national economic conditions.

In the 2012 US presidential election, all the leading approaches to forecasting generally "got it right," at least in the rough sense that, collectively, they forecast an Obama win. Part of that collective accuracy was due to the rising practice of *ensemble* forecasting, wherein the forecasts from different models are averaged, as was done in the pre-2012 election forecasting symposium published in *PS: Political Science and Politics* (Campbell 2012). But ensemble forecasting

models are based on assumptions whose validity can only be evaluated if the model and its operations are made known.

Besides these difficulties, other issues relate to replication, and, in particular, data. Accuracy may heavily rest on the availability of a sufficient number of reliable polls at the state or national level. But, as Blumenthal observes, the number of available state polls decreased from 2008 to 2012, and many forecasters fear that the number might further decrease as polling aggregation increases (for it is a much less costly forecasting strategy). If polls remain plentiful, the problem of their representativeness as voter samples persists, according to many of the articles in this symposium. In particular, Blumenthal asks why different polls may converge on the "right prediction." Is aggregate voter opinion more stable, or are the polling houses adjusting their final forecasts toward central values?

ELECTION THEORY: LESSONS FROM PRESIDENTIAL ELECTION FORECASTING

Sometimes, election forecasting can appear to be a limited enterprise. For example, as Abramowitz notes, if interested citizens simply predicted that each state in 2012 would vote for its party choice in 2008, they would have been correct for 48 out of 50 states. In other words, no fancy equations, surveys, or models were needed to pick Obama as the presidential

winner. But election forecasting is not always so easy for many reasons, as Campbell discusses. For one, we may be interested in point forecasts of the popular vote margin (in the state or the nation). For another, presidential elections recently have become very close, making them harder to forecast. Therefore, in the long run, theory becomes more important. Indeed, Sides argues that the forecasting exercise itself tests election theory.

Can sufficient accuracy be obtained weeks, even months before voting day? This question—that of the optimal lead—stands as an important next question to be solved in this burgeoning field.

It seems valuable, then, to ask what forecasting has taught us, as political scientists, about election theory. What have we learned about the behavior of American voters in presidential elections? Here we list five propositions:

- I. Electoral cycles exist. As Norpoth shows, the incumbent party will generally only hold the White House for two, maybe three terms. Further, first-term incumbent parties are most advantaged, as Campbell and Norpoth observe. After that, the costs of ruling increase dramatically.
- II. Campaigns influence the electoral outcome. This influence comes in obvious and less-obvious ways. In particular, it is conditioned by how candidates use economic information (strategically or not) to win votes, as Vavreck demonstrates.
- III. The economy matters a great deal in the voter's electoral calculus. Further, with respect to national economic performance, trends matter more than absolutes (Vavreck). Also, economic effects manifest themselves with a time lag (Erikson and Wlezien, Lewis-Beck and Stegmaier). Finally, economic perceptions count and can count even more than the economic facts (Lewis-Beck and Stegmaier, Vavreck).
- IV. Voters are retrospective, and myopic. As Mayer points out, voters base their incumbent assessments largely on past performance, and they form that assessment roughly from events of the last year.
- V. Voter opinion cannot be easily swayed. The forecasts tend to show considerable inertia in candidate preference (day after day, month after month), contrary to the expectation of many journalists, as Mayer observes. Moreover, according to Dickinson, the media tend to exaggerate the impact of candidate personality and campaign tactics.

While these propositions are not incontrovertible, they appear to rest on a solid empirical base developed from the repeated ex-ante forecasting by different research teams on United States presidential elections since 1980.

CONCLUSION

US presidential election forecasting has firmly established itself as a scientific forecasting enterprise that is capable of

sophisticated modeling providing accurate, long-range work. The accuracy level, while high, is not perfect and never can be. Error will always remain, and some contests will be forecast incorrectly. However, this error may be reduced by careful attention to the more qualitative elements in the race, elements that go beyond the usual quantitative strictures. Finally, considerable accuracy can generally be achieved at some temporal distance from Election Day. A trade-off exists between

accuracy and lead. At some point the gains in accuracy may not offset the costs in lead. Can sufficient accuracy be obtained weeks, even months before voting day? This question—that of the optimal lead—stands as an important next question to be solved in this burgeoning field.

ACKNOWLEDGMENTS

We would like to express our gratitude to Bill Jacoby and the ICPSR Summer School at the University of Michigan for hosting the roundtable “Presidential Election Forecasting: Frontiers and Controversies,” where a group of the contributors shared and discussed ideas on the future of election forecasting. We also appreciate Drew Linzer’s thoughtful comments on this introduction. ■

NOTES

1. A number of excellent sources exist for readers who are interested in learning more about the development of the election forecasting field, the methodology of forecasting, and election prediction in other democracies: Lewis-Beck and Rice 1992; Lewis-Beck and Tien 2011; Jones 2002; Stegmaier and Norpoth 2013.
2. For a synopsis of Jackman’s Model-Based Poll Averaging approach, see: http://www.huffingtonpost.com/simon-jackman/modelbased-poll-averaging_b_1883525.html.

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