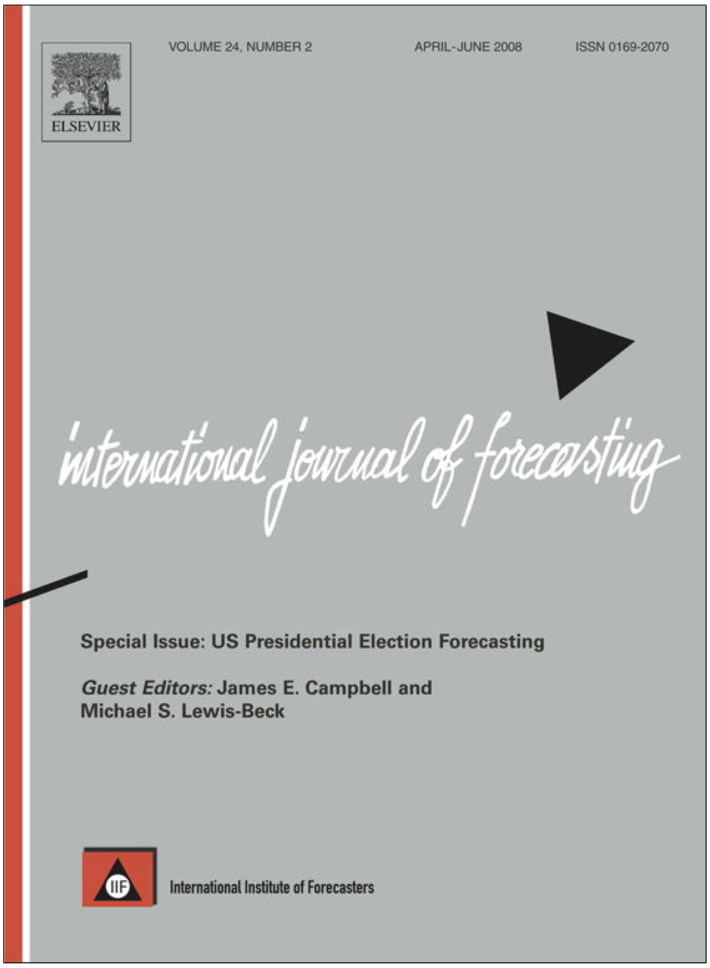
VOLUME 24, NUMBER 2
APRIL-JUNE 2008
ISSN 0169-2070
ELSEVIER
international journal of forecasting
Special Issue: US Presidential Election Forecasting
Guest Editors: James E. Campbell and
Michael S. Lewis-Beck
IIF
International Institute of Forecasters

Available online at www.sciencedirect.com
ScienceDirect
International Journal of Forecasting 24 (2008) 237–256
www.elsevier.com/locate/ijforecast

Forecasting non-incumbent presidential elections: Lessons learned from the 2000 election

Andrew H. Sidman [a,*], Maxwell Mak [b], Matthew J. Lebo [b]

[a] Department of Government, John Jay College of Criminal Justice, City University of New York, 445 W. 59th Street, New York, NY 10019, United States
[b] Department of Political Science, Stony Brook University, Stony Brook, NY 11794-4392, United States

Abstract

As the 2008 election approaches, we offer a reexamination of the 2000 election — its place in history, political science, and presidential forecasting models. This is especially relevant since 2008, like 2000, will be an election without a president seeking reelection. How should forecasting models deal with such elections? Looking carefully at 2000 we evaluate the utility of "weighting" candidates in non-incumbent elections. Using Bayesian Model Averaging, we find that weighting helps to better predict 2000, but also produces a poorer model fit over a wider set of elections. For other non-incumbent elections, weighting only improves predictions for the 1960 election. Moreover, we find that the 2000 election is anything but ordinary; attempts by forecasters to change the specification of models to better fit the 2000 election are ultimately harmful to the forecasting exercise. We conclude that presidential forecasts are best when they ignore whether or not an incumbent is running.

Keywords: 2008 election; Bayesian model averaging; Evaluating forecasts; Successor candidates; Weighting

In 2008, the American electorate will be faced with an uncommon type of election — one featuring neither an incumbent president nor a sitting vice president. For only the sixth time since World War II, an incumbent president will not appear on the ballot, and for the first time since 1952 neither a president nor a vice president will be running. Forecasting the 2008 election will very likely be fraught with many of the same difficulties that arose in trying to predict the 2000 contest, the last non-incumbent election. In addition, the models used to forecast the 2008 election will no doubt reflect some of the lessons learned from the 2000 experience. In particular, questions of the transference of sentiment from the current President to the nominee from his party were asked most pointedly following the 2000 election. The question is especially relevant in 2008, when one of the concerns will be how much of the credit and blame attributable to President Bush will be transferred to the Republican candidate. The question is also one of theoretical importance, both to the field of forecasting and to the study of presidential elections generally. Knowing how to treat incumbent party candidates in non-incumbent presidential elections will help generate better forecasts of

* Corresponding author. Tel.: +1 646 557 4613; fax: +1 212 237 8245.
E-mail addresses: asidman@jjay.cuny.edu (A.H. Sidman), mmak@ic.sunysb.edu (M. Mak), matthew.lebo@sunysb.edu (M.J. Lebo).

0169-2070/$ - see front matter
doi:10.1016/j.ijforecast.2008.03.003

2008 and subsequent elections. It will also give a better understanding of candidates like Nixon in 1960, Humphrey in 1968, and Bush in 1988.

The specific concern of this research is the practice of down-weighting so-called successor candidates, presidential candidates from the incumbent party running in non-incumbent elections. The performance of forecasting models in the 2000 election led many forecasters to suggest that Vice President Gore, a successor candidate, should not have been given the same credit for the economic boom of the Clinton years that Bill Clinton himself would have received had he been running. With another non-incumbent election on the horizon, we seek to evaluate the practice of down-weighting successor candidates, with particular focus on the 2000 election itself. The experiences of 2000 lead to three major questions with respect to how forecasting models should address non-incumbent elections in the future.

First, was the 2000 election a typical election? This question was addressed in the March 2001 forecast evaluations featured in *PS: Political Science and Politics*, and we return to it in this paper. The question is important because its answer has implications for the questions that follow. If the 2000 election was typical, down-weighting candidates like Vice President Gore will have little substantive impact, and few changes need to be made to the way in which presidential elections are currently studied.

Second, should models be updated to account for successor candidates, and if so, in what manner? If 2000 is indeed atypical, as many researchers believe, it may be because the candidate of the incumbent party was not the President of the United States. One of the prevailing rationales for Gore's underperformance relative to what forecasters expected was his failure to capitalize on the economic good will from the Clinton administration. Gore's campaigning situation was not all that dissimilar from the issues facing the Nixon campaign in 1960 or the Bush campaign in 1988. If successor candidates do not perform as well as we would expect from incumbents, how should models be updated to better predict non-incumbent elections? In the special issue of *PS: Political Science and Politics* referenced above, there were seven articles that specifically addressed Vice President Gore's underperformance, given what was forecasted, in the 2000 election. Five of the seven articles suggest that Gore was specifically given too much credit for the positive economic conditions in the country at the time (Campbell, 2001; Holbrook, 2001; Lewis-Beck & Tien, 2001; Norpoth, 2001; Wlezien, 2001). It is not a huge leap to assume that sentiment from any incumbent administration does not fully transfer to its party's nominee.

Finally, do methods appropriate for updating models ultimately lead to better election forecasts? Answering this question first requires a brief review of the practice of forecasting presidential elections. Presidential election forecasts have a rich history in the study of American politics. The most well known forecasting models identify a handful of independent variables for predicting the national, two-party, popular vote. Most of these models focus on, or at least control for, some measure of objective economic performance. Economic indicators are featured in models developed by Abramowitz (1996, 2004), Campbell (1996, 2004), Fair (1978, 1996), Lewis-Beck and Tien (1996, 2004), Norpoth (1996), and Wlezien and Erikson (1996, 2004). In addition, Abramowitz, Lewis-Beck and Tien, and Wlezien and Erikson, as well as Holbrook (1996, 2004), include a measure of presidential approval. The dilemma of forecasting presidential elections is that one needs to be careful about which variables are included. Most models can only go back, at best, to the 1948 election, which gives only fifteen usable observations. Theory becomes extremely important in identifying the key variable that makes the difference between a successful forecast and a failure. The model is estimated using the available data, and estimates are used to generate a predicted value for the future election — the election forecast. Our chief interest is in whether estimates derived from models that down-weight measures of incumbent sentiment for successor candidates yield better forecasts.

To answer these questions, we begin with a discussion of the post-2000 election summaries written by political science forecasters that appeared in the aforementioned March 2001 issue of *PS: Political Science and Politics*. These authors found themselves having to explain Al Gore's underperformance, given their predictions that he would win by a comfortable margin, and many suggest reasons for the underperformance. We then discuss the practice of down-weighting variables for successor candidates, like Al Gore, which is the main implication from the 2001 articles relating to how forecasting models could be adapted to conform to the lessons of 2000. To assess the performance of models that do and do not employ a weighting scheme, we use the model averaging approach introduced by Bartels (1997) and used explicitly to evaluate presidential forecasting models by Bartels and Zaller (2001) and Erikson, Bafumi, and Wilson (2001). Bayesian Model Averaging is uniquely suited to assessing model performance where the "correct" specification is uncertain. Put simply, the process, which we describe below, allows us to generate forecasts from and evaluate classes of models. Here, the classes we are concerned with are models that down-weight successor candidates and models that do not. We then present our results, which demonstrate the overall weakening of forecasting models when they are stretched to better predict 2000 by down-weighting independent variables for successor candidates. We conclude with thoughts for future elections and election forecasts.

1. Back-casting the 2000 election results

Certainly, the 2000 presidential election was closer than anyone could have predicted. It took a full 36 days following Election Day for it to be finally decided that the candidate who carried the popular vote by half a million votes, Al Gore, had lost the election in the Electoral College. Especially surprising to political scientists was that Gore lost despite being a part of an administration that had overseen two solid terms of peace and prosperity. Anyone assuming that voters reward and punish parties and their candidates for their handling of the economy would have predicted a comfortable victory for Vice President Gore.

In fact, this is precisely what political scientist forecasters predicted. At the 2000 APSA Annual Meeting, seven forecasting models were presented. All of these forecasts predicted a Gore victory ranging from a low of 52.8% of the two-party vote to a high of 60.3% with an average forecast of 56% (Wlezien, 2001).[1]

Following the election, several scholars suggested that a key reason for so many inaccurate forecasts was the failure to correctly handicap Al Gore as a Vice President rather than as an incumbent. This makes intuitive sense. Bill Clinton oversaw a long economic boom and used it to turn budget deficits into surpluses. His job approval hovered near 60%, amazingly high for a second term president. Furthermore, Al Gore explicitly did not run on Clinton's economic record, telling the 2000 Democratic National Convention:

> "But now we turn the page and write a new chapter. And that's what I want to speak about tonight. This election is not an award for past performance. I'm not asking you to vote for me on the basis of the economy we have. Tonight I ask for your support on the basis of the better, fairer, more prosperous America we can build together."

Obviously no student of V.O. Key, Gore was unable to ride this strategy to victory against an opponent who promised voters pain-free tax cuts.

This left forecasters with the task of having to explain their models' poor performances. Among the many explanations put forward, two were most prominent. First, at the time of the election, the economy was not really doing as well as the models believed. Second, the models may have more accurately predicted how Bill Clinton, rather than Gore, would do if he was the one running for another term. That is, the evaluation of the incumbent president and the economy he oversaw are not so easily transferred to his successor. Indeed, five of the post-election summaries that appeared in *PS* pointed out this fact:

> "In the 2000 election, as in 1960, a sitting vice president sought to succeed a two-term president with high approval ratings. Like Nixon, Gore struggled to carve his own profile while taking advantage of the good will left behind by his predecessor. In both cases, the incumbent-party candidates were unable to convert that good will into a comfortable victory. Why? Perhaps it is to be expected that one man should not be judged on the record of another one, even if they are of the same party and served in the same administration."
>
> – Norpoth (2001, p. 48).
>
> "…I think the answer is that the electorate did not assign as much weight to economic considerations as they had in the past, or at least voters did not give Gore the kind of credit for a strong economy as they had given previous incumbent-party candidates."
>
> – Holbrook (2001, p. 39).
>
> "Open-seat presidential elections may not only be more competitive, they may be less of a referendum on the in-party's performance and its handling of the economy than an election with an incumbent running. In effect, Al Gore might have expected to get only part of the credit for the economy that Bill Clinton would have

[1] These predictions are especially impressive for Gore, in that several models explicitly punish candidates from parties who had occupied the White House for two terms or more (Abramowitz, 1996, 2004; Holbrook, 1996, 2004; Lockerbie, 2004). In addition to these, Lewis-Beck and Tien (2004) punish successor candidates who are not "united" with the outgoing incumbent using their *Incumbency Party Advantage* variable, and Norpoth (1996, 2004) implicitly punishes beyond the second term with a negative, second order, autoregressive parameter.

received had he been the candidate. In assuming that there was no difference, the models may wrongly have expected Gore to receive the full credit due an incumbent."

– Campbell (2001, p. 36–37).

"Gore was not an incumbent. Perhaps, therefore, he did not get full credit for the country's good times."

– Wlezien (2001, p. 28).

"…our model will yield more accurate predictions if we include a theoretically induced remeasurement of the GNP variable (i.e., letting it mean more for candidates who are previously elected presidents). With this judicious modification, the Gore forecast is brought within more understandable range."

– Lewis-Beck and Tien (2001, p. 23).

Thus, following the 2000 election, some forecasters re-specified their models so that President Clinton's numbers were not completely transferred to Gore. After doing so, their "back-casts" of the election drastically improved. For example, Lewis-Beck and Tien (2001) present 7 alternative models for the 2000 election, and find that including an interaction that only gives credit for GNP growth to incumbents serves to improve both overall model fit and the out-of-sample forecasts for 2000. Their 2004 forecast (Lewis-Beck & Tien, 2004) incorporated a similar discount for successor candidates.[2] This change led to better in-sample forecasts, but also predicted a razor-thin victory – 50.07 to 49.93 – for Senator John Kerry (p.756). Given the margin of error, the race was too close to call. Lewis-Beck and Tien end their 2004 forecast with a look back at 2000, and state (p. 757): "The anomalous 2000 outcome can be explained… Analysts do not have to resort to *ad hoc*, idiosyncratic, contest-specific characteristics in order to account for the large Gore vote deficit." However, their discounting of successor candidates might be viewed as exactly that; the weighting schemes that are helpful for predicting the 2000 election can throw off the estimates of other elections, including 2004.

More generally, some forecasters have begun to move away from the careful selection of *the* perfect forecasting model. Bayesian model averaging (BMA; Bartels, 1997) begins by questioning the assumption that in-sample performance can be used to discern one particular, *best* model. Thus, a range of possible models are used to estimate parameters and make forecasts, and these results are weighted by the models' goodness-of-fit statistics. BMA can be especially instructive when data are scarce or when the correct functional form is difficult to discern. Thus, the approach seems to be naturally suited to election forecasting.

Bartels and Zaller (2001) make the first such attempt, and estimate 48 separate models to generate out-of-sample forecasts for the 2000 election. Based on a weighted average of their forecasts, they found Al Gore's performance to be only slightly below expectations. However, one major omission in their analyses calls into question their conclusion that, given the standard predictors used by political scientists, the 2000 election was essentially predictable. As Erikson et al. (2001) point out, the omission of some measure of presidential approval from their models makes Bartels and Zaller's models unrepresentative of presidential vote forecasting models. Certainly, it was the high level of presidential approval before the 2000 election that was a major factor in throwing off vote projections for Gore.

Bartels and Zaller's omission of this variable from their 48 models is proved to dampen the forecasts for Gore and bring them closer to the eventual result. As Erikson et al. (2001) demonstrate, however, this strategy drastically underplays the importance of approval in forecasting models. When Erikson et al.'s 48 models that exclude approval are compared with 48 models that include it, the latter are found to have far more predictive power for the 1948–1996 period, accounting for more than 99% of the weight assigned to the overall 2000 forecast (p. 817). Nevertheless, that forecast predicts a Gore victory in the neighborhood of 53% to 47% over George W. Bush.

Thus, while model averaging promises a way out of the search for the perfect forecasting model, its predictive power can still be outwitted by an uncommon election. At the very least, using the BMA approach, we should include models that use variables that we think *might* be relevant, and then let the extent of their inclusion in the ultimate forecast be based on their predictive power. Presidential approval naturally falls into this category, and merits inclusion.

However, given the fact that models that include some measure of presidential approval are *worse* predictors of the 2000 result than models that exclude it, should we manipulate approval numbers in such a way as to punish a candidate

[2] Other forecasters also added this type of adjustment to their 2004 predictions. Campbell (2004) uses the second quarter growth rate of GDP, but halves the values for successor candidates. Holbrook (2004) employed a weighted personal finances variable that adjusted the value used to predict the 2000 election.

Table 1
List of variables

Concept	Operationalizations
Incumbent Vote Share (DV)	The incumbent party candidate's share of the two-party vote
Third term	A dummy variable scored 1 if the incumbent party is seeking at least a third consecutive term
Approval	Percentage approval in June of the election year; the scale is shifted by subtracting 50 from the approval rating
	Difference between percentage approval and percent disapproval in June of the election year
	Natural log of the percentage approval in June of election year
Economic indicators	Percentage change in real GDP in the second quarter of the election year (annualized)
	Percentage change in real disposable income in the second quarter of the election year (annualized)
	Percentage change in jobs between January of the inaugural year and June of the election year
Economic evaluations	Personal prospective evaluations in the second quarter of the election year
	Personal retrospective evaluations in the second quarter of the election year
	National prospective evaluations in the second quarter of the election year
	National retrospective evaluations in the second quarter of the election year

Note: Data for all approval variables were obtained from the Gallup Organization. Data on GDP and RDI were taken from the Bureau of Economic Analysis. Jobs data are from the Bureau of Labor Statistics. Data on economic evaluations are from the Survey of Consumers given by the Survey Research Center, University of Michigan.

from the incumbent party who is not the president? Our answer is no. Below we demonstrate that discounting values of economic growth or presidential approval for successor candidates may aid in predictions of the 2000 election, but makes the other results, like 2004, more difficult to predict, and ultimately harms the forecasting exercise.

2. Methods

We estimate seventy-two total models, beginning with thirty-six that contain various operationalizations of variables commonly found in forecasting models. Specifically, we identified three concepts that are used in most forecasting models, in various combinations. These are: presidential approval (Abramowitz, 1996, 2004; Holbrook, 1996, 2004; Lewis-Beck & Tien, 1996, 2004; Wlezien & Erikson, 1996, 2004); objective economic indicators (Abramowitz, 1996, 2004; Campbell, 1996, 2004; Fair, 1978, 1996; Lewis-Beck & Tien, 1996, 2004; Norpoth, 1996; Wlezien & Erikson, 1996, 2004); and subjective economic evaluations (Holbrook, 1996, 2004; Lockerbie, 2004; Norpoth 1996). We then operationalized each concept in three or four different ways; the final variables are listed in Table 1 below. These thirty-six models represent every permutation that takes one type of variable from each concept — one approval variable, one economic indicator, and one measure of subjective evaluations per model. We also borrow the "time for a change" concept (Abramowitz, 1996, 2004), and include it in every model as a dummy variable scored 1 for each election in which the incumbent party is seeking at least a third consecutive term.

We then estimate the same thirty-six models, giving successor candidates half-credit for conditions from the retiring administration by simply multiplying the approval,[3] economic indicator, and economic evaluation variables by 0.5 in years with successor candidates. One could ask whether the two groups of models are the same for elections in which an incumbent runs. The simple answer is that, considering all of the election years to be used in the analyses that follow, the weighting scheme, while only applied to certain elections, can have a substantial impact on the model estimates, leading to vastly different election forecasts. Our procedure will allow us to assess whether, as a class, models that down-weight variables for non-incumbent elections yield better predictions of elections generally, which is the chief concern of forecasting models.

When considering different weighting schemes, our goal was to assign a simple weight by which successor candidates would receive partial credit for the successes and failures of the incumbent. We also wanted weights that could reasonably be applied to forecasting models in the future. The selection of 0.5, while arbitrary, is sufficient, in that it balances considerations of the party (incumbency effects) against those of the candidate. Weights larger or

[3] Weighting schemes can be problematic for the approval variable measured in June of the election year. To adjust for this, as described in Table 1, we shift the approval ratings by 50 points, so that the scale ranges from −50 to 50. In this way, we avoid drastically underweighting approval for successor candidates. For example, Clinton's approval rating in June 2000 was 55%. In the unweighted models, the value for Gore is 5 (55−50). In the weighted models, the value for Gore is 2.5, which would be equivalent to an approval rating of 52.5%. We find this to be more realistic than simply giving Gore half of Clinton's approval, which would give Gore a paltry rating of 27.5%.

smaller than 0.5 would be even more arbitrary, and may necessitate discussions of specific candidates (i.e., how much credit should Nixon in 1960, Humphrey in 1968, Bush in 1988, or Gore in 2000 receive).[4] Thus, all of the 72 models follow the same general form:

$$\text{Incumbent Vote Share}_t = \beta_0 + \beta_1 \text{ Approval}_t + \beta_2 \text{ Economic Indicator}_t + \beta_3 \text{ Economic Evaluations}_t + \beta_4 \text{ Third Term}_t + \varepsilon_t.$$

In order to assess the effectiveness of these 72 models in predicting the outcomes of both the 2000 and the 2004 elections, we use the model averaging technique discussed in Bartels (1997) and Bartels and Zaller (2001). The benefit of applying such a methodological technique is that it allows us to compare different specifications in instances where there is no clear theoretical model. In the case of presidential forecasting, this technique makes perfect sense given the competing theories and varying models put forth and offered each presidential election.

Model averaging will basically give a weighted average for each coefficient and standard error for every variable included in the seventy-two models. For our purposes, this means that we will have twenty-two average coefficients: ten coefficients in all for the approval variables, economic indicators, and evaluation variables listed in Table 1; ten coefficients for these same variables weighted by one-half for successor candidates; one coefficient for the third term dummy; and one average intercept. The process begins by estimating all seventy-two models. Next, we determined the posterior probability of each model, which gives us the weight to be applied to each model in the weighted average. Given the number of models, this is essentially the likelihood that a given model will be selected. A model is more likely to be selected when it fits the data better; the posterior probability is therefore an increasing function of both degrees of freedom and R^2. The higher a model's R^2, the more weight that model's coefficients receive in the model average.[5]

After obtaining a posterior probability for each model, a model average coefficient and standard error for each variable is calculated.[6] An important note to make is that in models that do not contain a given variable, a coefficient of zero is included in the model average. This results in smaller than expected coefficient averages, and will be discussed in detail

[4] We also recognize that there are myriads of other ways to weight our data. Weights could be generated empirically, Bayesian methods could be employed using 0.5 as a prior with varying strength, or our variables could be interacted with other variables meant to capture aspects of the candidate, not necessarily the party. Our selection of a simple, half-credit weighting scheme in no way invalidates other procedures, but is meant to capture some of what was suggested by several academics following the 2000 election (Campbell, 2001; Holbrook, 2001; Lewis-Beck & Tien, 2001; Wlezien, 2001), and was explicitly used to weight economic indicators in two forecasts of the 2004 election (Campbell, 2004; Lewis-Beck & Tien, 2004).

[5] The formula for the posterior probability of model i is given as follows:

$$\pi_i = B_i \pi_i^0 / \sum_{j=1}^{72} B_j \pi_j^0,$$

where B denotes the Bayes factor and π^0 is the prior probability of a given model. We assume a uniform prior distribution — that is, each model is equally likely to be selected prior to estimation. This means that for each model, π^0 equals 1/72, and the formula for the posterior probability of model i reduces to:

$$\pi_i = B_i/72 / \sum_{j=1}^{72} B_j/72.$$

To see that this formula increases with the fit of each model, we need only examine the formula for the Bayes factor:

$$B_i \approx e^{-\left[\left(N\cdot\ln\left(1-R_i^2\right)+\ln(N)\cdot(K_i-1)\right)/2\right]}.$$

As R^2 increases, the Bayes factor increases, which in turn increases the posterior probability of model i. Of course, all probabilities are bounded by zero and one, and the sum of all posterior probabilities equals one.

[6] Calling β_1 the coefficient average for variable 1 and b_{i1} the estimated coefficient for variable 1 in model i, the coefficient average for variable 1 equals:

$$E(\beta_1|X,y) = \sum_i \pi_i b_{i1}.$$

The model average standard error is equal to:

$$\mathrm{SE}(\beta_1|X,y) = \sqrt{\sum_i [\pi_i \cdot V(b_{i1})] + \sum_i \left[\pi_i (b_{i1} - {}^{-}b_1)^2\right]}.$$

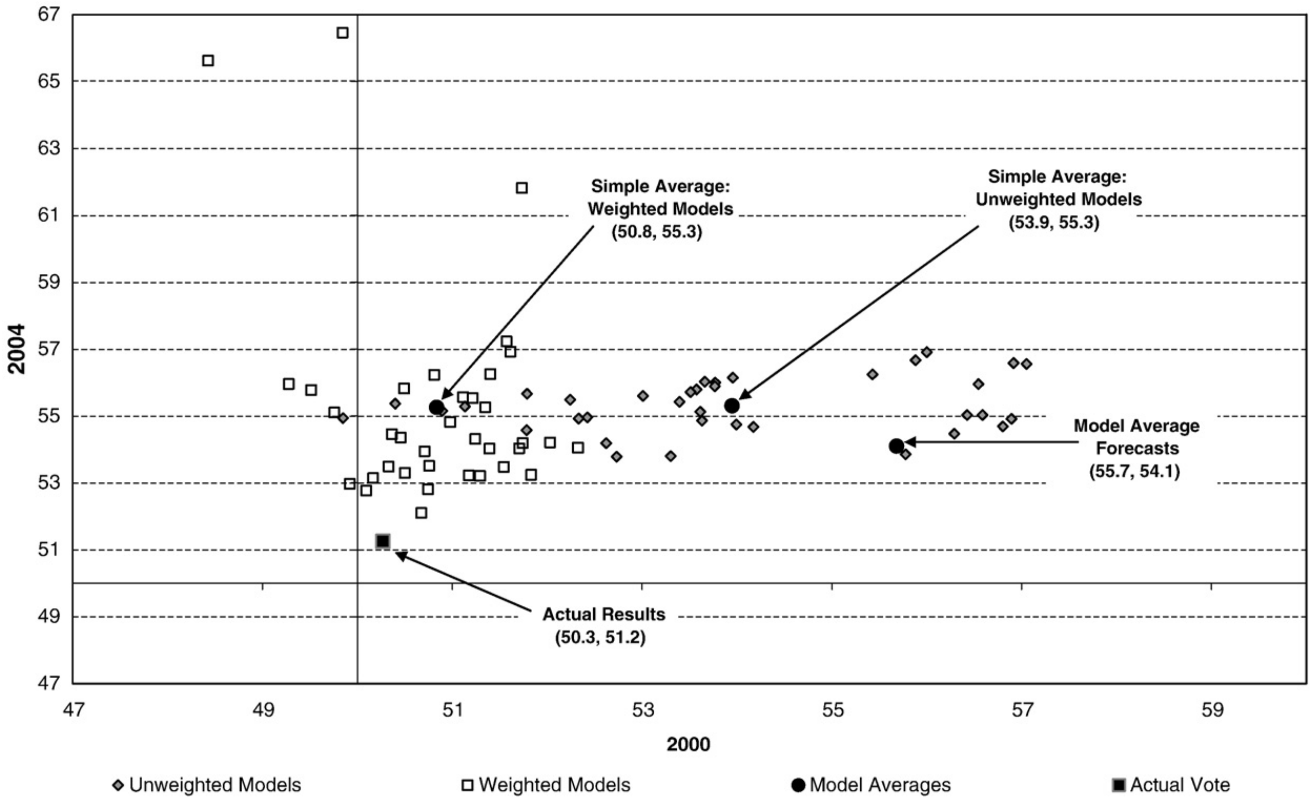

Fig. 1. Comparison between 2000 and 2004 one-step-ahead forecasts.

with the results. As a primer to the logic of this approach, think of a set of model averages as one model itself — a model with 22 variables and several parameters constrained to zero.[7] In addition to calculating an average coefficient and standard error for each variable, we also look at the model average forecast for the 2000 or 2004 election.[8]

In all, we examine five sets of model average forecasts: 2000 and 2004 one-step-ahead forecasts, and out-of-sample forecasts for 1960, 1968, and 1988.[9] Our data cover presidential elections from 1956 through 2004, but each forecast leaves out at least one election — all exclude their particular election, but the 2000 forecast does not include data from either 2000 or 2004. Thus, only the 2004 one-step-ahead forecast includes data from the 2000 election. We include data going back only to 1956, because it is the first election for which all of our variables are observed. In particular, subjective economic evaluations were not fully asked about by the University of Michigan SRC until after 1952. Below, we present and discuss the results for all models, as well as the average coefficients. However, the heart of our analyses is the examination of the posterior probabilities and election forecasts. We expect that the models that predict the 2000 election best will be those that down-weight the variables for successor candidates.[10] However, our main empirical point is that the models that employ successor weighting will have less predictive power *overall* than models that leave these cases alone. This will be true for all elections, and particularly for other successor elections.

In order to support the former expectation, we offer two pieces of evidence. First, we show that for the 2000 one-step-ahead forecasts, the average forecast error for successor weighted models is much smaller than the average forecast error of non-weighted models. Second, we present a comparison between the posterior probabilities of the successor weighted and unweighted models for the 2000 one-step-ahead and 2004 one-step-ahead forecasts.

[7] Specifically, we are constraining seventeen parameters in every model to be zero: five approval variables, five economic indicators, and seven economic evaluation measures.

[8] For the 2000 and 2004 forecasts, we take the predicted value for the 2000 or 2004 election for each model, and calculate the weighted average forecast using weights from the posterior probability of each model. This can be thought of as the model average forecast.

[9] A "one-step-ahead" forecast uses data from all of the elections that precede it. An "out-of-sample" forecast uses all election data both before and after the election. We do not show any "in-sample" forecasts that would use all data available, that is, all of the data from an out-of-sample forecast and from the particular election itself.

[10] While this expectation is unrelated to our discussion of posterior probabilities, we show that the successor weighted models do give better predictions of the 2000 election, but that these models do a worse job predicting elections generally.

Table 2
Model average coefficients for 2000 and 2004 forecasts

Variables	2000 one-step-ahead		2004 one-step-ahead	
	Unweighted	Successor weighted	Unweighted	Successor weighted
Presidential approval				
Presidential approval	0.038 (0.028)	0.001 (0.006)	0.016 (0.024)	0.008 (0.015)
Difference b/w approval and disapproval	0.033 (0.017)	0.003 (0.005)	0.048 (0.023)	0.031 (0.016)
Log of presidential approval	1.531 (1.372)	0.0004 (0.106)	1.168 (1.453)	0.005 (0.284)
Economic indicators				
Percent change in real GDP	0.123 (0.143)	0.024 (0.037)	0.323 (0.150)	0.224 (0.110)
Percentage change in real disposable income	0.015 (0.076)	0.0002 (0.011)	0.019 (0.056)	0.002 (0.029)
Percentage change in the number of jobs	−0.009 (0.058)	0.00005 (0.008)	0.002 (0.028)	0.0004 (0.021)
Economic evaluations				
Personal prospections	0.011 (0.041)	−0.001 (0.005)	0.007 (0.061)	−0.009 (0.016)
Personal retrospections	0.182 (0.059)	−0.00002 (0.001)	0.003 (0.020)	−0.0002 (0.004)
National prospections	0.0005 (0.022)	−0.001 (0.005)	0.010 (0.045)	−0.005 (0.013)
National retrospections	0.001 (0.009)	−0.00002 (0.004)	0.002 (0.016)	−0.0005 (0.012)
Miscellaneous				
Third term	−4.597 (1.107)		−5.164 (1.688)	
Constant	25.080 (7.836)		45.747 (9.027)	
Model average statistics				
Average of forecast for the 2000 or 2004 election [a]	55.719		54.057	
Average error of prediction for the 2000 election	5.451		2.813	
Sum of posterior 'probabilities [b]	0.966	0.034	0.677	0.323

Note: The cells contain model average coefficients for each variable with average standard errors in parentheses. Both forecasts contain two sets of averages: the coefficient averages for the unweighted variables and the coefficient averages for the successor weighted variables. These are *not* different sets of averages; they are placed side-by-side to save space, whereas the table would become quite cumbersome if all of the variables were simply listed again with the prefix "weighted." As discussed in the text, the averages for the successor weighted variables may appear small. This is because the models that include these variables contribute very little to the model averages, evidenced by the low posterior probabilities.

[a] This is the model average forecast for each set of models. It is calculated as the weighted average of the forecasts from each of the seventy-two models — weighted by the posterior probability of each model.

[b] These cells contain the sum of the posterior probabilities for each set of *thirty-six* models. For example, the first cell contains the sum of the posterior probabilities of the thirty-six 2000 one-step-ahead forecasts that use the unweighted variables.

In examining the posterior probabilities, we will be most concerned with the sum of the posterior probabilities for the weighted and unweighted models in each set of forecasts. The sum is appropriate to this analysis because it is representative of the total contribution made by either weighted or unweighted models, as a class, to the overall model average. Our expectation is that: $\sum_{\text{Weighted}} \pi_{2004} > \sum_{\text{Weighted}} \pi_{2000}$.[11] The inclusion of data from the 2000 election drastically improves the performance of the successor weighted models, as is demonstrated by their contribution to the model averages for the 2004 one-step-ahead forecast. This finding points to the singular peculiarity of the 2000 outcome. Simply including data for the 2000 election dramatically improves the fit of models that down-weight successor candidates, and yet improving the fit of these models may throw off forecasts of similar elections — those with no president running. We examine this first by analyzing the mean posterior probabilities for weighted and unweighted models for other successor elections in our sample. We generate the posterior probabilities by performing out-of-sample forecasts for the 1960, 1968, and 1988 elections using both weighted and unweighted models.

3. Successor weighting and the 2000 election

Looking first at the 2000 and 2004 one-step-ahead forecasts, Fig. 1 plots each of the seventy-two model specifications by their predictions for 2000 (the x-axis shows the vote-share for Gore) and 2004 (the y-axis shows the vote-share for Bush). The diamonds represent unweighted models and the squares represent successor weighted models. There is a stark difference between the predictions for 2000, with the successor weighted models coming much closer to the actual results. That is, down-weighting the independent variables so that Al Gore does not receive full

[11] While the sum is a statistic representative of the relative contributions of the two models, the mean is better suited to statistical tests.

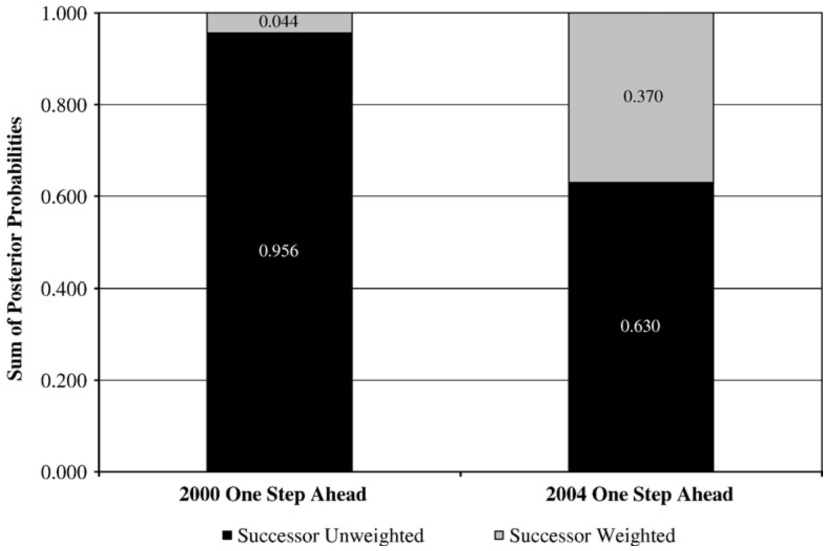

Fig. 2. Comparison of the posterior probability contributions between successor weighted and unweighted models for the 2000 and 2004 forecasts.

credit for Bill Clinton's numbers is a sensible procedure to get a more accurate prediction of the 2000 outcome. On the other hand, while there is no mean difference between the forecasts for 2004 – both weighted and unweighted models yield a mean forecast of 55.3% for Bush – there is a great deal of difference in the variance of the forecasted outcomes. The unweighted models are all quite close to the eventual outcome of Bush winning 51.2% of the two-party vote, while the weighted models (squares) are widely dispersed.

The overall average forecast for the models is also plotted.[12] It yields a slightly better prediction of the 2004 election than either the successor weighted or unweighted models, but a much worse forecast of the 2000 election, with a prediction of Al Gore getting 55.7% of the two-party vote. Thus, when trying a one-step-ahead forecast of the 2000 election, the models that predict elections between 1956 and 1996 best, do a relatively poor job of predicting 2000. This is the primary evidence for our first argument that the 2000 outcome is simply unusual. The full model average results for both forecasts, including posterior probabilities, are presented in Table 2.[13]

Our first argument stated that the successor weighted models would yield better predictions of the 2000 election. This is clearly the case. As Fig. 1 demonstrates, the average forecast for the weighted models was much closer than that of the unweighted models. In fact, the mean absolute forecasting error of the weighted models is only 0.854, while that of the unweighted models is 3.704.[14] This difference is significant beyond the 0.0001 level.[15]

The posterior probabilities from each set of forecasts also provide strong support for the superior predictive power of the successor weighted models in forecasting the 2000 election. Fig. 2 shows the sum of the posterior probabilities for the weighted and unweighted models for the 2000 and 2004 forecasts. In the 2000 one-step-ahead models, coefficients from the unweighted models account for 95.6% of the weight in the model average, while coefficients from the successor weighted models contribute only 4.4%. For the 2004 forecast, successor weighted models become much more prominent, accounting for 37% of the model average coefficients, once data from the 2000 election are included. Essentially, for the 2004 one-step-ahead forecasts, the weighted models do not do a better job of predicting the election, but they are so much better at accounting for 2000 that their relevance increases by about 740%.[16] Thus, the better fit of the weighted models for 2000 tells us to take more heed of their faulty forecasts for future elections. Contrary to the

[12] This is the (posterior probability) weighted average of each of the seventy-two predictions. Thus, more weight is given to models that better fit *all* of the data.

[13] Tables A1 and A2 contain the estimation results for all seventy-two models for each election year.

[14] To calculate the mean absolute forecasting error, we took the absolute value of the forecast error, $|\hat{y}-y|$, of each of the seventy-two models. The mean absolute error was then calculated for the thirty-six models in each class, weighted or unweighted, for each election.

[15] This is the result of a difference in means test between the mean of the absolute values of the forecasting errors for the successor weighted and unweighted models respectively. The null hypothesis states that there is no difference between the mean absolute forecasting errors.

[16] We further compared the average contribution of posterior probabilities for weighted models between the two forecasts, 2000 and 2004. The average contribution of the weighted models is 0.001 for the 2000 forecast and 0.01 for the 2004 forecasts. This difference is significant ($p=0.027$).

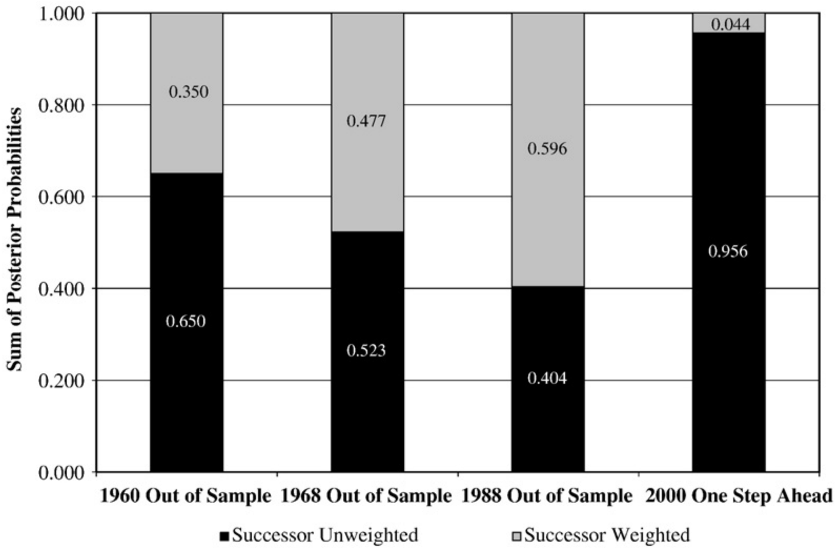

Fig. 3. Comparison of the posterior probability contributions between successor weighted and unweighted models for successor election forecasts. Each model includes all elections through 2000, except the one being forecast.

claims of Bartels and Zaller (2001), the 2000 election does not appear to be a normal election as far as forecasting is concerned.

A possible explanation for these results is that succession elections as a class are different. If so, with only three such elections in our time span, their contribution may be relatively small compared to the eight elections prior to 2000 that included an incumbent candidate. We turn to this possibility next.

4. Down-weighting in other non-incumbent elections

Simply showing that successor weighting predicts the 2000 election on its own better, runs counter to our claim that weighting *should not* be done for 2008. If weighting helps predict 2000, why not use it again for the open 2008 election? At the same time, we find that successor weighting does more harm than good in predicting other successor elections. Indeed, the 2000 election stands out even among similar incumbent-free contests.

Fig. 3 graphs the sums of the posterior probabilities for the weighted and unweighted models in each of the 1960, 1968, 1988, and 2000 forecasts.[17] Each of the bars demonstrates the breakdown in posterior probabilities when one election is left out. When the 2000 election is left out, the unweighted models dominate, but in each of the other 3 elections, 2000 is included and drastically pushes up the importance of the weighted models. If successor weighting had strong predictive power for 1960, 1968, and 1988, the weighted models would contribute more than 4.4% to the model average coefficients for 2000.[18] As we did with the 2000 and 2004 forecasts, we present the model average coefficients in Table 3 below. Full results for each of the 72 models are provided in the Appendix in Tables A3–A5.

While we find the analysis of posterior probabilities compelling, it does not necessarily show that successor weighting is only effective for forecasting the 2000 election. Table 4 provides an analysis of the absolute forecast errors from each of the four succession elections in our sample. Specifically, the mean absolute forecasting errors for the unweighted and weighted models are calculated for each of the four succession elections, and we perform a simple difference in means test for each election year. As expected for 2000, successor weighting clearly yields better predictions — the mean error for these models was 0.854, as compared to 3.704 points for unweighted models. This difference, almost three points, is highly significant. Looking at the three remaining elections unfortunately gives little guidance regarding which procedure should be used in future forecasts. Successor weighting yields better forecasts of the 1960 election, although the difference is only marginally significant. Weighting provides significantly worse forecasts of the 1968 election, and only slightly worse predictions of 1988, although the difference here is clearly not significant.

[17] For each of these forecasts, data are included for every election through 2000, except for the particular year being forecast.

[18] We tested the differences between the mean posterior probabilities of the weighted models in the 1960, 1968, and 1988 forecasts and the 2000 forecasts. The weighted models for the three earlier elections all have significantly larger mean posterior probabilities than 2000. The differences between the means were significant for the following levels: 1960 v. 2000, $p=0.012$; 1968 v. 2000, $p=0.016$; and 1988 v. 2000, $p=0.022$.

Table 3
Model average coefficients for 1960, 1968, and 1988 forecasts

Variables	1960		1968		1988	
	Unweighted	Successor weighted	Unweighted	Successor weighted	Unweighted	Successor weighted
Presidential approval						
Presidential approval (%)	0.018 (0.066)	0.016 (0.062)	0.011 (0.052)	0.020 (0.068)	0.008 (0.041)	0.019 (0.065)
Difference b/w approval and disapproval (%)	0.058 (0.063)	0.031 (0.054)	0.049 (0.063)	0.043 (0.059)	0.032 (0.053)	0.058 (0.060)
Log of Presidential approval	0.854 (3.333)	0.063 (0.960)	0.647 (2.963)	0.035 (0.820)	0.429 (2.163)	0.007 (0.396)
Economic indicators						
Real GDP	0.446 (0.433)	0.251 (0.382)	0.286 (0.351)	0.348 (0.410)	0.168 (0.281)	0.385 (0.361)
Real Disposable Income	0.018 (0.100)	0.003 (0.057)	0.024 (0.124)	0.006 (0.077)	0.026 (0.116)	0.004 (0.057)
Number of jobs	0.003 (0.039)	0.002 (0.034)	0.005 (0.068)	0.002 (0.039)	0.025 (0.118)	0.004 (0.042)
Economic evaluations						
Personal prospections	−0.039 (0.100)	−0.007 (0.037)	−0.013 (0.062)	−0.010 (0.037)	−0.003 (0.038)	−0.007 (0.023)
Personal retrospections	0.001 (0.046)	−0.004 (0.025)	0.004 (0.044)	−0.007 (0.032)	0.004 (0.036)	−0.005 (0.024)
National prospections	−0.005 (0.041)	−0.005 (0.019)	−0.001 (0.045)	−0.008 (0.024)	0.020 (0.087)	−0.005 (0.017)
National retrospections	−0.001 (0.014)	−0.002 (0.018)	−0.001 (0.013)	−0.002 (0.019)	0.000 (0.010)	−0.001 (0.019)
Miscellaneous						
Third term	−4.748 (1.962)		−4.706 (2.131)		−5.118 (1.981)	
Constant	54.903 (16.577)		53.010 (15.080)		49.512 (15.392)	
Model average statistics						
Average of forecasts for a particular election	48.358		50.489		50.475	
Sum of posterior probabilities	0.350	0.650	0.477	0.523	0.596	0.404

Note: This table has the same interpretation as Table A1; thus all notes from that table also apply here.

Despite this, the 2000 election still stands out as being clearly different, even from other succession elections. The differences in 1960, 1968, and 1988 are minimal, at most about half a point or a point. The difference is not only much larger for the 2000 election, but weighting also explains far more of the variance in absolute forecasting errors in 2000. We ascertain this by estimating simple regression models on the absolute forecasting errors in each of the four election years. Each of the 72 models is an observation, with a dummy variable scored 1 for models that employ the weighting procedure as the only independent variable. The results are not presented because they are identical to the difference in means tests, but the adjusted R^2 statistics can tell us a great deal about the importance of weighting in each election.

In the 1960, 1968, and 1988 elections, weighting explains a small amount of the variance in forecast errors. Given this finding, the variance in forecasting errors is probably due simply to model dependence. In other words, it is the specification of certain inputs in the model generating the variance in forecast errors, rather than the choice to weight or not weight for successor elections. As a concrete example, models that use the percentage change in GDP tend to perform better. The low R^2 in 1968 could imply that models that use unweighted GDP make better forecasts, but models that use weighted GDP also perform reasonably well. Models that do not use either form of GDP do worse than that. For the 2000

Table 4
Comparison of absolute forecast errors for succession elections

Forecast errors	Models			
	1960 out-of-sample	1968 out-of-sample	1988 out-of-sample	2000 one-step-ahead
Mean for unweighted models	1.796	**1.145**	4.582	3.704
Mean for successor weighted models	**1.391**	1.680	4.588	**0.854**
Difference (weighted − unweighted)	−0.406	0.535	0.006	−2.850
H0: Weighted − unweighted = 0	$p=0.07$	$p=0.03$	$p=0.98$	$p<0.00$
Adj. R^2	0.033	0.053	−0.014	0.490

Note: Bolded means represent the class of models that had an advantage in forecasting. The adjusted R^2 statistics come from the results of regressions using each of the seventy-two models as an observation and the absolute value of the forecasting error of each model as the dependent variable. The only independent variable is a dummy coded 1 for models that use successor weighted variables, and 0 otherwise. The full results are not presented because they are identical to the difference in means tests reported above.

election, however, weighting is the crucial factor in lowering the forecasting error. Looking only at the difference between weighted and unweighted models, this difference explains almost *half* of the variance in the forecasting errors.

While Table 4 reiterates the uniqueness of the 2000 election, it does not provide irrefutable proof that successor weighting is a practice that should not be employed in future elections. Our second argument rests on the premise that procedures better suited to explaining the 2000 election do not help explain other elections generally. We focused primarily on other non-incumbent elections, because these should most resemble the 2000 election in terms of what is needed to accurately predict the outcome. Even though we did not show that successor weighting is always harmful, except in 2000, we did demonstrate that is does not necessarily help either. As a final analysis, we examined the average absolute error for each of the seventy-two models.

Specifically, our analysis mirrors our presentation in Table 4. We estimated each of the seventy-two models on all election data from 1956 to 2004, and therefore do not have forecasts. For each model, we calculated the average absolute error. This is the average absolute error for every election — the average of the absolute errors from 1956 to 2004 for Model 1, Model 2, etc. Finally, we tested the difference between the mean average absolute error of the unweighted models (the first thirty-six) and the weighted models (the last thirty-six). Across the thirteen elections, the unweighted models yielded a mean of 1.572 points. The weighted models provided a mean of 1.858 points. Thus, on average, the unweighted models were 0.287 of a point closer, which is significant for $p = 0.003$. Weighting explained roughly 11% of the variance in average absolute errors. As a general practice, successor weighting yields worse predictions of presidential elections.

5. Conclusion

The 2000 election simply did not follow the established patterns seen in the forecasting models of political scientists. Indeed, even years after the event, simply explaining what happened and why in that election is a long and complicated story. One common and seemingly simple explanation of the election was that it did not feature an incumbent, and therefore measures of incumbent performance should not have been given their full weight. This is an intuitively pleasing, yet overly simple explanation. To be sure, Al Gore never captivated voters to the extent that Bill Clinton did, and using the latter's approval rating to predict the success of the former seems an obvious mistake in retrospect. In addition, while Clinton oversaw enormous economic expansion and job growth, many asked the sensible question: "What effect does the Vice President have on the economy, anyway?" Again, this pointed to the need to assign less than full weight to a successor in forecasting models.

However, we find here that doing so does not help the forecasting exercise as a whole, and leads to overall poorer model performance. When we down-weight observations for successor candidates we do get better predictions for 2000, but the overall model fit of the forecasting models suffers. Put simply, on average presidential forecasts are best when they ignore whether or not an incumbent is running. Certainly, 2000 was not the first presidential election in which a president was not running. In our sample period, there are the examples of Nixon–Kennedy in 1960, Humphrey–Nixon in 1968, and Bush–Dukakis in 1988. Only in 1960 does the weighting scheme provide better predictions, and that finding attains only marginal statistical significance; so what empirical rule tells us that such weights are appropriate for 2000? Tailoring models to best predict a once-in-a-century outcome is too high a sacrifice to make when dealing with datasets as small as these, particularly in the absence of sound empirical evidence that such adaptations are appropriate for similar non-incumbent elections.

Appendix A

Table A1
2000 one-step-ahead forecast models

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
1 AP, GDP, PP	0.19 (0.07)	0.44 (0.22)	0.11 (0.15)	−4.89 (1.67)	39.65 (17.65)	3.91	0.0128
2 AP, GDP, NP	0.22 (0.08)	0.56 (0.17)	0.01 (0.10)	−4.25 (1.77)	51.38 (10.65)	3.13	0.0080
3 AP, GDP, NR	0.19 (0.07)	0.48 (0.19)	0.02 (0.04)	−4.57 (1.48)	50.87 (3.04)	3.36	0.0118
4 AP, RDI, PP	0.10 (0.08)	0.24 (0.27)	0.28 (0.14)	−6.43 (1.77)	20.48 (15.88)	3.69	0.0017
5 AP, RDI, NP	0.13 (0.11)	0.44 (0.33)	0.10 (0.15)	−5.90 (2.42)	42.91 (15.21)	0.13	0.0001
6 AP, RDI, NR	0.12 (0.10)	0.25 (0.35)	0.06 (0.05)	−5.70 (1.95)	48.13 (4.12)	2.15	0.0004
7 AP, JOB, PP	0.14 (0.08)	0.17 (0.19)	0.37 (0.11)	−6.17 (1.78)	9.04 (13.47)	5.73	0.0017
8 AP, JOB, NP	0.14 (0.11)	0.41 (0.26)	0.32 (0.14)	−6.57 (2.34)	16.63 (15.83)	1.52	0.0002

Table A1 (*continued*)

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
9 AP, JOB, NR	0.14 (0.10)	0.04 (0.23)	0.09 (0.04)	−5.54 (2.09)	46.01 (4.12)	3.39	0.0002
10 DIF, GDP, PP	0.10 (0.03)	0.48 (0.20)	0.09 (0.14)	−5.12 (1.38)	40.94 (15.39)	3.03	0.0446
11 DIF, GDP, NP	0.11 (0.03)	0.59 (0.16)	0.00 (0.09)	−4.54 (1.46)	51.71 (9.22)	2.35	0.0290
12 DIF, GDP, NR	0.10 (0.03)	0.55 (0.18)	0.01 (0.03)	−4.73 (1.29)	50.89 (2.71)	2.46	0.0317
13 DIF, RDI, PP	0.05 (0.04)	0.23 (0.26)	0.28 (0.13)	−6.60 (1.59)	19.84 (15.07)	3.31	0.0024
14 DIF, RDI, NP	0.06 (0.05)	0.45 (0.33)	0.10 (0.15)	−6.17 (2.22)	42.27 (14.66)	−0.42	0.0001
15 DIF, RDI, NR	0.06 (0.05)	0.28 (0.35)	0.06 (0.05)	−5.98 (1.85)	47.80 (4.07)	1.51	0.0003
16 DIF, JOB, PP	0.07 (0.04)	0.16 (0.18)	0.37 (0.10)	−6.48 (1.60)	8.17 (12.61)	5.16	0.0024
17 DIF, JOB, NP	0.06 (0.05)	0.39 (0.27)	0.33 (0.13)	−6.96 (2.18)	15.60 (15.51)	0.87	0.0002
18 DIF, JOB, NR	0.06 (0.05)	0.02 (0.23)	0.09 (0.04)	−5.96 (1.99)	45.52 (4.12)	2.74	0.0002
19 LOG, GDP, PP	10.22 (3.97)	0.43 (0.22)	0.08 (0.16)	−4.91 (1.61)	4.32 (12.39)	3.73	0.0158
20 LOG, GDP, NP	11.59 (3.84)	0.51 (0.16)	0.00 (0.10)	−4.44 (1.63)	7.74 (10.55)	3.24	0.0126
21 LOG, GDP, NR	10.55 (3.84)	0.46 (0.18)	0.02 (0.04)	−4.68 (1.42)	10.96 (12.96)	3.34	0.0147
22 LOG, RDI, PP	5.96 (4.43)	0.25 (0.26)	0.25 (0.14)	−6.34 (1.71)	1.23 (17.25)	3.50	0.0022
23 LOG, RDI, NP	8.36 (5.52)	0.42 (0.31)	0.07 (0.14)	−5.56 (2.23)	14.20 (18.69)	0.62	0.0003
24 LOG, RDI, NR	7.27 (5.03)	0.28 (0.33)	0.05 (0.05)	−5.60 (1.85)	21.14 (17.92)	2.06	0.0005
25 LOG, JOB, PP	7.84 (4.38)	0.18 (0.18)	0.33 (0.12)	−6.09 (1.73)	−17.34 (13.22)	5.61	0.0023
26 LOG, JOB, NP	8.79 (5.20)	0.40 (0.25)	0.28 (0.13)	−6.23 (2.14)	−12.86 (15.22)	1.97	0.0004
27 LOG, JOB, NR	8.49 (5.61)	0.07 (0.22)	0.08 (0.04)	−5.42 (2.02)	13.91 (20.48)	3.50	0.0003
28 AP, GDP, PR	0.13 (0.05)	0.07 (0.22)	0.23 (0.09)	−4.28 (0.89)	29.39 (9.30)	6.53	0.0830
29 AP, RDI, PR	0.12 (0.04)	0.04 (0.15)	0.25 (0.05)	−4.37 (0.96)	27.47 (4.94)	6.62	0.0807
30 AP, JOB, PR	0.12 (0.05)	−0.04 (0.11)	0.26 (0.04)	−4.38 (0.93)	26.96 (4.21)	6.78	0.0849
31 DIF, GDP, PR	0.07 (0.03)	0.15 (0.23)	0.20 (0.09)	−4.55 (0.82)	31.96 (9.42)	5.51	0.1353
32 DIF, RDI, PR	0.06 (0.02)	0.05 (0.14)	0.25 (0.05)	−4.65 (0.89)	27.17 (4.79)	6.02	0.1043
33 DIF, JOB, PR	0.06 (0.02)	−0.05 (0.11)	0.26 (0.04)	−4.64 (0.86)	26.46 (3.99)	6.28	0.1135
34 LOG, GDP, PR	6.89 (2.89)	0.07 (0.23)	0.22 (0.10)	−4.46 (0.91)	4.55 (7.47)	6.32	0.0504
35 LOG, RDI, PR	6.19 (2.36)	0.08 (0.15)	0.23 (0.05)	−4.62 (0.95)	5.82 (7.95)	6.16	0.0587
36 LOG, JOB, PR	6.13 (2.62)	−0.03 (0.12)	0.25 (0.05)	−4.53 (0.95)	4.61 (8.10)	6.65	0.0486
37 AP, GDP, PP	0.21 (0.06)	0.70 (0.19)	−0.05 (0.04)	−5.71 (2.26)	58.25 (4.60)	1.77	0.0064
38 AP, GDP, NP	0.22 (0.06)	0.68 (0.19)	−0.04 (0.04)	−5.19 (1.99)	57.32 (4.04)	2.06	0.0058
39 AP, GDP, NR	0.24 (0.09)	0.66 (0.34)	−0.02 (0.06)	−4.00 (2.17)	54.28 (4.96)	1.47	0.0021
40 AP, RDI, PP	0.16 (0.13)	0.60 (0.40)	−0.02 (0.06)	−5.10 (3.69)	55.50 (7.08)	0.06	0.0001
41 AP, RDI, NP	0.16 (0.13)	0.63 (0.40)	−0.03 (0.06)	−5.22 (3.26)	55.94 (6.27)	0.23	0.0001
42 AP, RDI, NR	0.18 (0.11)	0.03 (0.56)	0.08 (0.07)	−1.54 (3.14)	47.02 (6.15)	1.08	0.0001
43 AP, JOB, PP	0.30 (0.11)	−0.15 (0.50)	0.03 (0.06)	−3.27 (5.41)	52.75 (10.76)	0.95	0.0000
44 AP, JOB, NP	0.30 (0.11)	−0.15 (0.53)	0.02 (0.07)	−3.77 (5.43)	53.86 (11.03)	0.85	0.0000
45 AP, JOB, NR	0.18 (0.10)	0.22 (0.43)	0.09 (0.05)	0.20 (3.83)	43.36 (7.70)	1.44	0.0002
46 DIF, GDP, PP	0.10 (0.03)	0.71 (0.18)	−0.05 (0.04)	−5.45 (2.15)	57.20 (4.42)	1.28	0.0120
47 DIF, GDP, NP	0.11 (0.03)	0.70 (0.17)	−0.05 (0.04)	−4.97 (1.87)	56.38 (3.82)	1.56	0.0118
48 DIF, GDP, NR	0.12 (0.04)	0.70 (0.32)	−0.02 (0.06)	−3.86 (2.04)	53.51 (4.50)	0.91	0.0037
49 DIF, RDI, PP	0.08 (0.07)	0.61 (0.40)	−0.02 (0.06)	−4.91 (3.79)	54.66 (7.41)	−0.35	0.0001
50 DIF, RDI, NP	0.08 (0.06)	0.63 (0.40)	−0.03 (0.06)	−5.08 (3.32)	55.19 (6.48)	−0.17	0.0001
51 DIF, RDI, NR	0.09 (0.06)	0.00 (0.56)	0.08 (0.07)	−1.20 (3.16)	45.82 (6.11)	0.71	0.0002
52 DIF, JOB, PP	0.15 (0.05)	−0.14 (0.51)	0.03 (0.06)	−2.81 (5.52)	50.93 (11.07)	0.19	0.0000
53 DIF, JOB, NP	0.15 (0.06)	−0.14 (0.54)	0.02 (0.07)	−3.40 (5.54)	52.26 (11.30)	0.09	0.0000
54 DIF, JOB, NR	0.09 (0.05)	0.23 (0.42)	0.10 (0.04)	0.55 (3.78)	42.17 (7.45)	1.03	0.0002
55 LOG, GDP, PP	10.33 (7.12)	1.22 (0.28)	−0.37 (0.21)	−4.11 (4.29)	55.44 (7.85)	0.41	0.0001
56 LOG, GDP, NP	−0.77 (9.84)	0.94 (0.38)	−0.03 (0.29)	−7.65 (6.88)	59.35 (11.87)	1.13	0.0000
57 LOG, GDP, NR	−2.41 (1.99)	0.34 (0.42)	0.10 (0.06)	−5.82 (4.00)	54.13 (8.47)	1.30	0.0001
58 LOG, RDI, PP	−4.35 (7.02)	0.97 (0.27)	0.06 (0.19)	−9.67 (4.88)	62.44 (9.19)	−0.51	0.0000
59 LOG, RDI, NP	−5.87 (7.98)	0.91 (0.31)	0.11 (0.23)	−10.90 (5.92)	64.37 (10.53)	−0.99	0.0000
60 LOG, RDI, NR	−2.42 (2.01)	0.40 (0.55)	0.09 (0.08)	−6.19 (4.40)	54.90 (9.44)	0.54	0.0001
61 LOG, JOB, PP	−8.27 (11.18)	−0.88 (0.66)	0.22 (0.30)	−15.19 (9.60)	71.78 (18.63)	−0.43	0.0000
62 LOG, JOB, NP	−12.72 (11.73)	−0.47 (0.72)	0.36 (0.33)	−16.43 (9.07)	72.54 (17.33)	−1.84	0.0000
63 LOG, JOB, NR	−2.26 (2.11)	0.11 (0.49)	0.15 (0.04)	−3.49 (5.59)	48.67 (11.65)	1.35	0.0000
64 AP, GDP, PR	0.23 (0.07)	0.70 (0.28)	−0.03 (0.07)	−5.47 (3.31)	56.18 (6.60)	0.97	0.0002
65 AP, RDI, PR	0.25 (0.12)	0.22 (0.40)	0.07 (0.07)	−1.14 (4.07)	46.42 (7.24)	0.44	0.0000
66 AP, JOB, PR	0.30 (0.09)	0.04 (0.43)	0.09 (0.06)	0.54 (4.84)	43.70 (9.18)	1.12	0.0000

(*continued on next page*)

Table A1 (*continued*)

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
67 DIF, GDP, PR	0.11 (0.03)	0.72 (0.26)	−0.04 (0.06)	−5.28 (3.11)	55.37 (6.22)	0.49	0.0003
68 DIF, RDI, PR	0.12 (0.06)	0.21 (0.39)	0.07 (0.07)	−0.77 (4.08)	45.11 (7.32)	−0.10	0.0000
69 DIF, JOB, PR	0.15 (0.05)	0.05 (0.42)	0.10 (0.06)	1.06 (4.82)	41.98 (9.15)	0.48	0.0000
70 LOG, GDP, PR	2.19 (8.60)	1.27 (0.90)	−0.16 (0.39)	−9.12 (5.48)	60.69 (11.55)	−0.75	0.0000
71 LOG, RDI, PR	−5.95 (3.89)	0.62 (0.33)	0.21 (0.14)	−6.77 (4.14)	54.60 (8.13)	0.23	0.0000
72 LOG, JOB, PR	−8.56 (4.25)	−0.46 (0.50)	0.34 (0.13)	−8.11 (6.15)	57.30 (12.27)	1.47	0.0000

Note: The first 36 models use the variables in their original form. The last 36, which are shaded, weight the variables by 0.5 for successor candidates. In the model specifications, the first variable listed is the approval variable, the second is the economic indicator, and the third is the economic evaluation variable. The abbreviations correspond to the following variables: AP = June approval, DIF = Difference between approval and disapproval, LOG = Log of approval, GDP = Percentage change in real GDP, RDI = Percentage change in real disposable income, JOB = Percentage change in employment, PP = Personal prospections, NP = National prospections, NR = National retrospections, PR = Personal retrospections.

Table A2
2004 one-step-ahead forecast models

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
1 AP, GDP, PP	0.21 (0.08)	0.53 (0.24)	0.02 (0.16)	−4.89 (1.87)	50.93 (18.28)	3.43	0.0178
2 AP, GDP, NP	0.18 (0.08)	0.49 (0.17)	0.06 (0.10)	−5.33 (1.62)	46.55 (10.42)	4.18	0.0243
3 AP, GDP, NR	0.19 (0.08)	0.47 (0.21)	0.02 (0.04)	−5.16 (1.56)	51.39 (3.30)	3.62	0.0219
4 AP, RDI, PP	0.09 (0.09)	0.39 (0.24)	0.20 (0.12)	−6.69 (1.80)	30.02 (14.07)	4.90	0.0055
5 AP, RDI, NP	0.13 (0.10)	0.44 (0.31)	0.10 (0.14)	−5.93 (2.06)	42.85 (13.99)	4.12	0.0012
6 AP, RDI, NR	0.11 (0.09)	0.35 (0.30)	0.05 (0.04)	−6.02 (1.80)	49.09 (3.67)	3.72	0.0024
7 AP, JOB, PP	0.14 (0.10)	0.06 (0.22)	0.29 (0.12)	−6.80 (2.11)	19.18 (15.01)	5.66	0.0009
8 AP, JOB, NP	0.12 (0.10)	0.39 (0.25)	0.33 (0.13)	−7.00 (2.03)	16.01 (14.86)	4.42	0.0015
9 AP, JOB, NR	0.13 (0.10)	−0.01 (0.22)	0.08 (0.04)	−6.23 (2.01)	47.10 (4.02)	4.78	0.0008
10 DIF, GDP, PP	0.11 (0.03)	0.56 (0.21)	0.01 (0.13)	−5.02 (1.47)	50.89 (14.62)	2.56	0.1222
11 DIF, GDP, NP	0.10 (0.03)	0.54 (0.15)	0.03 (0.09)	−5.22 (1.37)	48.88 (9.06)	2.95	0.1333
12 DIF, GDP, NR	0.11 (0.03)	0.56 (0.19)	0.00 (0.04)	−5.02 (1.31)	51.57 (2.75)	2.54	0.1227
13 DIF, RDI, PP	0.05 (0.04)	0.36 (0.24)	0.20 (0.11)	−6.73 (1.61)	29.00 (12.72)	4.55	0.0093
14 DIF, RDI, NP	0.06 (0.05)	0.44 (0.30)	0.10 (0.13)	−6.07 (1.95)	42.34 (13.59)	3.69	0.0013
15 DIF, RDI, NR	0.06 (0.04)	0.35 (0.29)	0.05 (0.04)	−6.13 (1.71)	48.59 (3.47)	3.33	0.0027
16 DIF, JOB, PP	0.08 (0.04)	0.07 (0.20)	0.29 (0.11)	−6.86 (1.85)	18.51 (13.15)	5.00	0.0018
17 DIF, JOB, NP	0.06 (0.05)	0.38 (0.25)	0.33 (0.12)	−7.15 (1.93)	15.67 (14.45)	4.04	0.0016
18 DIF, JOB, NR	0.06 (0.05)	−0.02 (0.22)	0.08 (0.04)	−6.36 (1.89)	46.56 (3.84)	4.36	0.0009
19 LOG, GDP, PP	11.47 (4.32)	0.52 (0.23)	−0.02 (0.16)	−4.88 (1.79)	11.14 (12.92)	3.50	0.0252
20 LOG, GDP, NP	9.64 (3.80)	0.45 (0.17)	0.06 (0.10)	−5.52 (1.52)	10.14 (11.07)	4.47	0.0324
21 LOG, GDP, NR	10.21 (4.21)	0.46 (0.20)	0.01 (0.04)	−5.25 (1.50)	12.75 (14.17)	3.88	0.0266
22 LOG, RDI, PP	5.83 (4.54)	0.39 (0.23)	0.17 (0.13)	−6.53 (1.75)	11.10 (15.33)	4.75	0.0077
23 LOG, RDI, NP	7.97 (4.77)	0.43 (0.29)	0.07 (0.13)	−5.74 (1.89)	15.28 (16.58)	3.91	0.0025
24 LOG, RDI, NR	6.93 (4.79)	0.37 (0.29)	0.04 (0.04)	−5.88 (1.72)	23.38 (16.82)	3.68	0.0036
25 LOG, JOB, PP	8.19 (5.27)	0.08 (0.21)	0.26 (0.13)	−6.65 (2.06)	−8.28 (14.98)	5.42	0.0012
26 LOG, JOB, NP	7.73 (4.71)	0.37 (0.23)	0.29 (0.12)	−6.80 (1.86)	−9.95 (13.90)	4.24	0.0030
27 LOG, JOB, NR	7.64 (5.65)	0.01 (0.22)	0.07 (0.04)	−6.14 (1.95)	18.25 (20.45)	4.65	0.0010
28 AP, GDP, PR	0.20 (0.07)	0.47 (0.27)	0.04 (0.10)	−4.87 (1.30)	49.43 (10.37)	3.44	0.0039
29 AP, RDI, PR	0.12 (0.07)	0.29 (0.19)	0.15 (0.06)	−5.67 (1.33)	37.35 (6.06)	3.67	0.0028
30 AP, JOB, PR	0.13 (0.08)	−0.11 (0.19)	0.20 (0.06)	−5.49 (1.51)	34.49 (6.43)	5.31	0.0007
31 DIF, GDP, PR	0.10 (0.03)	0.53 (0.24)	0.02 (0.09)	−4.98 (1.07)	50.15 (8.58)	2.61	0.0290
32 DIF, RDI, PR	0.06 (0.03)	0.28 (0.18)	0.15 (0.05)	−5.70 (1.20)	36.71 (5.37)	3.22	0.0068
33 DIF, JOB, PR	0.07 (0.03)	−0.11 (0.17)	0.20 (0.05)	−5.52 (1.35)	34.05 (5.63)	4.71	0.0016
34 LOG, GDP, PR	10.54 (3.66)	0.47 (0.27)	0.01 (0.11)	−5.02 (1.25)	11.48 (9.95)	3.78	0.0048
35 LOG, RDI, PR	6.51 (3.38)	0.31 (0.18)	0.13 (0.06)	−5.71 (1.26)	14.40 (10.64)	3.79	0.0044
36 LOG, JOB, PR	6.80 (4.25)	−0.09 (0.19)	0.18 (0.07)	−5.56 (1.48)	9.81 (12.97)	5.34	0.0007
37 AP, GDP, PP	0.20 (0.06)	0.69 (0.19)	−0.04 (0.04)	−5.88 (2.18)	57.86 (4.44)	2.96	0.0467
38 AP, GDP, NP	0.21 (0.06)	0.66 (0.18)	−0.04 (0.04)	−5.27 (1.95)	56.56 (3.88)	2.81	0.0359
39 AP, GDP, NR	0.23 (0.08)	0.64 (0.32)	−0.02 (0.06)	−4.22 (2.04)	54.10 (4.71)	2.94	0.0175
40 AP, RDI, PP	0.16 (0.12)	0.60 (0.36)	−0.02 (0.06)	−5.11 (3.32)	55.50 (6.55)	2.24	0.0005
41 AP, RDI, NP	0.16 (0.12)	0.63 (0.37)	−0.03 (0.06)	−5.25 (2.98)	55.90 (5.78)	2.05	0.0005
42 AP, RDI, NR	0.17 (0.10)	0.09 (0.49)	0.07 (0.07)	−1.96 (2.66)	47.51 (5.55)	4.02	0.0012
43 AP, JOB, PP	0.30 (0.10)	−0.16 (0.46)	0.03 (0.06)	−3.53 (4.92)	52.88 (9.99)	4.29	0.0001

Table A2 (*continued*)

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
44 AP, JOB, NP	0.30 (0.10)	−0.16 (0.49)	0.02 (0.06)	−3.92 (5.00)	53.78 (10.24)	4.31	0.0001
45 AP, JOB, NR	0.17 (0.10)	0.18 (0.39)	0.09 (0.04)	−0.31 (3.44)	43.88 (7.16)	2.79	0.0014
46 DIF, GDP, PP	0.10 (0.03)	0.70 (0.17)	−0.04 (0.04)	−5.54 (2.04)	56.88 (4.18)	2.23	0.1156
47 DIF, GDP, NP	0.11 (0.03)	0.68 (0.17)	−0.04 (0.03)	−5.01 (1.80)	55.78 (3.59)	2.00	0.0985
48 DIF, GDP, NR	0.12 (0.04)	0.70 (0.30)	−0.02 (0.05)	−4.02 (1.88)	53.50 (4.22)	1.97	0.0392
49 DIF, RDI, PP	0.08 (0.06)	0.60 (0.37)	−0.02 (0.06)	−4.85 (3.45)	54.66 (6.87)	1.72	0.0005
50 DIF, RDI, NP	0.08 (0.06)	0.63 (0.37)	−0.03 (0.06)	−5.06 (3.05)	55.23 (5.97)	1.52	0.0005
51 DIF, RDI, NR	0.09 (0.05)	0.04 (0.49)	0.08 (0.07)	−1.48 (2.67)	46.19 (5.45)	3.57	0.0014
52 DIF, JOB, PP	0.15 (0.05)	−0.14 (0.47)	0.03 (0.06)	−2.85 (5.03)	50.95 (10.25)	3.11	0.0001
53 DIF, JOB, NP	0.15 (0.05)	−0.15 (0.50)	0.02 (0.06)	−3.41 (5.09)	52.25 (10.45)	3.21	0.0001
54 DIF, JOB, NR	0.09 (0.05)	0.21 (0.39)	0.09 (0.04)	0.18 (3.36)	42.60 (6.85)	1.96	0.0018
55 LOG, GDP, PP	10.46 (6.53)	1.22 (0.26)	−0.37 (0.19)	−4.08 (3.97)	55.25 (7.14)	0.85	0.0010
56 LOG, GDP, NP	−1.38 (8.92)	0.91 (0.34)	−0.01 (0.26)	−8.05 (6.26)	59.53 (11.04)	5.01	0.0001
57 LOG, GDP, NR	−2.27 (1.83)	0.34 (0.39)	0.10 (0.06)	−5.84 (3.75)	53.71 (7.87)	5.98	0.0006
58 LOG, RDI, PP	−4.54 (6.39)	0.97 (0.25)	0.07 (0.18)	−9.71 (4.52)	62.67 (8.37)	3.85	0.0002
59 LOG, RDI, NP	−5.65 (7.39)	0.91 (0.29)	0.10 (0.21)	−10.70 (5.47)	64.42 (9.80)	4.71	0.0002
60 LOG, RDI, NR	−2.37 (1.84)	0.42 (0.49)	0.09 (0.07)	−6.30 (4.02)	54.99 (8.74)	4.99	0.0006
61 LOG, JOB, PP	−8.42 (10.17)	−0.88 (0.61)	0.22 (0.27)	−15.22 (8.88)	71.95 (17.11)	15.21	0.0000
62 LOG, JOB, NP	−12.41 (10.92)	−0.47 (0.67)	0.35 (0.31)	−16.14 (8.43)	72.73 (16.18)	14.37	0.0000
63 LOG, JOB, NR	−2.13 (1.95)	0.08 (0.45)	0.15 (0.04)	−3.76 (5.19)	48.77 (10.91)	5.68	0.0004
64 AP, GDP, PR	0.22 (0.06)	0.70 (0.27)	−0.04 (0.06)	−5.68 (3.08)	56.29 (6.23)	3.07	0.0015
65 AP, RDI, PR	0.24 (0.11)	0.23 (0.36)	0.07 (0.06)	−1.32 (3.56)	46.61 (6.63)	2.69	0.0000
66 AP, JOB, PR	0.29 (0.09)	0.01 (0.40)	0.09 (0.06)	0.09 (4.36)	44.24 (8.51)	2.77	0.0000
67 DIF, GDP, PR	0.11 (0.03)	0.72 (0.25)	−0.04 (0.06)	−5.38 (2.88)	55.42 (5.83)	2.26	0.0039
68 DIF, RDI, PR	0.12 (0.05)	0.21 (0.35)	0.07 (0.06)	−0.73 (3.60)	45.07 (6.70)	1.90	0.0000
69 DIF, JOB, PR	0.15 (0.04)	0.04 (0.39)	0.09 (0.05)	0.87 (4.33)	42.21 (8.43)	1.56	0.0000
70 LOG, GDP, PR	1.47 (6.95)	1.20 (0.76)	−0.13 (0.32)	−8.85 (4.90)	60.24 (10.51)	4.52	0.0000
71 LOG, RDI, PR	−5.87 (3.40)	0.63 (0.30)	0.21 (0.12)	−6.80 (3.85)	54.60 (7.61)	4.58	0.0000
72 LOG, JOB, PR	−8.15 (3.82)	−0.48 (0.46)	0.32 (0.12)	−8.36 (5.75)	57.41 (11.57)	10.57	0.0000

Note: The first 36 models use the variables in their original form. The last 36, which are shaded, weight the variables by 0.5 for successor candidates. In the model specifications, the first variable listed is the approval variable, the second is the economic indicator, and the third is the economic evaluation variable. The abbreviations correspond to the following variables: AP = June approval, DIF = Difference between approval and disapproval, LOG = Log of approval, GDP = Percentage change in real GDP, RDI = Percentage change in real disposable income, JOB = Percentage change in employment, PP = Personal prospections, NP = National prospections, NR = National retrospections, PR = Personal retrospections.

Table A3
1960 out-of-sample forecasts

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
1 AP, GDP, PP	0.25 (0.07)	0.94 (0.31)	−0.20 (0.15)	−4.06 (1.52)	75.45 (17.53)	−4.53	0.0375
2 AP, GDP, NP	0.22 (0.08)	0.68 (0.24)	−0.05 (0.10)	−4.49 (1.63)	57.61 (10.59)	−2.68	0.0122
3 AP, GDP, NR	0.21 (0.08)	0.63 (0.28)	0.00 (0.04)	−4.60 (1.70)	52.71 (3.68)	−2.11	0.0099
4 AP, RDI, PP	0.15 (0.10)	0.47 (0.29)	0.11 (0.12)	−5.02 (2.04)	40.37 (14.55)	1.08	0.0014
5 AP, RDI, NP	0.18 (0.11)	0.54 (0.34)	0.02 (0.12)	−4.51 (2.07)	50.87 (12.68)	1.05	0.0008
6 AP, RDI, NR	0.15 (0.11)	0.42 (0.33)	0.03 (0.04)	−4.90 (2.05)	50.06 (3.96)	0.88	0.0013
7 AP, JOB, PP	0.22 (0.10)	0.18 (0.22)	0.22 (0.13)	−4.79 (2.31)	26.55 (16.69)	2.09	0.0004
8 AP, JOB, NP	0.18 (0.10)	0.45 (0.28)	0.28 (0.14)	−5.58 (2.30)	19.82 (16.94)	1.31	0.0008
9 AP, JOB, NR	0.19 (0.11)	0.11 (0.21)	0.07 (0.04)	−4.71 (2.24)	46.71 (4.55)	1.61	0.0005
10 DIF, GDP, PP	0.12 (0.03)	0.84 (0.27)	−0.13 (0.13)	−4.49 (1.25)	66.79 (14.52)	−2.94	0.1874
11 DIF, GDP, NP	0.12 (0.03)	0.68 (0.20)	−0.05 (0.08)	−4.63 (1.30)	56.63 (8.64)	−1.79	0.1043
12 DIF, GDP, NR	0.12 (0.03)	0.68 (0.23)	−0.02 (0.04)	−4.60 (1.36)	52.56 (2.93)	−1.41	0.0900
13 DIF, RDI, PP	0.09 (0.05)	0.37 (0.29)	0.13 (0.11)	−5.00 (1.79)	37.01 (12.89)	2.16	0.0037
14 DIF, RDI, NP	0.10 (0.05)	0.46 (0.33)	0.04 (0.11)	−4.59 (1.91)	48.34 (11.91)	2.05	0.0013
15 DIF, RDI, NR	0.08 (0.05)	0.37 (0.32)	0.03 (0.04)	−4.90 (1.88)	49.35 (3.61)	1.70	0.0021
16 DIF, JOB, PP	0.12 (0.04)	0.14 (0.20)	0.22 (0.11)	−4.88 (1.96)	25.38 (14.02)	3.17	0.0015
17 DIF, JOB, NP	0.10 (0.05)	0.39 (0.27)	0.26 (0.14)	−5.53 (2.15)	21.52 (16.17)	2.28	0.0014
18 DIF, JOB, NR	0.10 (0.05)	0.07 (0.20)	0.06 (0.04)	−4.71 (2.06)	46.56 (4.18)	2.63	0.0008

(*continued on next page*)

Table A3 (*continued*)

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
19 LOG, GDP, PP	13.42 (3.86)	0.88 (0.31)	−0.22 (0.16)	−4.03 (1.55)	26.41 (17.59)	−3.84	0.0319
20 LOG, GDP, NP	11.78 (4.21)	0.60 (0.25)	−0.05 (0.11)	−4.56 (1.68)	12.26 (15.56)	−1.90	0.0084
21 LOG, GDP, NR	11.65 (4.91)	0.58 (0.28)	−0.01 (0.05)	−4.60 (1.77)	8.32 (16.94)	−1.45	0.0072
22 LOG, RDI, PP	9.10 (5.48)	0.46 (0.28)	0.07 (0.13)	−4.81 (1.98)	9.94 (19.55)	1.40	0.0022
23 LOG, RDI, NP	10.52 (5.20)	0.51 (0.31)	−0.01 (0.12)	−4.36 (1.91)	13.21 (20.14)	1.38	0.0017
24 LOG, RDI, NR	9.31 (5.71)	0.44 (0.31)	0.02 (0.05)	−4.68 (1.98)	15.44 (20.30)	1.30	0.0020
25 LOG, JOB, PP	12.76 (5.41)	0.19 (0.22)	0.16 (0.14)	−4.61 (2.23)	−16.64 (15.75)	2.37	0.0006
26 LOG, JOB, NP	10.69 (5.17)	0.43 (0.26)	0.24 (0.14)	−5.39 (2.14)	−16.96 (14.37)	1.63	0.0017
27 LOG, JOB, NR	11.66 (6.02)	0.13 (0.21)	0.05 (0.04)	−4.55 (2.18)	2.81 (20.84)	1.98	0.0006
28 AP, GDP, PR	0.22 (0.08)	0.71 (0.39)	−0.04 (0.13)	−4.66 (1.61)	56.17 (12.87)	−2.42	0.0106
29 AP, RDI, PR	0.12 (0.09)	0.40 (0.26)	0.12 (0.07)	−4.95 (1.74)	40.13 (7.66)	0.02	0.0061
30 AP, JOB, PR	0.19 (0.10)	0.05 (0.20)	0.16 (0.08)	−4.19 (1.93)	35.98 (8.51)	1.10	0.0011
31 DIF, GDP, PR	0.12 (0.03)	0.69 (0.33)	−0.03 (0.10)	−4.80 (1.31)	54.64 (10.39)	−1.48	0.0828
32 DIF, RDI, PR	0.08 (0.04)	0.33 (0.25)	0.12 (0.06)	−4.82 (1.54)	39.24 (6.74)	0.94	0.0162
33 DIF, JOB, PR	0.11 (0.04)	0.02 (0.17)	0.16 (0.07)	−4.21 (1.67)	35.72 (7.20)	2.14	0.0042
34 LOG, GDP, PR	11.90 (4.58)	0.66 (0.40)	−0.05 (0.13)	−4.73 (1.65)	11.69 (15.56)	−1.75	0.0078
35 LOG, RDI, PR	6.97 (5.15)	0.40 (0.25)	0.10 (0.08)	−4.96 (1.71)	15.18 (17.24)	0.34	0.0066
36 LOG, JOB, PR	11.07 (5.35)	0.09 (0.20)	0.13 (0.09)	−4.24 (1.89)	−3.96 (15.96)	1.44	0.0012
37 AP, GDP, PP	0.21 (0.07)	0.71 (0.22)	−0.05 (0.04)	−5.75 (2.48)	57.93 (4.94)	−0.87	0.0215
38 AP, GDP, NP	0.22 (0.07)	0.69 (0.21)	−0.05 (0.04)	−5.27 (2.21)	56.92 (4.24)	−0.87	0.0201
39 AP, GDP, NR	0.26 (0.08)	0.78 (0.36)	−0.04 (0.06)	−4.67 (2.35)	55.77 (4.96)	−1.06	0.0114
40 AP, RDI, PP	0.17 (0.13)	0.61 (0.38)	−0.02 (0.06)	−4.89 (3.50)	55.83 (6.74)	0.64	0.0006
41 AP, RDI, NP	0.17 (0.13)	0.65 (0.38)	−0.03 (0.06)	−5.13 (3.16)	56.39 (5.87)	0.58	0.0007
42 AP, RDI, NR	0.19 (0.12)	0.30 (0.51)	0.04 (0.07)	−2.34 (2.97)	49.85 (5.71)	0.65	0.0006
43 AP, JOB, PP	0.34 (0.09)	0.06 (0.34)	0.03 (0.06)	−1.41 (4.08)	49.89 (9.08)	1.78	0.0001
44 AP, JOB, NP	0.34 (0.09)	0.07 (0.36)	0.03 (0.06)	−1.71 (4.04)	50.60 (9.13)	1.83	0.0001
45 AP, JOB, NR	0.18 (0.10)	0.39 (0.31)	0.10 (0.05)	1.19 (2.72)	40.67 (6.62)	−0.66	0.0017
46 DIF, GDP, PP	0.11 (0.03)	0.71 (0.19)	−0.05 (0.04)	−5.35 (2.24)	56.79 (4.49)	−0.56	0.0814
47 DIF, GDP, NP	0.12 (0.03)	0.69 (0.19)	−0.05 (0.04)	−4.96 (1.97)	55.96 (3.79)	−0.55	0.0846
48 DIF, GDP, NR	0.14 (0.04)	0.80 (0.32)	−0.04 (0.05)	−4.34 (2.08)	54.66 (4.23)	−0.75	0.0417
49 DIF, RDI, PP	0.09 (0.07)	0.58 (0.39)	−0.02 (0.06)	−4.42 (3.59)	54.61 (6.97)	0.93	0.0007
50 DIF, RDI, NP	0.09 (0.06)	0.62 (0.38)	−0.03 (0.06)	−4.75 (3.21)	55.37 (6.02)	0.87	0.0008
51 DIF, RDI, NR	0.11 (0.06)	0.18 (0.51)	0.05 (0.06)	−1.55 (2.97)	47.95 (5.54)	1.09	0.0010
52 DIF, JOB, PP	0.17 (0.04)	−0.01 (0.33)	0.03 (0.06)	−1.35 (3.95)	49.36 (8.81)	2.39	0.0001
53 DIF, JOB, NP	0.17 (0.04)	−0.01 (0.35)	0.02 (0.06)	−1.86 (3.92)	50.62 (8.88)	2.52	0.0001
54 DIF, JOB, NR	0.09 (0.05)	0.34 (0.30)	0.10 (0.05)	1.18 (2.62)	40.62 (6.25)	−0.22	0.0025
55 LOG, GDP, PP	11.49 (4.76)	1.30 (0.22)	−0.40 (0.14)	−4.01 (3.22)	54.20 (6.19)	−3.57	0.0056
56 LOG, GDP, NP	5.61 (6.22)	1.15 (0.30)	−0.21 (0.18)	−4.35 (4.80)	52.63 (9.20)	−4.14	0.0002
57 LOG, GDP, NR	−1.83 (2.21)	0.55 (0.51)	0.07 (0.08)	−5.61 (4.63)	53.59 (9.56)	−2.23	0.0001
58 LOG, RDI, PP	−1.58 (5.89)	1.02 (0.26)	−0.02 (0.16)	−8.18 (4.46)	60.53 (8.63)	−0.76	0.0002
59 LOG, RDI, NP	−0.67 (5.74)	1.05 (0.27)	−0.04 (0.16)	−7.68 (4.75)	59.66 (9.21)	−0.82	0.0002
60 LOG, RDI, NR	−2.23 (2.10)	0.75 (0.50)	0.05 (0.07)	−6.95 (4.54)	57.32 (9.74)	−0.73	0.0002
61 LOG, JOB, PP	1.02 (10.80)	−0.12 (0.59)	0.00 (0.30)	−4.45 (8.16)	52.42 (16.84)	0.01	0.0000
62 LOG, JOB, NP	−5.89 (13.10)	0.20 (0.79)	0.21 (0.39)	−6.31 (8.36)	53.83 (16.63)	−1.05	0.0000
63 LOG, JOB, NR	−1.47 (2.05)	0.54 (0.33)	0.17 (0.04)	0.43 (4.31)	39.04 (9.47)	−2.46	0.0003
64 AP, GDP, PR	0.22 (0.07)	0.79 (0.30)	−0.06 (0.07)	−6.21 (3.38)	58.67 (6.91)	−0.89	0.0151
65 AP, RDI, PR	0.21 (0.13)	0.42 (0.42)	0.03 (0.07)	−2.33 (3.96)	50.13 (7.72)	0.53	0.0006
66 AP, JOB, PR	0.31 (0.09)	0.15 (0.31)	0.09 (0.06)	1.25 (3.86)	43.05 (8.63)	0.54	0.0003
67 DIF, GDP, PR	0.11 (0.03)	0.79 (0.27)	−0.06 (0.06)	−5.84 (3.04)	57.60 (6.24)	−0.57	0.0554
68 DIF, RDI, PR	0.11 (0.06)	0.36 (0.42)	0.04 (0.07)	−1.57 (4.02)	48.27 (7.84)	0.87	0.0008
69 DIF, JOB, PR	0.15 (0.04)	0.09 (0.30)	0.08 (0.06)	1.33 (3.73)	42.50 (8.31)	1.11	0.0005
70 LOG, GDP, PR	6.15 (6.41)	1.80 (0.72)	−0.37 (0.30)	−11.03 (4.89)	66.31 (10.59)	−4.17	0.0002
71 LOG, RDI, PR	−5.06 (3.27)	0.84 (0.29)	0.13 (0.12)	−7.47 (3.82)	58.17 (8.00)	−1.45	0.0004
72 LOG, JOB, PR	−7.54 (4.67)	0.18 (0.44)	0.34 (0.15)	−2.37 (5.96)	45.60 (13.00)	−2.91	0.0000

Note: The first 36 models use the variables in their original form. The last 36, which are shaded, weight the variables by 0.5 for successor candidates. In the model specifications, the first variable listed is the approval variable, the second is the economic indicator, and the third is the economic evaluation variable. The abbreviations correspond to the following variables: AP = June approval, DIF = Difference between approval and disapproval LOG = Log of approval, GDP = Percentage change in real GDP, RDI = Percentage change in real disposable income, JOB = Percentage change in employment, PP = Personal prospections, NP = National prospections, NR = National retrospections, PR = Personal retrospections.

Table A4
1968 out-of-sample forecasts

Model Specification	Approval	Economic Ind.	Economic Eval.	Third term	Constant	Error	PP
1 AP, GDP, PP	0.26 (0.08)	0.68 (0.27)	−0.10 (0.15)	−3.45 (1.76)	64.44 (17.44)	0.69	0.0122
2 AP, GDP, NP	0.24 (0.08)	0.56 (0.21)	−0.02 (0.10)	−4.01 (1.63)	54.69 (10.43)	0.09	0.0086
3 AP, GDP, NR	0.23 (0.09)	0.53 (0.24)	0.00 (0.04)	−4.20 (1.64)	52.27 (3.74)	0.00	0.0083
4 AP, RDI, PP	0.13 (0.11)	0.53 (0.33)	0.10 (0.13)	−5.24 (1.89)	41.17 (15.00)	0.65	0.0016
5 AP, RDI, NP	0.15 (0.11)	0.66 (0.37)	0.00 (0.12)	−4.62 (1.93)	52.95 (12.92)	1.38	0.0010
6 AP, RDI, NR	0.12 (0.11)	0.51 (0.35)	0.03 (0.04)	−5.07 (1.82)	49.97 (3.94)	1.29	0.0015
7 AP, JOB, PP	0.21 (0.10)	0.18 (0.26)	0.22 (0.13)	−5.43 (2.13)	25.62 (17.16)	−1.10	0.0004
8 AP, JOB, NP	0.11 (0.11)	0.73 (0.36)	0.39 (0.16)	−6.22 (1.96)	6.21 (20.21)	4.21	0.0017
9 AP, JOB, NR	0.17 (0.11)	0.15 (0.25)	0.07 (0.04)	−5.14 (2.01)	45.80 (5.12)	0.46	0.0005
10 DIF, GDP, PP	0.13 (0.03)	0.70 (0.22)	−0.09 (0.12)	−3.92 (1.38)	61.39 (13.77)	1.02	0.1212
11 DIF, GDP, NP	0.12 (0.03)	0.61 (0.17)	−0.04 (0.08)	−4.24 (1.29)	55.08 (8.40)	0.55	0.0924
12 DIF, GDP, NR	0.12 (0.03)	0.62 (0.20)	−0.01 (0.04)	−4.30 (1.30)	52.26 (2.92)	0.29	0.0856
13 DIF, RDI, PP	0.07 (0.05)	0.47 (0.32)	0.12 (0.12)	−5.48 (1.71)	38.31 (13.90)	0.33	0.0030
14 DIF, RDI, NP	0.08 (0.05)	0.63 (0.36)	0.01 (0.12)	−4.88 (1.81)	51.53 (12.46)	1.39	0.0013
15 DIF, RDI, NR	0.06 (0.05)	0.48 (0.34)	0.03 (0.04)	−5.23 (1.69)	49.42 (3.65)	1.26	0.0022
16 DIF, JOB, PP	0.11 (0.04)	0.17 (0.24)	0.24 (0.12)	−5.82 (1.87)	23.17 (14.76)	−1.03	0.0009
17 DIF, JOB, NP	0.06 (0.05)	0.70 (0.35)	0.37 (0.15)	−6.32 (1.79)	7.27 (18.80)	4.01	0.0023
18 DIF, JOB, NR	0.09 (0.05)	0.13 (0.24)	0.07 (0.04)	−5.41 (1.87)	45.27 (4.69)	0.48	0.0006
19 LOG, GDP, PP	14.19 (4.14)	0.65 (0.26)	−0.14 (0.15)	−3.55 (1.71)	14.14 (15.93)	0.20	0.0146
20 LOG, GDP, NP	12.70 (4.20)	0.50 (0.21)	−0.03 (0.10)	−4.27 (1.61)	6.73 (14.15)	−0.50	0.0080
21 LOG, GDP, NR	12.78 (5.14)	0.50 (0.24)	−0.01 (0.05)	−4.33 (1.63)	3.98 (17.36)	−0.72	0.0076
22 LOG, RDI, PP	7.95 (5.71)	0.51 (0.32)	0.07 (0.13)	−5.15 (1.83)	14.33 (21.72)	0.27	0.0022
23 LOG, RDI, NP	9.23 (5.54)	0.61 (0.35)	−0.02 (0.12)	−4.59 (1.80)	19.63 (22.17)	0.76	0.0018
24 LOG, RDI, NR	7.71 (6.11)	0.50 (0.34)	0.02 (0.05)	−5.01 (1.76)	21.29 (21.85)	0.71	0.0021
25 LOG, JOB, PP	12.18 (5.48)	0.19 (0.25)	0.17 (0.14)	−5.35 (2.06)	−15.53 (15.98)	−1.39	0.0005
26 LOG, JOB, NP	7.24 (5.91)	0.67 (0.36)	0.34 (0.17)	−6.07 (1.86)	−16.34 (13.98)	3.37	0.0025
27 LOG, JOB, NR	10.55 (6.35)	0.16 (0.24)	0.06 (0.05)	−5.12 (1.96)	6.28 (21.50)	−0.13	0.0006
28 AP, GDP, PR	0.23 (0.08)	0.55 (0.33)	0.00 (0.12)	−4.15 (1.51)	52.85 (12.39)	−0.01	0.0082
29 AP, RDI, PR	0.10 (0.09)	0.46 (0.28)	0.12 (0.07)	−4.90 (1.50)	40.01 (7.43)	1.40	0.0083
30 AP, JOB, PR	0.19 (0.09)	0.05 (0.22)	0.17 (0.08)	−4.53 (1.76)	35.58 (8.50)	−0.69	0.0012
31 DIF, GDP, PR	0.12 (0.03)	0.61 (0.28)	−0.02 (0.10)	−4.44 (1.22)	52.92 (9.87)	0.38	0.0797
32 DIF, RDI, PR	0.06 (0.04)	0.40 (0.26)	0.13 (0.06)	−4.97 (1.36)	39.09 (6.68)	1.09	0.0193
33 DIF, JOB, PR	0.10 (0.04)	0.03 (0.20)	0.17 (0.07)	−4.80 (1.57)	34.49 (7.26)	−0.68	0.0035
34 LOG, GDP, PR	12.75 (4.69)	0.54 (0.33)	−0.03 (0.13)	−4.40 (1.49)	6.39 (14.08)	−0.60	0.0077
35 LOG, RDI, PR	5.69 (5.28)	0.46 (0.28)	0.11 (0.07)	−5.00 (1.47)	19.51 (18.30)	1.14	0.0084
36 LOG, JOB, PR	10.58 (5.19)	0.08 (0.22)	0.14 (0.08)	−4.69 (1.73)	−2.73 (15.64)	−0.92	0.0013
37 AP, GDP, PP	0.21 (0.07)	0.73 (0.22)	−0.06 (0.04)	−5.76 (2.41)	58.86 (5.19)	1.40	0.0290
38 AP, GDP, NP	0.22 (0.07)	0.69 (0.21)	−0.05 (0.04)	−5.15 (2.12)	57.48 (4.40)	1.17	0.0252
39 AP, GDP, NR	0.27 (0.08)	0.75 (0.35)	−0.04 (0.06)	−4.34 (2.22)	55.67 (5.01)	0.51	0.0121
40 AP, RDI, PP	0.14 (0.14)	0.71 (0.42)	−0.04 (0.06)	−5.38 (3.52)	57.02 (7.37)	1.46	0.0007
41 AP, RDI, NP	0.14 (0.13)	0.75 (0.41)	−0.05 (0.06)	−5.55 (3.08)	57.52 (6.30)	1.66	0.0009
42 AP, RDI, NR	0.19 (0.12)	0.32 (0.54)	0.04 (0.07)	−2.48 (2.89)	49.83 (5.91)	−0.01	0.0007
43 AP, JOB, PP	0.34 (0.09)	0.07 (0.34)	0.04 (0.06)	−1.46 (4.15)	48.71 (8.73)	−1.24	0.0001
44 AP, JOB, NP	0.33 (0.09)	0.09 (0.36)	0.03 (0.06)	−1.76 (4.16)	49.46 (8.75)	−1.04	0.0001
45 AP, JOB, NR	0.18 (0.10)	0.40 (0.31)	0.10 (0.04)	1.51 (3.00)	40.59 (6.34)	0.97	0.0020
46 DIF, GDP, PP	0.11 (0.03)	0.73 (0.19)	−0.06 (0.04)	−5.42 (2.15)	57.73 (4.67)	1.42	0.1236
47 DIF, GDP, NP	0.11 (0.03)	0.71 (0.18)	−0.05 (0.04)	−4.90 (1.87)	56.56 (3.90)	1.24	0.1203
48 DIF, GDP, NR	0.14 (0.04)	0.78 (0.31)	−0.04 (0.05)	−4.10 (1.95)	54.66 (4.26)	0.62	0.0476
49 DIF, RDI, PP	0.08 (0.07)	0.68 (0.42)	−0.03 (0.06)	−5.02 (3.61)	55.91 (7.73)	1.35	0.0008
50 DIF, RDI, NP	0.07 (0.06)	0.72 (0.41)	−0.04 (0.06)	−5.28 (3.13)	56.63 (6.53)	1.58	0.0010
51 DIF, RDI, NR	0.10 (0.06)	0.20 (0.54)	0.05 (0.07)	−1.81 (2.87)	47.93 (5.83)	−0.25	0.0011
52 DIF, JOB, PP	0.17 (0.04)	0.01 (0.33)	0.04 (0.06)	−1.39 (4.06)	47.81 (8.58)	−1.38	0.0001
53 DIF, JOB, NP	0.16 (0.04)	0.03 (0.35)	0.03 (0.06)	−1.88 (4.08)	49.04 (8.62)	−1.17	0.0001
54 DIF, JOB, NR	0.09 (0.05)	0.37 (0.30)	0.10 (0.04)	1.50 (2.88)	40.25 (5.94)	0.86	0.0030
55 LOG, GDP, PP	10.98 (4.97)	1.28 (0.23)	−0.40 (0.14)	−3.99 (3.36)	56.63 (6.71)	2.90	0.0040
56 LOG, GDP, NP	4.07 (6.53)	1.10 (0.31)	−0.18 (0.19)	−4.70 (5.08)	55.65 (9.98)	2.56	0.0001
57 LOG, GDP, NR	−2.25 (2.31)	0.50 (0.49)	0.08 (0.07)	−5.43 (4.61)	54.69 (10.19)	1.85	0.0001

(*continued on next page*)

Table A4 (*continued*)

Model Specification	Approval	Economic Ind.	Economic Eval.	Third term	Constant	Error	PP
58 LOG, RDI, PP	−2.51 (5.66)	1.08 (0.25)	−0.01 (0.15)	−8.72 (4.25)	63.26 (8.59)	3.43	0.0004
59 LOG, RDI, NP	−1.65 (5.51)	1.10 (0.26)	−0.04 (0.15)	−8.27 (4.55)	62.49 (9.10)	3.40	0.0004
60 LOG, RDI, NR	−2.83 (2.11)	0.89 (0.51)	0.03 (0.07)	−7.82 (4.49)	60.78 (10.18)	3.02	0.0004
61 LOG, JOB, PP	1.34 (11.02)	−0.15 (0.59)	0.00 (0.30)	−4.46 (8.15)	52.19 (16.45)	−0.88	0.0000
62 LOG, JOB, NP	−6.61 (14.85)	0.22 (0.86)	0.23 (0.42)	−6.46 (8.45)	54.86 (16.65)	1.20	0.0000
63 LOG, JOB, NR	−2.11 (2.06)	0.58 (0.34)	0.17 (0.04)	0.54 (4.24)	40.88 (8.91)	3.19	0.0004
64 AP, GDP, PR	0.22 (0.07)	0.82 (0.31)	−0.08 (0.07)	−6.38 (3.38)	59.90 (7.40)	1.30	0.0193
65 AP, RDI, PR	0.20 (0.13)	0.43 (0.46)	0.03 (0.08)	−2.40 (4.06)	50.02 (8.31)	0.00	0.0006
66 AP, JOB, PR	0.31 (0.08)	0.14 (0.31)	0.09 (0.06)	1.09 (3.89)	42.79 (8.00)	−1.05	0.0004
67 DIF, GDP, PR	0.11 (0.03)	0.83 (0.27)	−0.08 (0.06)	−6.10 (3.00)	58.91 (6.61)	1.35	0.0797
68 DIF, RDI, PR	0.11 (0.06)	0.37 (0.47)	0.04 (0.08)	−1.66 (4.14)	47.99 (8.60)	−0.21	0.0008
69 DIF, JOB, PR	0.15 (0.04)	0.09 (0.29)	0.09 (0.06)	1.23 (3.77)	41.79 (7.72)	−1.18	0.0005
70 LOG, GDP, PR	5.49 (6.53)	1.80 (0.75)	−0.38 (0.31)	−11.08 (5.06)	69.35 (11.57)	3.54	0.0001
71 LOG, RDI, PR	−5.61 (3.15)	0.91 (0.28)	0.12 (0.11)	−7.96 (3.64)	61.14 (7.84)	3.43	0.0010
72 LOG, JOB, PR	−7.81 (4.92)	0.15 (0.45)	0.34 (0.15)	−2.58 (6.02)	47.88 (12.59)	1.81	0.0000

Note: The first 36 models use the variables in their original form. The last 36, which are shaded, weight the variables by 0.5 for successor candidates. In the model specifications, the first variable listed is the approval variable, the second is the economic indicator, and the third is the economic evaluation variable. The abbreviations correspond to the following variables: AP = June approval, DIF = Difference between approval and disapproval, LOG = Log of approval, GDP = Percentage change in real GDP, RDI = Percentage change in real disposable income, JOB = Percentage change in employment, PP = Personal prospections, NP = National prospections, NR = National retrospections, PR = Personal retrospections.

Table A5
1988 out-of-sample forecasts

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
1 AP, GDP, PP	0.25 (0.07)	0.61 (0.22)	−0.07 (0.13)	−4.27 (1.60)	60.26 (15.16)	−2.90	0.0064
2 AP, GDP, NP	0.20 (0.07)	0.48 (0.18)	0.04 (0.10)	−5.10 (1.62)	48.02 (10.39)	−3.65	0.0061
3 AP, GDP, NR	0.21 (0.08)	0.49 (0.21)	0.01 (0.04)	−4.93 (1.55)	51.62 (3.36)	−3.21	0.0055
4 AP, RDI, PP	0.12 (0.08)	0.52 (0.23)	0.11 (0.11)	−6.16 (1.67)	39.89 (12.48)	−4.26	0.0018
5 AP, RDI, NP	0.13 (0.09)	0.52 (0.26)	0.09 (0.11)	−6.14 (1.78)	43.86 (11.34)	−5.10	0.0013
6 AP, RDI, NR	0.12 (0.08)	0.47 (0.27)	0.04 (0.04)	−6.00 (1.65)	49.79 (3.39)	−4.27	0.0016
7 AP, JOB, PP	0.19 (0.09)	0.18 (0.20)	0.23 (0.12)	−5.98 (2.07)	24.64 (15.48)	−3.43	0.0001
8 AP, JOB, NP	0.10 (0.07)	0.54 (0.18)	0.39 (0.10)	−7.98 (1.59)	7.07 (11.97)	−6.67	0.0126
9 AP, JOB, NR	0.16 (0.10)	0.10 (0.19)	0.07 (0.04)	−5.91 (1.93)	46.21 (3.97)	−3.82	0.0002
10 DIF, GDP, PP	0.12 (0.03)	0.62 (0.18)	−0.05 (0.10)	−4.74 (1.22)	56.79 (11.66)	−2.61	0.0710
11 DIF, GDP, NP	0.11 (0.03)	0.53 (0.15)	0.02 (0.08)	−5.19 (1.27)	49.22 (8.38)	−3.05	0.0631
12 DIF, GDP, NR	0.12 (0.03)	0.57 (0.18)	0.00 (0.03)	−4.95 (1.22)	51.69 (2.64)	−2.72	0.0599
13 DIF, RDI, PP	0.07 (0.04)	0.48 (0.23)	0.13 (0.10)	−6.33 (1.48)	37.52 (11.24)	−4.06	0.0036
14 DIF, RDI, NP	0.07 (0.04)	0.49 (0.25)	0.09 (0.10)	−6.33 (1.64)	42.79 (10.70)	−4.98	0.0018
15 DIF, RDI, NR	0.06 (0.04)	0.45 (0.27)	0.04 (0.04)	−6.17 (1.53)	49.19 (3.16)	−4.11	0.0022
16 DIF, JOB, PP	0.10 (0.04)	0.17 (0.19)	0.24 (0.11)	−6.30 (1.80)	22.50 (13.40)	−3.21	0.0004
17 DIF, JOB, NP	0.05 (0.03)	0.52 (0.18)	0.39 (0.10)	−8.08 (1.47)	7.35 (11.42)	−6.53	0.0168
18 DIF, JOB, NR	0.08 (0.04)	0.08 (0.18)	0.07 (0.03)	−6.15 (1.79)	45.69 (3.70)	−3.67	0.0003
19 LOG, GDP, PP	13.47 (3.85)	0.60 (0.22)	−0.11 (0.14)	−4.22 (1.60)	13.41 (13.05)	−2.61	0.0065
20 LOG, GDP, NP	10.71 (3.99)	0.45 (0.18)	0.03 (0.11)	−5.22 (1.66)	8.02 (11.91)	−3.38	0.0041
21 LOG, GDP, NR	11.25 (4.39)	0.47 (0.22)	0.00 (0.04)	−5.00 (1.60)	8.94 (14.73)	−3.00	0.0039
22 LOG, RDI, PP	7.03 (4.40)	0.52 (0.23)	0.08 (0.11)	−6.05 (1.65)	16.31 (15.49)	−4.08	0.0024
23 LOG, RDI, NP	7.47 (4.43)	0.52 (0.25)	0.06 (0.11)	−5.98 (1.73)	17.91 (15.38)	−4.62	0.0020
24 LOG, RDI, NR	7.17 (4.52)	0.49 (0.26)	0.02 (0.04)	−5.91 (1.62)	23.07 (15.96)	−4.08	0.0021
25 LOG, JOB, PP	10.96 (5.04)	0.20 (0.20)	0.19 (0.13)	−5.88 (2.04)	−13.01 (15.31)	−3.11	0.0002
26 LOG, JOB, NP	5.88 (3.82)	0.53 (0.17)	0.37 (0.11)	−7.87 (1.56)	−13.24 (10.41)	−6.31	0.0163
27 LOG, JOB, NR	9.33 (5.37)	0.12 (0.19)	0.06 (0.04)	−5.86 (1.92)	10.83 (18.92)	−3.50	0.0003
28 AP, GDP, PR	0.22 (0.07)	0.53 (0.29)	0.00 (0.11)	−4.71 (1.40)	52.74 (11.12)	−3.09	0.0052
29 AP, RDI, PR	0.11 (0.07)	0.44 (0.21)	0.11 (0.06)	−5.68 (1.36)	41.03 (6.42)	−3.79	0.0086
30 AP, JOB, PR	0.17 (0.08)	0.04 (0.18)	0.17 (0.07)	−5.02 (1.68)	35.63 (7.51)	−3.17	0.0005
31 DIF, GDP, PR	0.12 (0.03)	0.58 (0.24)	−0.01 (0.09)	−4.99 (1.10)	52.43 (8.67)	−2.75	0.0601
32 DIF, RDI, PR	0.06 (0.03)	0.40 (0.20)	0.12 (0.05)	−5.74 (1.22)	39.85 (5.74)	−3.55	0.0216
33 DIF, JOB, PR	0.09 (0.03)	0.02 (0.16)	0.17 (0.06)	−5.24 (1.48)	34.59 (6.45)	−2.96	0.0015

Table A5 (*continued*)

Model specification	Approval	Economic ind.	Economic eval.	Third term	Constant	Error	PP
34 LOG, GDP, PR	12.07 (4.11)	0.53 (0.30)	−0.03 (0.12)	−4.88 (1.41)	8.63 (11.95)	−2.95	0.0040
35 LOG, RDI, PR	6.05 (3.81)	0.45 (0.21)	0.10 (0.06)	−5.77 (1.34)	19.16 (13.25)	−3.72	0.0088
36 LOG, JOB, PR	9.66 (4.70)	0.07 (0.18)	0.15 (0.08)	−5.14 (1.67)	0.28 (14.69)	−2.95	0.0005
37 AP, GDP, PP	0.22 (0.06)	0.66 (0.18)	−0.04 (0.04)	−5.58 (2.07)	56.49 (4.34)	−3.44	0.0264
38 AP, GDP, NP	0.23 (0.06)	0.63 (0.18)	−0.03 (0.04)	−5.05 (1.86)	55.34 (3.84)	−3.39	0.0209
39 AP, GDP, NR	0.25 (0.07)	0.64 (0.30)	−0.02 (0.05)	−4.41 (1.89)	53.82 (4.37)	−3.69	0.0138
40 AP, RDI, PP	0.15 (0.11)	0.64 (0.33)	−0.01 (0.05)	−5.27 (3.00)	54.50 (5.96)	−4.34	0.0006
41 AP, RDI, NP	0.15 (0.11)	0.65 (0.33)	−0.02 (0.05)	−5.33 (2.69)	54.69 (5.31)	−4.22	0.0006
42 AP, RDI, NR	0.16 (0.10)	0.31 (0.42)	0.05 (0.06)	−3.03 (2.45)	49.00 (4.85)	−4.68	0.0010
43 AP, JOB, PP	0.32 (0.09)	0.09 (0.30)	0.05 (0.05)	−1.59 (3.77)	47.64 (8.07)	−4.26	0.0000
44 AP, JOB, NP	0.32 (0.09)	0.12 (0.32)	0.05 (0.06)	−1.64 (3.70)	47.56 (8.09)	−4.48	0.0000
45 AP, JOB, NR	0.17 (0.08)	0.35 (0.23)	0.11 (0.04)	0.46 (2.24)	40.65 (4.93)	−4.61	0.0035
46 DIF, GDP, PP	0.11 (0.02)	0.66 (0.15)	−0.03 (0.03)	−5.25 (1.79)	55.38 (3.77)	−3.38	0.1692
47 DIF, GDP, NP	0.12 (0.02)	0.64 (0.15)	−0.03 (0.03)	−4.81 (1.59)	54.45 (3.30)	−3.28	0.1396
48 DIF, GDP, NR	0.13 (0.03)	0.67 (0.26)	−0.02 (0.04)	−4.20 (1.62)	52.96 (3.58)	−3.57	0.0783
49 DIF, RDI, PP	0.08 (0.05)	0.61 (0.33)	−0.01 (0.05)	−4.93 (3.05)	53.44 (6.15)	−4.31	0.0007
50 DIF, RDI, NP	0.08 (0.05)	0.63 (0.33)	−0.02 (0.05)	−5.06 (2.72)	53.81 (5.42)	−4.20	0.0007
51 DIF, RDI, NR	0.09 (0.05)	0.22 (0.42)	0.06 (0.05)	−2.44 (2.42)	47.42 (4.67)	−4.64	0.0016
52 DIF, JOB, PP	0.16 (0.04)	0.03 (0.29)	0.05 (0.05)	−1.50 (3.69)	46.77 (7.92)	−4.24	0.0001
53 DIF, JOB, NP	0.16 (0.04)	0.07 (0.31)	0.05 (0.06)	−1.73 (3.64)	47.16 (7.97)	−4.41	0.0001
54 DIF, JOB, NR	0.09 (0.04)	0.32 (0.22)	0.10 (0.03)	0.49 (2.13)	40.32 (4.55)	−4.57	0.0063
55 LOG, GDP, PP	11.02 (4.86)	1.20 (0.23)	−0.38 (0.14)	−3.80 (3.28)	53.63 (6.38)	−3.21	0.0009
56 LOG, GDP, NP	3.36 (6.55)	1.00 (0.31)	−0.14 (0.19)	−5.03 (5.03)	53.72 (9.44)	−3.27	0.0000
57 LOG, GDP, NR	−1.49 (2.02)	0.35 (0.43)	0.09 (0.06)	−4.69 (4.09)	50.38 (8.83)	−4.85	0.0001
58 LOG, RDI, PP	−1.46 (5.22)	1.00 (0.23)	−0.01 (0.14)	−8.20 (3.95)	59.05 (7.72)	−4.57	0.0001
59 LOG, RDI, NP	−1.95 (5.19)	1.00 (0.24)	0.01 (0.15)	−8.40 (4.27)	59.32 (8.18)	−4.63	0.0001
60 LOG, RDI, NR	−1.80 (1.83)	0.68 (0.43)	0.05 (0.06)	−6.61 (3.93)	54.97 (8.58)	−4.81	0.0003
61 LOG, JOB, PP	1.07 (10.17)	−0.13 (0.53)	0.02 (0.28)	−4.73 (7.75)	50.82 (15.66)	−5.51	0.0000
62 LOG, JOB, NP	−8.41 (12.10)	0.27 (0.68)	0.30 (0.35)	−7.48 (7.79)	53.27 (15.07)	−6.92	0.0000
63 LOG, JOB, NR	−1.21 (1.80)	0.45 (0.28)	0.16 (0.03)	−0.16 (3.75)	39.47 (8.00)	−5.05	0.0003
64 AP, GDP, PR	0.22 (0.06)	0.69 (0.25)	−0.04 (0.06)	−5.68 (2.85)	56.48 (6.09)	−3.55	0.0183
65 AP, RDI, PR	0.19 (0.10)	0.44 (0.35)	0.04 (0.06)	−2.78 (3.36)	48.94 (6.59)	−4.62	0.0008
66 AP, JOB, PR	0.29 (0.08)	0.14 (0.26)	0.10 (0.05)	0.88 (3.36)	41.78 (7.05)	−4.47	0.0003
67 DIF, GDP, PR	0.11 (0.02)	0.70 (0.21)	−0.04 (0.05)	−5.42 (2.46)	55.50 (5.27)	−3.47	0.1099
68 DIF, RDI, PR	0.10 (0.05)	0.39 (0.35)	0.05 (0.06)	−2.15 (3.39)	47.24 (6.70)	−4.58	0.0011
69 DIF, JOB, PR	0.14 (0.04)	0.10 (0.25)	0.10 (0.05)	1.04 (3.23)	40.82 (6.77)	−4.45	0.0005
70 LOG, GDP, PR	4.60 (6.48)	1.51 (0.73)	−0.28 (0.30)	−9.71 (4.93)	63.34 (11.09)	−3.66	0.0000
71 LOG, RDI, PR	−4.48 (2.88)	0.83 (0.25)	0.12 (0.10)	−7.42 (3.35)	56.90 (7.02)	−4.57	0.0004
72 LOG, JOB, PR	−6.76 (4.46)	0.08 (0.39)	0.32 (0.14)	−2.98 (5.61)	46.30 (11.87)	−4.97	0.0000

Note: The first 36 models use the variables in their original form. The last 36, which are shaded, weight the variables by 0.5 for successor candidates. In the model specifications, the first variable listed is the approval variable, the second is the economic indicator, and the third is the economic evaluation variable. The abbreviations correspond to the following variables: AP = June approval, DIF = Difference between approval and disapproval, LOG = Log of approval, GDP = Percentage change in real GDP, RDI = Percentage change in real disposable income, JOB = Percentage change in employment, PP = Personal prospections, NP = National prospections, NR = National retrospections, PR = Personal retrospections.

References

Abramowitz, A. I. (1996). Bill and Al's excellent adventure: Forecasting the 1996 presidential election. *American Politics Research*, *24*, 434−442.

Abramowitz, A. I. (2004). When good forecasts go bad: The time-for-change model and the 2004 presidential election. *PS: Political Science and Politics*, *37*, 745−746.

Bartels, L. M. (1997). Specification uncertainty and model averaging. *American Journal of Political Science*, *41*, 641−674.

Bartels, L. M., & Zaller, J. (2001). Presidential vote models: A recount. *PS: Political Science and Politics*, *34*, 9−20.

Campbell, J. E. (1996). Polls and votes: The trial heat presidential election forecasting model, certainty, and political campaigns. *American Politics Research*, *24*, 408−433.

Campbell, J. E. (2001). The referendum that didn't happen: The forecasts of the 2000 presidential election. *PS: Political Science and Politics*, *34*, 33−38.

Campbell, J. E. (2004). Forecasting the presidential vote in 2004: Placing preference polls in context. *PS: Political Science and Politics*, *37*, 763−767.

Erikson, R. S., Bafumi, J., & Wilson, B. (2001). Was the 2000 election predictable? *PS: Political Science and Politics*, *34*, 815−819.

Fair, R. C. (1978). The effect of economic events on votes for president. *Review of Economics and Statistics*, *60*, 159−173.

Fair, R. C. (1996). Econometrics and presidential elections. *Journal of Economic Perspectives*, *10*, 89−102.
Holbrook, T. M. (1996). Reading the political tea leaves: A forecasting model of contemporary presidential elections. *American Politics Research*, *24*, 506−519.
Holbrook, T. M. (2001). Forecasting with mixed economic signals: A cautionary tale. *PS: Political Science and Politics*, *34*, 39−44.
Holbrook, T. M. (2004). Good news for Bush? Economic news, personal finances, and the 2004 presidential election. *PS: Political Science and Politics*, *37*, 759−761.
Lewis-Beck, M. S., & Tien, C. (1996). The future in forecasting: Prospective presidential models. *American Politics Research*, *24*, 468−491.
Lewis-Beck, M. S., & Tien, C. (2001). Modeling the future: Lessons from the Gore forecast. *PS: Political Science and Politics*, *34*, 21−24.
Lewis-Beck, M. S., & Tien, C. (2004). Jobs and the job of president: A forecast for 2004. *PS: Political Science and Politics*, *37*, 753−758.
Lockerbie, B. (2004). A look to the future: Forecasting the 2004 presidential election. *PS: Political Science and Politics*, *37*, 741−743.
Norpoth, H. (1996). Of time and candidates: A forecast for 1996. *American Politics Research*, *24*, 443−467.
Norpoth, H. (2001). Primary colors: A mixed blessing for Al Gore. *PS: Political Science and Politics*, *34*, 45−48.
Norpoth, H. (2004). From primary to general election: A forecast of the presidential vote. *PS: Political Science and Politics*, *37*, 737−740.
Wlezien, C. (2001). On forecasting the presidential vote. *PS: Political Science and Politics*, *34*, 25−32.
Wlezien, C., & Erikson, R. S. (1996). Temporal horizons and presidential election forecasts. *American Politics Research*, *24*, 492−505.
Wlezien, C., & Erikson, R. S. (2004). The fundamentals, the polls, and the presidential vote. *PS: Political Science and Politics*, *37*, 747−751.

Andrew Sidman is an Assistant Professor at John Jay College of Criminal Justice, a senior college of the City University of New York. His research focuses on U.S. presidential and congressional elections, distributive benefits, and public opinion.

Maxwell Mak is a Ph.D. candidate in the Political Science Department at Stony Brook University. His research interests focus on judicial decision-making, as well as the interaction between coordinate branches of government; he has also done work on congressional elections.

Matthew J. Lebo is an Assistant Professor in the Department of Political Science at Stony Brook University. He studies political methodology, parties, public opinion and elections.