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US presidential election forecasting: An introduction

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The modern era of election forecasting is now almost thirty years old. Like many significant developments in science, it began as separate streams of work occurring at around the same time: the investigations of Lee Sigelman (1979), Michael Lewis-Beck and Tom Rice (1982), Richard Brody and Sigelman (1983) on the relationship between presidential approval ratings and the vote; economist Ray Fair's (1978) work on the predictive strength of the economy and presidential incumbency for the vote; Steven Rosenstone's (1983) construction of a forecasting model for the presidential vote in the States; the identification by geophysicist Vladimir Keilis-Borok and historian Allan Lichtman (1981) of thirteen general indicators or "keys" for foretelling the outcome of presidential elections. Soon thereafter, Michael Lewis-Beck and Tom Rice (1984) combined the presidential approval ratings with an indicator of economic conditions to create a core forecasting equation based on retrospective voting theory.

Alan Abramowitz (1988) later added to this core idea his "time for a change" consideration of the number of consecutive terms that the president's political

party has occupied The White House. That same year saw the formation of the first political stock market, the Iowa Political Stock Market (Forsythe, Nelson, Neumann & Wright, 1992). Next, James Campbell and Ken Wink (1990), following up a lead in Lewis-Beck (1985), developed a simple forecasting model using trial-heat or preference poll responses ("if the election were held today...") and reports of pre-campaign economic conditions. Within approximately its first decade, the serious scientific groundwork for the forecasting of US presidential elections had been laid.

The enterprise continued to grow in the 1990s. By the 1992 election, six econometric models produced pre-election forecasts, and Lewis-Beck and Rice (1992) published *Forecasting Elections* as an overview of the emerging field. Another four forecasting equations (including models by Thomas Holbrook, Helmut Norpoth, Christopher Wlezien and Robert Erikson, and Brad Lockerbie) were added by 1996. James Campbell and James Garand compiled six of these forecasts in a special pre-election issue of *American Politics Quarterly*, and reprinted them with post-election postmortems, along with analyses of issues facing the field, in *Before the Vote* (Campbell & Garand, 2000). Additional models were developed in this period, including Alfred Cuzán and Charles Bundrick's (1999) "fiscal model", an amended version

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of Fair's equation. The presidential vote forecasts produced by seven of the political science models, applied to the controversial 2000 election, were published in *PS: Political Science and Politics*, and more extended and technical versions were published in *American Politics Research*.

Prior to the 2004 election, the presidential forecasts of seven different teams again appeared in *PS: Political Science and Politics*, followed in the next issue of that journal by a review of the results. A noteworthy sign of the field's growing acceptance was the 1999 special issue of *IJF* on political forecasting (edited by Sigelman, Roy Batchelor, and Herman Stekler). There were other signs as well: the creation of the *Pollyvote* forecasting website, a new textbook on election forecasting (Jones, 2002), increased media coverage (and criticism), and the spread of forecasting research to congressional elections, presidential nominations, and contests in other nations. A mark of the heightened academic status of the enterprise was the creation, in 2007, of the Political Forecasting Group as an officially recognized research group within the American Political Science Association.

This issue of *IJF* comprises yet another chapter in the field's history. As Sigelman, Batchelor, and Stekler (1999) observed almost a decade ago, despite some bumps in the road (most notably over the turbulent 2000 election), election forecasting remains "a thriving research field." Most of the papers assembled for this collection were submitted after their presentation at the 2007 International Symposium on Forecasting in New York. These papers, along with a few independently submitted papers, were evaluated and revised through the normal peer-review process. They reflect the growing diversity in methodological approaches – statistical models, trading markets, opinion polling, and historical analyses – not to mention the extension of this research to encompass the selection, as well as the election, of the presidential candidates. With respect to the last, the paper by Wayne Steger takes on the difficult task of improving on forecasting models of presidential nominations. He focuses on the forecast of the primary vote in contests where the incumbent president is not a candidate, comparing models using information from before the Iowa Caucus and the New Hampshire primary to those taking these momentum-inducing events into account. His momentum model impressively postdicts the winning party nominee in

all nine of the open races between 1980 and 2004. At the date of this writing, in looking toward the 2008 nominations, the victories of Barack Obama and Mike Huckabee in Iowa, and John McCain and Hillary Clinton's wins in New Hampshire, substantially enhance each of these candidate's prospects of securing their party's nomination, though both nomination contests appear to be unusually muddled.

Among academic forecasters, statistical models have been the dominant strategy, and are well-represented here. Classically, these models begin with straightforward regression equations of the presidential two-party vote share as a function of economic change and presidential popularity, estimated on short national time series. An exemplar here is that of Alan Abramowitz, who employs referenda theory to argue that, when things are bad (good), the party in the White House will be punished (rewarded). Specifically, he holds the popular vote percentage to be determined by presidential approval (in June), economic growth (in the first half of the election year), and length of time the president's party has been in office. The model, estimated on elections from 1948–2004, fits the data well, with an adjusted R^2 of 0.87, and a standard error of the estimate of only 2.03.

Robert Erikson and Christopher Wlezien take on two perennial questions: what is the preferred economic measure, and what is the optimal time before the election to issue a forecast? They find that leading indicators not only offer better predictions than income growth, leading indicators assessed months before the election also predict as well as income growth measured on the eve of the election. This result makes the case for leading indicators being the correct economic specification. Michael Lewis-Beck and Charles Tien look more generally at the question of model specification. They ask whether the addition of variables can genuinely reduce forecasting error, as opposed to merely boosting statistical fit by chance. In their example, they explore the evolution of their core model, presidential vote as a function of GNP growth and presidential popularity. Using *ex ante* tests, they compare it to a more complex, "jobs" model that they have developed over the years. The conclusion is that the more complex model exhibits gains, both theoretical and empirical, over the simpler model.

Andrew Sidman, Maxwell Mak, and Matthew Lebo examine the forecasts of the 2000 election and criticize forecasters who discount the economic influence

on non-incumbent candidates. For example, in both the Lewis-Beck-Tien and Campbell models, economic growth with Al Gore as a candidate in 2000 received only half of its weight (rather than a full 1.0), on the grounds that the electorate rewards a successor candidate like Gore less because he did not serve as president, and therefore could not be held personally accountable for the economy leading into the 2000 election. The Sidman team, using a Bayesian Model Averaging approach, concludes that this sort of systematic weighting actually weakens the general forecasting performance. Campbell, in his contribution, disagrees, asserting that such a weighting scheme (or conditional retrospective voting) is a proper, theoretically driven specification change, one at least as well supported empirically as the general retrospective models. More broadly, Campbell argues that forecasters have been careful to draw on well-established theory to guide their modeling efforts, but also controversially argues that theory has its limits in forecasting. He takes special aim at those forecasting detractors who say otherwise, and who frequently go on to charge forecasters with woeful inaccuracy. Campbell stresses that accuracy is a paramount criterion for election forecasting, and in particular the precise forecasting of the actual percentage point vote shares. In that regard, he offers convincing evidence that, while there is variation among forecasters, the forecasting modelers, as a whole, make months-ahead predictions that are as precise as day-before public opinion polls.

At least in the popular mind, the most well-known election forecasts come from polls. The most famous is the Gallup Final Pre-Election Poll, usually occurring a day or two before the contest itself. In it is posed a question of the type, "In the presidential election held tomorrow, which candidate will you vote for?" While pollsters routinely issue a disclaimer that the survey responses to this item are not a forecast, they are in fact treated as forecasts by pundits, politicians, and citizens alike. The manuscript by Richard Johnston and Mark Pickup provides an assessment of polls as forecasts. Obviously, some of their error will be random, but some will be systematic bias caused by the survey methodology used. Polling firms must make decisions about such things as sampling, question wording, instrumentation, and weighting. In general, these decisions are closely guarded house secrets, so it is difficult to study them individually. However, they can

be studied as a "bundle" of decisions made, and the accuracy of different houses can be evaluated. Comparing various sophisticated methods for assessing overall systematic bias in polling from the 2004 US presidential election, Johnston and Pickup show that three houses had large and significant biases.

The relative accuracy of the polls is again challenged by Joyce Berg, Forrest Nelson, and Thomas Reitz, who help run the Iowa Electronic Market. Formerly known as the Iowa Political Stock Market, it is an SEC-registered exchange where traders receive financial payoffs as a function of their candidate stock value, based on the perceived likelihood of winning. A high candidate stock value translates into a higher forecasted share of the presidential popular vote. They compare their forecasts for presidential races, 1988 to 2004, to forecasts from an exhaustive body of opinion polls. The finding is that, in both the short-term and the long-term, the IEM usually outperforms the polls, in that its point estimates are more accurate.

Completely different from markets, polls or econometric models, Alan Lichtman provides an historian's checklist of 13 conditions, or "keys," to watch for in forecasting the presidential contest. These conditions are assessed as a set of "yes or no" questions that concern both how the president's party has been doing and the political circumstances of the election. The in-party is predicted to win the election if fewer than six of the keys are turned against it. If six or more of the keys are turned against the in-party, the out-party's candidate is the predicted winner. Lichtman notes that this rule correctly postdicted every presidential election from 1860 to 1980 and has predicted the winner in every race since 1984. Randall Jones, in a piece on the "state of the art," reviews the work of Lichtman and the other major approaches, as applied to the 2004 presidential election. In addition to examining campaign polls, trading markets, and regression models, he discusses Delphi expert surveys, bellwether states, and probability models. He concludes that, at least for 2004, the market method made the most accurate forecasts.

What about 2008? Because of the requirements of the publication schedule, none of the papers have final numbers for all of their predictor variables for 2008. Certain of these models do have considerable lead times. For example, those of Abramowitz, and Lewis-Beck and Tien, provide a final forecast in late July or August of the election year. Still, we are not yet close to summer 2008. Nevertheless, certain of our authors ventured preliminary

forecasts, based on conditions at the time of writing. Steger suggests that Clinton will most probably be the Democratic nominee, but judges the Republican race to be too close to call. With respect to the presidential contest itself, Campbell speculates that it is likely to be a very tight race, both because it lacks an incumbent and because of the polarization and competitive balance between the parties. Lewis-Beck and Tien foresee a Democratic victory—narrow according to the core model, large according to their jobs model. Based on the “time for a change” dynamic working against the Republicans and President Bush’s low approval ratings, Abramowitz anticipates a forecast of a comfortable victory for the Democrats. Finally, Lichtman indicates that his keys “firmly predict a Democratic victory in 2008.” Assuming that Republicans continue to hold five of the 13 keys, Lichtman predicts that the Republican candidate will receive only about 46 percent of the two-party vote. To summarize, of the forecasters here who brave a clear prediction, all name the Democrats. Of course, these are mostly speculations about the forecasts that will be firmed up by later in the summer and early fall. Even so, they suggest that this may be a good year for the Democrats. But when, as forecasters, we climb out on the limb, we know it may get sawed off.

References

- Abramowitz, A. (1988). An Improved Model for Presidential Outcomes. *Political Science and Politics*, 21, 843–847.
- Brody, R., & Sigelman, L. (1983). Presidential Popularity and Presidential Elections: An Update and Extension. *Public Opinion Quarterly*, 47, 325–328.
- Campbell, J. E., & Garand, J. C. (Eds.). (2000). *Before the Vote: Forecasting American National Elections*. Thousand Oaks, CA: Sage Publications.
- Campbell, J. E., & Wink, K. A. (1990). Trial-Heat Forecasts of the Presidential Vote. *American Politics Quarterly*, 18, 251–269.
- Cuzán, A. G., & Bundrick, C. M. (1999). Fiscal Policy as a Forecasting Factor in Presidential Elections. *American Politics Quarterly*, 29(3), 338–353.
- Fair, R. C. (1978). The Effect of Economic Events on Votes for President. *Review of Economics and Statistics*, 60, 159–172.
- Forsythe, R., Nelson, F. D., Neumann, G. R., & Wright, J. (1992). Anatomy of an Experimental Political Stock Market. *American Economic Review*, 82, 1142–1161.
- Jones, R. J., Jr. (2002). *Who Will Be in the White House? Predicting Presidential Elections*. New York: Longman.
- Keilis-Borok, V. I., & Lichtman, A. J. (1981). Pattern Recognition Applied to Presidential Elections in the United States, 1890–1980: The Role of Integral Social, Economic, and Political Traits. *Proceedings of the National Academy of Sciences of the United States of America*, 78, 7230–7234.
- Lewis-Beck, M. S. (1985). Election Forecasts in 1984: How Accurate Were They? *Political Science and Politics*, 18, 53–62.
- Lewis-Beck, M. S., & Rice, T. W. (1982). Presidential Popularity and Presidential Vote. *Public Opinion Quarterly*, 46, 534–537.
- Lewis-Beck, M. S., & Rice, T. W. (1984). Forecasting Presidential Elections: A Comparison of Naïve Models. *Political Behavior*, 6, 9–21.
- Lewis-Beck, M. S., & Rice, T. W. (1992). *Forecasting Elections*. Washington, D.C.: Congressional Quarterly Press.
- Rosenstone, S. J. (1983). *Forecasting Presidential Elections*. New Haven, CT: Yale University Press.
- Sigelman, L. (1979). Presidential Popularity and Presidential Elections. *Public Opinion Quarterly*, 43, 532–534.
- Sigelman, L., Batchelor, R., & Stekler, H. (1999). Political Forecasting. *International Journal of Forecasting*, 15, 125–126.