FISCAL POLICY AS A FORECASTING FACTOR IN PRESIDENTIAL ELECTIONS

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This research note presents a model in which fiscal policy, measured by changes in the ratio of federal outlays to gross national product between election years, is a factor in explaining and forecasting the outcome of the past 30 presidential elections. Compared with six forecasting models assembled in a special issue of this journal in the fall of 1996, the model performs satisfactorily. The model implies that to win reelection or extend his party's tenure in the White House, a president should reject a policy of fiscal expansion. It is hoped that this article will stimulate students of presidential elections to add policy variables to their forecasting models.

In a special issue of this journal published in advance of the last presidential election (Garand & Campbell, 1996), six forecasting models (henceforth known as "the group of six," "the group," or "the six") were assembled for the purpose of predicting the outcome of the campaign then in progress. All members of the six correctly forecast President Clinton's reelection, several coming within 1 or 2 percentage points of the Democrats' share of the two-party vote. This was no stroke of luck: The 1996 predictions were generated by models that proved remarkably accurate at "predicting," retrospectively, the results of most elections held during the past four decades or so, including such hard-fought contests as those of 1948 and 1968. In other words, each member of the group of six fits, to varying degrees of perfection, the postwar pattern of presidential election outcomes (see Table 4).

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Collectively and individually, then, the forecasting power of these models is, indeed, impressive. Nevertheless, they are not without limitations. Although differing in particulars, each of the six incorporates one or two measures of economic conditions and all but one member of the group also include a Gallup presidential approval rating taken during the election year, in one case as late as September. This last feature makes it impossible to estimate five of the six models with elections held before survey research came into its own. Thus, the period during which all but one member of the group perform is, in historical terms, rather short. More fundamentally, the relationship between presidential approval ratings and how incumbents fare on election day is reducible to a truism: Popular presidents win reelection for themselves or their party's nominee. This is not a statement pregnant with theoretical meaning.

Another limitation, this one shared by all six, is that none include a policy variable. True, inflation and economic growth are to some degree outcomes of the administration's economic policies, a hypothesis that appears to be believed by voters as well, because they seem to hold incumbents accountable for economic conditions. Nevertheless, because they make no explicit connection between what an administration does and election outcomes, these models, although accurate as forecasters, do not yield much by way of policy-relevant knowledge. "Be popular in the months leading to election day" is not very useful advice to a president running for reelection or intent on handing the keys to the White House to his party's candidate.

The purpose of this research note, then, is to introduce readers of this journal to an alternative model of presidential elections, one that does not rely on public opinion polls, by way of comparing its forecasting success with that of the group of six. Like the six, our model incorporates economic variables as predictors but, unlike them, ours does include a policy variable. Data for all of the model's components are available for more than a century (see appendix), allowing out-of-sample predictions for 30 elections held between 1880 and 1996, about 3 times as many as are included in all but one of the group of six.

A caveat, however, is in order. Our model was not originally designed to forecast elections but to test the idea that voters are, in Peltzman's (1992) phrase, "fiscal conservatives." We have developed this hypothesis, as well as the economic analogy that underlies it, in a

series of articles published in several journals during the last decade and a half. Given the space limitations of a research note, only a sparse rendering of the argument will be attempted here. For a fuller articulation, readers are referred to previous publications by the authors (Cuzán & Bundrick, 1992, 1996; Cuzán & Heggen, 1984, 1985). Be it noted, also, that in addition to Peltzman (1987, 1990, 1992), a few other researchers, analyzing data from different countries and employing other measures of fiscal policy and support for the incumbents, independently have reached conclusions that are consistent with our model (Happy, 1992; Landon & Ryan, 1997; Niskanen, 1975, 1979; Pissarides, 1980). Still, the idea that fiscal policy has an effect on elections, particularly the effect hypothesized here, will strike many readers as counterintuitive. In response, we can do no better than to quote Ashby (1970): "Test by demonstration is always treated as the ultimate test, let plausibility say what it will" (p. 110).

A FISCAL HYPOTHESIS

Table 1 describes nine variables used to construct our presidential election model. These include the percentage of the two-party vote going to the candidate of the incumbent party,[1] vote2, which serves as the dependent variable, and six "explanatory" or "predictor" variables. Of the latter set, three variables are standard in presidential election studies and forecasting: two measures of economic performance, growth and inflation, and one variable, president, indicating whether the president was a candidate for reelection. The rationale for including the third variable is that when the president himself runs for another term, the advantages of incumbency are mobilized in his favor. A fourth variable, terms, counts the number of consecutive terms that presidents of the same party have occupied the White House, on the premise that after several terms, voters tire of the incumbents. As Abramowitz (1996) puts it, "Once a party has controlled the White House for two or more terms . . . there is growing sentiment among the public that it is simply 'time for a change'" (p. 436). Finally, a variable unfamiliar to most readers, fiscal, itself derived from three others, is elucidated below.

TABLE 1
Variable Definitions and Measurements

Variable	*Definitions and Measurements*
Vote2	Percentage of the two-party vote going to the incumbent party candidate (adapted from Fair, 1994, 1996a, 1996b).
Growth (g3)	Economic growth as defined by Fair (1994, 1996a, 1996b). The annualized rate of growth of real per capita gross domestic product (GDP) through the first three quarters of the presidential election year.
Inflation (p15)	Inflation as defined by Fair (1994, 1996a, 1996b). The annualized rate of growth of the GDP price index in the first 15 quarters of the presidential term.
President	President = 1 if president ran for reelection. President = 0 if president did not run.
Terms (T)	Number of consecutive terms by presidents of the same party.
F	Federal spending as a percentage of gross national product. $F = \frac{\text{Federal outlays}}{\text{GNP}} \times 100$
F′	Percentage change in F between presidential election years. $F' = \frac{F_t - F_{t-1}}{F_{t-1}},$ where t is an election year and t − 1 is the previous election year.
F″	The arithmetic change in F′ between presidential election years. $F'' = F'_t - F'_{t-1}$
Fiscal	Fiscal policy implemented during a presidential term: expansionary (1), cutback (−1), or steady state (0). Fiscal = 1 if $F' > 2$ *and* $-2 \leq F''$ Fiscal = −1 if $F' < -2$ *or* $F'' < -2$ Fiscal = 0 if $-2 \leq F' \leq 2$ *and* $-2 \leq F''$

Fiscal is constructed from three federal spending variables included in Table 1: F and its derivations, F′ and F″. F, the percentage of gross national product (GNP) spent by the federal government, is a measure of relative, not total, spending. Federal expenditures may grow with the economy without raising F. It is only when the rise in outlays exceeds GNP growth that F goes up, and it is only in this comparative or proportionate sense that in this article terms such as *budget increase* and *spending growth* are to be understood. As the appendix shows, from 1880 to 1928, except for the temporary displacement associated with World War I, in most election years F ranged between 2% and 3%. This was a stable fiscal period. Beginning with the 1932 election and through the next several decades, F experienced several instances of large and not so large increases that were not completely offset by subsequent decreases, so that the net effect was a sevenfold

increase in the size of the federal budget, from 3% to more than 20% of GNP by 1976. From 1980 to the present, another period of fiscal stability seems to have set in: F has gone up and down by small increments, the net effect being about a 10% decrease from the 1976 peak.

F′ is the percentage change in F between presidential election years. It indicates whether spending has increased, decreased, or remained the same from one administration to the next. F″ is the arithmetic change in F′ between election years (mathematically, F″ is the first derivative of F′). F″ denotes whether expenditures are growing at an accelerating, decelerating, or constant rate.

F′ and F″ combine to produce three kinds of fiscal policy described by the variable "fiscal." If F′ is positive and F″ is not negative, it means that, compared to the previous administration, spending has gone up at either the same or a faster rate.[2] This amounts to an *expansionary* fiscal policy. By contrast, fiscal policy is *cut back* if either F′ or F″ is negative. Even when F′ is positive, if F″ is negative, it means that, compared to the preceding term, the growth in spending has slowed down, that is, there has been a fiscal deceleration. Another combination is possible: if F′ is zero and F″ is not negative. This amounts to a "steady state" policy but because it is not present in the data (see appendix), it may safely be ignored.

Now for the hard part: Voters are hypothesized to punish incumbents who pursue fiscal expansion and to reward those who implement fiscal cutback. The theoretical justification for this hypothesis rests on an analogy with economics. (On model building by analogy, see Morris, 1970.) We assume that voters regard federal expenditures (the bulk of which are financed out of taxes or borrowing that commits future taxes) as the cost or "price" of government. To them, the federal government delivers real goods and services, among which is included macroeconomic management, but only at the cost of taking command or steering a share of the economy through the federal budget. Like cost-conscious consumers, voters are presumed to want to keep the "price" of government down. Unlike consumers in a competitive market, or even state or local residents, who have several jurisdictions to choose from, voters at the federal level have no competing supplier of services against which to compare "prices." (On neighboring states providing voters with fiscal benchmarks, see Besley & Case, 1995.) What they can do, however, is to observe whether the "price" of government has risen or fallen, or risen faster or more slowly, between election years. Accordingly, we hypothesize that, depending on whether the former or the latter comparison is relevant, a majority of voters will turn out incumbents who preside over an increase in federal spending amounting to an expansionary policy and reelect those who reduce or slow down budgetary growth, that is, pursue fiscal cutbacks. In this interpretation, voters view the president, who sits at a strategic crossroad in the budget process, as their "manager," accountable to them on election day for keeping down the cost of procuring services from Washington. If, during his term, the cost has risen relative to the previous term, the president is "fired" or his party's nominee not "hired."

At this point, a reality check is in order. The assumption that voters compute fiscal policy between election years is not to be taken literally. We do not mean to suggest that voters do, in fact, look up the relevant figures, although they are readily available, and make the necessary calculations, simple as they are. What we hypothesize is that voters are able to observe the effects of such changes in fiscal policy and act accordingly. Thus, they cast their votes *as if* they looked up the numbers and made the calculations themselves.[3] That said, the model will still strike many readers as a reductionist and prosaic view of presidents and elections. We agree. The model does not pretend to tell the whole story of the respective roles of president, political parties, and voters, let alone of everything that the federal government does or how it operates within a separation-of-powers framework. For that we make no apologies. Following Ashby (1970), our model, like all representations of complex systems, is an effort "to *lose* information" (p. 100; emphasis in original). In the final analysis, the only objective test of a scientific hypothesis is not how well it conforms to conventional interpretations of the same system but how adequately it fits the relevant facts. It is to empirical testing that we now turn.

DATA ANALYSIS

Table 2 displays two ordinary least squares (OLS) estimates for vote2, one obtained with the initial six-variable model and another after two variables that did not reach statistical significance in the first

TABLE 2
Fiscal, Economic, and Political Impacts on Presidential Elections: 1880-1996 (see Table 1 for variable definitions)

Variable	*Dependent Variable*	*Vote2*
Fiscal	–2.61***	–2.58***
	(–3.64)	(–3.86)
Terms	–1.35***	–1.56***
	(–2.66)	(–3.48)
Growth	0.41***	0.46***
	(2.98)	(3.91)
Inflation	–0.54**	–0.48**
	(–2.48)	(–2.38)
President	1.36	
	(0.88)	
F	0.04	
	(0.49)	
Intercept	55.56***	57.14***
	(26.87)	(40.26)
N	30	30
Adjusted R^2	.69	.70
Root *MSE*	3.5	3.4
First-order D.W.[a]	2.40	2.50
Probability level	.87	.92
Second-order D.W.	2.07	1.97
Probability level	.56	.50

NOTE: Coefficients are unstandardized ordinary least squares (OLS) regression values; *t*-statistics are in parentheses.
a. D.W. = Durbin-Watson statistic.
**Significant at $p < .05$, two-tailed test. ***Significant at $p < .01$, two-tailed test.

model are dropped. The first thing to note is that the relationship of the fiscal variable with vote2 is negative and statistically significant in both models.[4] Thus, the electoral effects of the fiscal variable are robust with respect to the usual economic variables, as well as presidential incumbency, the number of consecutive terms in the White House by the same party, and F, that is, the percentage of GNP spent by the federal government. What the last control indicates is that, no matter how large or small the federal budget is relative to the economy, increases and decreases in this ratio have the predicted effect on the vote. It is not the relative size of government that is electorally relevant but its growth.[5]

As expected, the effect of the terms variable is negative. Its impact on vote2 is similar to Abramowitz's "time for a change" factor and what Norpoth (1996) calls voter "fatigue" with the incumbents (p. 450). Also consistent with the existing literature on economics and elections, and with those members of the group of six in which variations of one or both variables appear, growth has a positive and inflation a negative effect on vote2.

The noneffect of president is surprising,[6] given that other researchers have registered a positive effect for what Campbell (1996) calls "presidential incumbency" (p. 424). Part of the discrepancy may be due to simple measurement error. For example, Campbell's model estimates post–World War II elections only. Consequently, several defeats of incumbent presidents included in our time series were omitted in his model: Cleveland (1888),[7] Harrison (1892), and Hoover (1932). Moreover, in small samples, landslide victories ($V \cong 60\%$), such as those scored by Johnson (1964), Nixon (1972), and Reagan (1984), would have a distorting effect.

However, there is another, more fundamental reason for the poor showing of the president variable: It is confounded with the fiscal variable. Most presidents seeking reelection have pursued a cutback policy during their first term in office. (Lack of space prohibits our presenting a tabular analysis of the relationship but readers are encouraged to verify it for themselves.) Interestingly, Besley and Case (1995) observe a parallel phenomenon in states with term limits, where Democratic (although not Republican) governors follow a fiscal cycle, keeping the budget down in the first term and allowing it to grow in their second, that is, their final term. We find a similar phenomenon, only it is not limited to Democrats: Presidents of both parties do it. Whether this is because of political calculation, as Besley and Case (1995) believe, we cannot say.

Returning to Table 2, note that in the four-variable model of vote2, the adjusted R^2 is .70 and the standard error of the estimate (root *MSE*) is 3.4.[8] Although not spectacular, these statistics compare favorably with those that Norpoth (1996) obtained with his four-variable model of 31 elections held between 1872 and 1992.

If the model fits the data fairly well, it remains to be seen how accurately it performs in out-of-sample forecasting. To that end, the outcome of each of the 30 elections in this study was "predicted" with a

TABLE 3
Out-of-Sample Forecasts of Vote2 1880-1996
(wrong predictions are in italics)

		Vote2: 1880-1996		*Vote2: 1948-1996*	
Year	*Actual*	*Predicted*	*Error*	*Predicted*	*Error*
1880	50.2	53	–2.8		
1884	*49.9*	*50.9*	*1*		
1888[a]	50.4	50.1	–0.3		
1892	*48*	*54*	*6*		
1896	48	46	–2		
1900	53	57	4		
1904	60	54	–6		
1908	54	51	–3		
1912[b]	55	54	–1		
1916	52	52	0		
1920	36	41	5		
1924	58	53	–5		
1928	59	59	0		
1932	41	39	–2		
1936	62	62	0		
1940	55	58	3		
1944	*54*	*47*	*–7*		
1948	*52*	*49*	*–3*	*44*	*–8*
1952	45	47	2	44	–1
1956	58	56	–2	50.4	–7
1960	*49.9*	*50.4*	*0.5*	47	–3
1964	61	60	–1	62	1
1968	*49.6*	*52.5*	*2.9*	*55*	*5*
1972	62	58	–4	61	–1
1976	48.9	49.4	0.5	*50.3*	*1.4*
1980	*45*	*54*	*9*	*54*	*9*
1984	59	52	–7	53	–6
1988	54	56	2	56	2
1992	47	49	2	48	1
1996	55	58	3	58	3
Forecast success rate			76%		69%
Largest absolute error in vote2			9		9
Mean absolute error in vote2			±2.9		±3.7

a. President Grover Cleveland won the popular vote but lost in the Electoral College.
b. Excluded in calculation of the forecast success rate. See text.

model estimated with the remaining 29 elections. Table 3 displays the out-of-sample forecasts. Elections whose outcome was wrongly predicted are shown in italics. A prediction is considered wrong if the forecast amounts to an election outcome opposite that of the actual. In close elections, where the predicted or actual value of vote2 rounds off to 50%, decimals are used. A forecast success rate is calculated as the percentage of correct predictions. In computing this ratio, the 1912 election was omitted.[9] Note that more than 75% of the elections are correctly forecast, and two thirds of the predictions come within 3 points of the actual result. Because all but one of the six models to which we will compare ours (see Table 4) estimate elections beginning with 1948 at the earliest, we recalculated the predictions of our model for the truncated time series, 1948-1996. The results are shown in the last two columns of Table 3. During this shorter period, forecast success is lower (below 70%) and the mean absolute error larger, although not excessively so.

TABLE 4
Forecasting Vote2: Fiscal Policy and Other Models Compared
Criteria of Evaluation

Model	*Years*	*Variables/ Elections*	*Forecast Rate*	*Largest Error*	*Mean ± Error*
Time factor (Abramowitz, 1996)	1948-1992	3/12	67%	–3	1.4
Trial heat (Campbell, 1996)	1948-1992	2/12	83%	3	1.3
Personal finances (Holbrook, 1996)	1948-1992	3/12	83%	3.2	1.2
"Full-time" (Lewis-Beck & Tien, 1996)	1952-1992	3/11	82%	–3.1	1.6
Autoregressive (Norpoth, 1996)	1920/1992	5/19	84%	–8.2	2.99
Economic indicators (Wlezien & Erikson, 1996)	1948/1992	2/11	73%	6.3	2.2
Fiscal policy	1880/1996	4/30	76%	9	2.91
Fiscal policy	1948/1996	4/13	69%	9	3.7
Average (excluding last row)			78%	5.1	1.96

NOTE: All models other than the fiscal models are named after a distinctive label or phrase used by the author(s) in their respective contributions to Garand and Campbell (1996).

Table 4 matches our model against the group of six. In all six, the dependent variable is a version of the incumbent's share of the two-party vote. Five of the six forecast out-of-sample outcomes incorporate a measure of economic performance and an election-year presi-

dential popularity rating and, because they rely on poll results, cover only the last 11 or 12 elections. Norpoth's model is quite different. It includes two (first and second order) autoregressive parameters, growth of GNP, inflation, and a measure of candidate strength in party primaries. Omitting presidential popularity, it is able to reach back before the age of Gallup to include more elections, 19 in all; however, it makes in-sample, not out-of-sample, predictions.

Surprisingly, in the raw forecast success rate, that is, in the ability correctly to call most elections as a simple win or a loss for the incumbent candidate, the fiscal policy model estimated for the entire time series achieves about average for the group. This is remarkable, given the length of the time series, the number of elections predicted, the low variables-to-elections ratio, and the fact that neither presidential popularity nor incumbency, regarded by Campbell (1996) as forecasting "keys" (p. 424), is used as a predictor.

Where the fiscal model comes up short is on the magnitude of several errors, which together add up to a mean absolute error that is the second-largest in Table 4, about twice the size as that of three other models. When it comes to exactness in the vote estimates and avoiding embarrassing blunders (as in the 1980 election), qualities that for obvious reasons are highly prized in the art of forecasting, five members of the six do better. This is understandable, given that those models incorporate an election-year measure of presidential popularity, in one case taken as late as 2 months before the election. Interestingly, the fiscal model, when estimated for all 30 elections, performs as well as Norpoth's, the one model that predicts the second-largest number of elections without a presidential popularity measure.

CONCLUSION

This research note has presented a forecasting application of a model of presidential elections in which fiscal policy is a factor in explaining the share of the two-party vote going to the incumbent candidate. The model's parameters and forecasts are estimated for 30 presidential elections, more than any other model we know of, which says something about its stability across time and circumstances. As a forecaster, the model falls within the ballpark marked out by the group

of six, performing as well as the one member of the group that estimates more than a dozen elections (Norpoth's).

The model's satisfactory results are obtained without any measure of presidential approval or candidate popularity. What it *does* include is what every member of the six lacks: a policy variable. Unlike all other forecasting models we are aware of, ours presents a connection between presidential output, namely, fiscal policy, and how well the incumbents fare on election day. Thus, it offers practical advice for presidents and their advisers. To win reelection, or attempt to extend his party's tenure in the White House,[10] a president should reject a policy of fiscal expansion.[11]

True, the assumptions about voters and presidents underlying the model are reductionist and are likely to strike most readers as implausible. Nevertheless, the model does well in empirical testing, the bottom line in political (as in any) science. Moreover, because its core hypothesis and policy implication are unconventional, not to say controversial, the model raises the level of analysis from the merely technical or pragmatic to the theoretical, from tinkering with alternative specifications of predictors to maximize model fit before or after every election to inquiring into causality. Finally, in showing that a model that incorporates a policy variable performs satisfactorily as a forecaster, we hope to stimulate other political scientists to search for additional policies that can serve as forecasting factors.

APPENDIX
Data: 1872-1996

Year	*F*	*F′*	*F″*	*Fiscal*	*G3*	*P15*	*President*	*T*	*Vote2*
1880	2.5	–26	–15	–1	3.879	1.974	0	5	50
1884	2.3	–8	18	–1	1.589	1.055	0	6	49.8
1888	2.5	9	17	1	–5.553	0.604	1	1	50
1892	2.7	8	–1	1	2.763	2.274	1	1	48
1896	2.9	7	–1	1	–10.024	3.410	0	1	48
1900	2.9	0	–6	–1	–1.425	2.548	1	1	53
1904	2.7	–7	–7	–1	–2.421	1.442	1	2	60
1908	2.6	–4	3	–1	–6.281	1.879	0	3	54
1912	2.0	–23	–19	–1	4.164	2.172	1	4	55
1916	2.8	40	63	1	2.229	4.252	1	1	52
1920	6.7	139	99	1	–11.463	16.535	0	2	36
1924	3.5	–48	–187	–1	–3.872	5.161	1	1	58
1928	3.0	–11	37	–1	4.623	0.183	0	2	59
1932	9.2	207	218	1	–15.574	6.657	1	3	41
1936	11.0	20	–187	–1	12.625	3.387	1	1	62
1940	11.6	5	–15	–1	2.420	0.553	1	2	55
1944	44.3	281	276	1	2.910	6.432	1	3	54
1948	14.9	–66	–347	–1	3.105	10.369	1	4	52
1952	20.7	39	105	1	0.910	2.256	0	5	45
1956	17.1	–17	–56	–1	–1.479	2.132	1	1	58
1960	18.4	8	25	1	0.020	2.299	0	2	49.9
1964	18.6	1	–7	–1	4.950	1.201	1	1	61
1968	20.8	12	11	1	4.712	3.160	0	2	49.6
1972	20.9	0	–12	–1	5.716	4.762	1	1	62
1976	22.6	8	8	1	3.411	7.604	1	2	48.9
1980	21.6	–4	–12	–1	–3.512	7.947	1	1	45
1984	22.6	5	9	1	5.722	5.296	1	1	59
1988	21.1	–6	–11	–1	2.174	3.392	0	2	54
1992	22.1	5	11	1	1.478	3.834	1	3	47
1996	20.2	–9	–14	–1	2.000	2.300	1	1	55

SOURCE: Calculated from the following sources: U.S. Bureau of the Census (1975); Kendrick (1955); U.S. Department of Commerce (1986); Joint Economic Committee, *Economic Indicators* (various years through 1997); U.S. Department of Commerce publications: *Statistical Abstract of the United States* (Washington, DC: various years through 1996); Fair (1994, 1996b).

NOTES

1. Like growth and inflation, vote2 is borrowed from Fair (1994, 1996a, 1996b). His dependent variable, V, is the Democratic share of the two-party vote. Thus, vote2 = V when the incumbent is Democrat and vote2 = (1 – V) when Republican. Be it noted that Fair adjusted the vote for the 1912 and 1924 elections: In the former, he added T. R. Roosevelt's votes to Taft's and in the latter he, in effect, assigned 77% of the LaFollete vote to the Democrats and the remainder to the Republicans. We commend Professor Fair for publishing all his data, a practice that contributes to making political science more of a social enterprise.

2. Note that in Table 1, F′ and F″ are regarded as equivalent to zero—that is, neither positive nor negative—if their value falls between –2 and 2. The rationale for that operationalization is that to cross a threshold of awareness, that is, to be recognized as a change of policy, the magnitude of these values cannot be trivial.

3. The *as if* assumption is commonly made in economics. For example, in discussing the theoretical ground on which the Walrasian "vision" rests, Katzner (1992) explains, "Thus, although there is no guarantee that the consumer is, in fact, a utility maximizer, the model constructed here and the vision from which it emanates explains his behavior *as if* he were" (p. 46; emphasis added).

4. Be it noted that we experimented with an alternative specification, substituting F′ and F″, which are continuous variables, for fiscal. The results were not as good as with the original model. F′ has a positive but statistically insignificant effect on vote2 and F″ has a negative effect that is statistically significant at the level of .05 or better. Neither the direction nor statistical significance of the other variables was changed. But the overall model fit was not as good, the adjusted R^2 falling below .60 and the standard error of the estimate rising above 4.0. Thus, although it goes against the grain, continuous variables usually being preferred to binary ones, the fiscal variable turns out to be a better predictor than its components.

5. The reader may wonder how it is that, if fiscal expansion contributes to the defeat of incumbents, F has grown by a factor of 7 since the 1920s. Limited space does not allow us to do more than hint that the paradox dissolves with an economic analogy. Economists distinguish between two types of changes in consumer behavior: shifts in the *demand curve* and changes in the *quantity demanded*. A forward shift in the demand function, or demand, results in more units of the commodity being bought at a higher price. On the other hand, given a stationary demand function, an increase in price of the same good causes a fall in the quantity demanded. Analogously, a forward shift in the support function allows incumbents to be reelected at a higher F than before, whereas an increase in F, given a static support function, results in a loss of votes. For a graphic illustration, see Cuzán and Heggen (1985) and Cuzán and Bundrick (1998).

6. We also tested for the possibility that the president's party strength in the House of Representatives, measured alternatively by his party's share of House seats and its showing in the most recent off-year election, would have an effect on vote2. We found that it does not.

7. President Grover Cleveland, a Democrat, edged out his Republican challenger, Benjamin Harrison, by fewer than 100,000 votes, or one tenth of 1% of the two-party vote, but lost in the Electoral College, 233 to 168.

8. We tested for first- through fourth-order autocorrelation in the model and found none that is statistically significant. Neither did we find multicollinearity among the independent variables. These results confirmed that ordinary least squares is the proper procedure for estimating vote2.

9. Recall that in 1912, the Republican Party split between supporters of President Taft and that of his predecessor, T. R. Roosevelt. Rebuffed at the Republican nominating convention, Roosevelt bolted the party for an independent run as the progressive or Bull Moose candidate. As indicated in the previous note, Roosevelt's votes are added to Taft's. This results in a near-perfect prediction of vote2, but, of course, Taft lost the election to Wilson. Eliminating this election from the forecast model does not change any of the predictions, so it was thought preferable to keep it without, however, counting the vote2 prediction as correct.

10. Note that in Table 2, the effect of the terms variable is such that the longer the incumbents occupy the presidency, the more difficult it becomes for fiscal policy or economic outcomes to

overcome voter "fatigue." History suggests that incumbents wear out their welcome after four or five consecutive terms.

11. Interestingly, Machiavelli (1997) makes a similar recommendation:

> Therefore . . . if he is prudent [a prince] must not worry about the reputation of miser: because with time he will be considered even more liberal, when it is seen that because of his parsimony his income suffices him, that he can defend himself against whomever makes war on him, and that he can undertake enterprises without weighing down the peoples; by which token he comes to use liberality toward all those from whom he does not take, who are infinite, and miserliness toward all to whom he does not give, who are few. (p. 59)

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