

SIMULATING THE FISCAL MODEL OF PRESIDENTIAL ELECTIONS

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Abstract

In this paper we apply a simulation technique borrowed from civil engineering to the fiscal model of presidential elections. In this model, federal spending policy and presidential election outcomes are interrelated. On the one hand, as Machiavelli would have understood, an expansionary fiscal policy militates against incumbent reelection but a cutback policy facilitates it. That is the “demand” side of the fiscal model. The fiscal model also has a “supply” side: the longer the incumbents have occupied the White House, the more likely they are to implement fiscal expansion. This relationship holds starting with the 1932 election, when the federal share of GDP first broke out of the 2-3 percent range to which it had been confined, except during World War I, in the previous half century.

In this paper we simulate 1,000 elections under conditions that replicate the values of the predictor variables of the fiscal model over the 1880-2004 and 1932-2004 periods of American history. The simulated series allow patterns that are weakly detected in the historical data to emerge more clearly for observation and analysis. The results of the simulations not only confirm the empirical findings from the historical data, they also suggest additional relationships between fiscal policy, length of party reign in the White House, and victory in the two-party vote for president. The simulated system is a stable one, one that maintains a two-party system and keeps fiscal policy within bounds of what the majority of the voters will support.

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Drawing on previous work, in this paper we update and extend a simulation of the fiscal model of American presidential elections (for earlier efforts, see Cuzán, Heggen, and Bundrick 2000, 2003). We proceed as follows. In the first section we present a brief summary of the fiscal model. Next, we test it with data across 32 presidential elections held since 1880. Then we simulate the model to see what insights may be extracted. Finally, we offer some conclusions about the model and about simulation as a tool in political science.

The Fiscal Model: Theory¹

We preface our presentation by acknowledging that ours is only one of many possible representations of presidential elections.² Like all theoretical models of complex systems, it is an attempt “to *lose* information” (Ashby 1970: 100; emphasis in original). Accordingly, at the outset we make a number of simplifying assumptions, to wit: the president is the primary agent in setting fiscal policy, the congress being relegated to the role of a pressure group that must be accommodated by the White House; the outcome of the election hinges solely on the president’s fiscal policy; there are only two parties, the incumbents and the opposition; and the election is decided by the popular vote, not the Electoral College.

These postulates may be regarded as counter-intuitive or unrealistic. Against that criticism, we can do no better than to show that the model holds up rather well under empirical testing. As W. Ross Ashby says, “test by demonstration is always treated as the ultimate test, let plausibility say what it will The operational test is the last court of appeal” (1970: 103-104). Or, as Milton Friedman has it, “the only relevant test of the *validity* of a hypothesis is comparison of its predictions with experience” (1987: 157; emphasis in the original).

The pure fiscal model consists of three actors and two variables. The principals are the incumbents, the voters, and the opposition party. The incumbents, led by the president, who acts as his party’s chief executive officer, include key members of the administration and the party’s congressional delegation. As shown in Figure 1, the variables are F and VOTE2. Appearing on the horizontal axis, F is the percent of Gross Domestic Product (GDP) spent by the federal government. VOTE2, the percent of the two-party vote going to the incumbents, the president or his party’s candidate, is viewed

along the vertical axis. A truncated support function or schedule (S) slopes down and to the right, summarizing the first of two key propositions embedded in the fiscal model: that as the budget grows relative to the economy,³ the proportion of the electorate willing to renew the governing party's lease on the White House falls.

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Figure 1 about here
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The negative relationship between spending and the incumbent share of the two-party vote has an analogy with economics.⁴ F is treated as the equivalent of a "price" or "fee" which Washington charges the economy for a given bundle of goods and services. *Ceteris paribus*, as this "price" rises, more and more voters refuse to "buy" another term from the governing party. Metaphorically, on Election Day the managers of the federal purse have their "contract" up for renewal. The willingness of the voters to grant them another term depends on the fiscal "fee" being charged. Other things equal, if the amount exacted has risen since the last election, a smaller portion of the votes are cast for the president or his party's candidate. If spending has grown beyond what a majority is willing to support, the incumbents are "fired." By default, fiscal policy is now placed in the hands of what on Election Day was the "out" party. In our model, then, the relationship between voters and presidents is treated as an exchange relationship, one in which fiscal policy is traded for terms in office. Viewed in this light, elections are the equivalent of a retrospective-minded referendum on the president's fiscal policy.

Voters vary in their preference or tolerance for federal expenditures. Those located high on the vertical axis in Figure 1 have very little use for spending. They will turn against the incumbents the moment the budget crosses a trivial threshold. At the bottom, or opposite end along the vertical axis, are found voters willing to support the incumbents no matter how much the federal government spends. For convenience, henceforth we shall designate as Lockceans all voters whose spending limit has been crossed, and as Rousseauans all those who would support yet additional expenditures.⁵

The other key proposition driving the fiscal model has to do with the incumbents. We assume that their goal is to maximize spending, subject to reelection. For the president (or more generally the incumbents), greater spending is desirable for a variety of reasons. A substantial percent of the budget is a function of prior legislation, which may provide for automatic increases. Inertia dictates a certain amount of expenditure growth. Absent shocks that would justify major changes, it takes fortitude to alter the budgetary status quo. This is because various interest groups and their allies in congress often lose with a change or reform of the law. They can usually rely on like-minded members of the media to portray the president as mean-spirited. (Even Renaissance princes appear to have been sensitive to some version of this criticism, since Machiavelli (1997) felt compelled to address it.) The negative publicity is annoying, distracting, and may cause at least temporary damage in the eyes of various segments of the public. More positively, budget growth allows the president to appease interest groups and legislators who seek to convert ideas into projects, or who clamor for additional expenditures on

their favorite programs. Also, a president uses new money to reorder national priorities, to accomplish some great enterprise that will become his legacy, or, in the worst of cases, simply to indulge his whims at taxpayers' expense.⁶

Even as they appreciate the advantages of a growing budget, however, the incumbents also desire to stay in office. This is analogous to Machiavelli's assumption that a prince wishes "to maintain himself in his state" (Machiavelli 1997: 6). Occasionally, a president may sacrifice reelection on a matter of principle, looking to history for vindication. It is assumed, though, that most presidents (and, along with them, members of their party) derive utility from controlling the executive branch and, perhaps just as important, dread losing the next election. In other words, incumbents are defeat-averse. Therefore, they seek to discover how much more they can spend while retaining the White House. The governing party, with an eye on reelection, yields to bureaucrats, legislators, interest groups, and its own appetites, allowing the budget to grow, but only up to a point. That point is what they estimate is the maximum that can be spent compatible with reelection. In sum, presidents seek to maximize spending, subject to a reelection constraint. They aim to manage the biggest budget voters will "buy."

Our model unites Downs' idea of reelection-minded parties, Niskanen's budget-maximization principle, Brennan and Buchanan's fiscal Leviathan, and Riker's minimum-winning coalition strategy in the behavior of one actor, the president.⁷ However, in our view presidents do not maximize votes, or the probability of reelection, or revenues. Rather, they maximize *spending*, subject to the constraint of winning another term for themselves or their party's candidate.

Since presidents want to maximize spending subject to reelection, in a two-party system the budget expands until it reaches F^* , where the support function S intersects the 50 percent plus one of the vote "parallel." F^* is the equilibrium level of expenditures. This is the most that government can spend without the president or his party's candidate losing the next election. At F^* , the size of the federal budget (again, relative to the economy) is equal to that to which a bare majority of the voters will consent. In the words of our exchange metaphor, it is the maximum fiscal fee that the incumbents can charge without their being fired.

Since it splits the electorate in two, F^* belongs to the median voter, as in other rational choice models (Wittman 1995). To the left of F^* , there being more Rousseauans than Lockceans, the governing party can allow or promote additional spending, and still win another term. If the budget grows beyond F^* , Rousseauans being in the minority, the incumbents are voted out. What on Election Day was the opposition party now enters the White House. If the new president cuts spending back to or below F^* , he is reelected; if not, his bid for another term is rejected. The process continues in cyclical fashion until the budget is brought into compliance with what a majority of the voters will support.

Just as in economic theory the equilibrium price clears the market, solving the problem of how much of a particular commodity to produce, so in our model F^* solves the fiscal problem. At the equilibrium price, the quantity supplied by sellers and the

quantity demanded by consumers are in balance or at rest. Similarly, at F^* the amount the federal government spends coincides with what just over half of all voters will consent to support. At F^* the president and a bare majority of the electorate are in agreement on how big the federal budget ought to be. This point is stable: deviations from F^* are self-correcting, with presidents adjusting the size of the budget in response to election returns.

It goes without saying that F^* is a theoretical concept, one deduced logically from the premises of the pure fiscal model. As a practical matter, the fiscal-electoral process is never quiescent or stagnant. F^* is not so much a place of rest as a gravitational point, one to which the system tends to converge. Be it noted that all natural systems, be they ecological, hydrological, thermodynamic or, as in our case, political, strive for equilibrium. As in other natural systems, a range of stability bounds a steady state. Differences between voters and presidents over fiscal policy need to reach some critical magnitude for the latter to be displaced from the White House. What this critical value is will be specified in the next section.

The support function is not static. It may shift forward, toward greater support or tolerance for expenditures on the part of the electorate, or backward, toward greater resistance to budgetary growth, as shown in Figure 2. Assume the starting point to be F^*1 in period $t1$. Assume, further, that in the next period the public becomes more fiscally indulgent, or that it demands additional spending to finance a greater quantity or a higher quality of federal goods and services. This is represented by a forward shift in the support function from $S1$ to $S2$, where it intersects the 50 percent “parallel” further to the east.⁸ This results in the reelection of the incumbents with, say, 60 percent of the two-party vote. Flushed with what in the United States is a landslide victory, the president promotes or allows budget growth. As spending increases, $VOTE2$ shrinks back, to 50 percent at F^*2 . This fiscal expansion may take place over one or more terms, depending on the audacity of the governing party. Thus, to say that the support function shifts forward is to say that a change in public opinion has occurred, so that, at the time the incumbents win a landslide victory, but *before* spending increases, a percent of the electorate that was previously Lockean has become Rousseauan, willing to support a larger budget. However, once expenditures have risen, their desire for additional expenditures having been satiated the erstwhile Rousseauans turn Lockean again. The two categories of voters are once again in balance or at rest at a new equilibrium point, F^*2 .

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Figure 2 about here
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If the process is repeated, either periodically, in big steps, or incrementally, with smaller, successive forward shifts in the support function, F^* migrates forward over time. Conceivably, the process could occur in a reverse direction, with backward shifts in the support function causing F^* to migrate westerly, from F^*3 to F^*1 . This is the same as saying that public opinion has changed in a Lockean direction. Now a greater proportion of voters than previously will not consent to the incumbents remaining in the White House unless spending is reduced. If that did not happen, on Election Day F would exceed F^* , the incumbents would be defeated, the opposition party would take control,

and if spending were not reduced it, too, would be voted out, and so on until a new president, having figured out what was needed fiscally to win reelection, implemented the desired fiscal cutback. F^* , then, is the product of a dynamic process.

With Figure 2 we demonstrate two things. First, that shifts in the support function in a Rousseauian direction, i.e., toward greater tolerance or demand for federal spending, whatever their ultimate causes, do not violate the assumption of a negative relationship between F and $VOTE2$. Second, that the model provides for a political process for converting shifts in voter attitudes toward spending into fiscal policy. On the one hand, presidents trade support above the 50 percent plus one of the vote minimum to stay in office for a larger federal budget. On the other hand, a defeat of the incumbents signals to a new president that a shift of fiscal policy into reverse gear is in order.⁹

Recapitulating: the pure fiscal model consists of two primary actors, voters and the incumbents, represented by the president or, if he is not running for reelection, his party's candidate, and a secondary player, the opposition party. The model is represented by a fiscal-electoral map displaying a continuous support function, the points showing the proportion of voters who consent to the federal government spending any given percent of GDP. Voters are distributed along this downward sloping schedule so that, with every increase in the federal budget relative to the economy, fewer and fewer of them are willing to grant the incumbents another term. Theoretically, the equilibrium budget size, denoted by F^* in Figure 1, is found just slightly above where the support function crosses the 50 percent "parallel." This is the maximum that the governing party can spend and still keep its lease on the White House. Beyond F^* the incumbents are defeated; just short of it they win another term. For their part, presidents are expenditure maximizers, subject only to one constraint: continuing occupancy of the White House for themselves or their party. They will increase spending, trading votes for a bigger budget but, being defeat-averse, will approach F^* gingerly. Nevertheless, with every reelection the incumbents become more confident, so that the probability that fiscal policy will deviate from that to which a majority of the electorate will consent increases. The longer a party occupies the White House, then, the more likely the president is to increase spending, until he overshoots the mark and loses the next election. Their defeat is interpreted as a cautionary tale by the opposition party. Upon taking office, the new president is motivated to trim the budget. If he does so he is reelected. After one or two reelections, once again the incumbents begin to push the fiscal envelope, are defeated, and the cycle completes another revolution. In this way, presidential election outcomes and federal fiscal policy are reciprocally related in a self-regulating system.¹⁰

The Fiscal Model: Evidence

Figure 3 displays the empirical relationship between F , viewed along the vertical axis, and victory (white dots) or defeat (black dots) in the two-party vote for president (ignoring the Electoral College) across the 32 presidential elections held since 1880. The height of the line connecting the dots, what we call the F -line, measures the ratio of federal outlays to GDP. At first glance there appears to be no relationship between this ratio and election outcome, since incumbents are returned to the White House at any value

of F. However, examining the *turns* of the F-line, a relationship emerges. Most of the time, clockwise turns, generally representing decreases or decelerations in spending, are associated with victory in the two-party vote for president. By contrast, counter-clockwise turns, generally describing increases or accelerations in the growth of spending, coincide with defeat.

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Figure 3 about here

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These turns in the F-line are quantified by the variable FISCAL. (See Table 1 for specification of this and all other variables included in the analyses presented in this paper). FISCAL takes two values, expansionary (+1) or cutback (-1). (Theoretically it could take the value of zero, representing a steady-state fiscal policy, but historically this has never happened. See the Data Appendix.)

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Table 1 about here
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In Table 2 we show the bivariate relationship between fiscal policy measured by FISCAL and election outcome, i.e., a simple win or loss for the incumbents in the popular vote for president (again, ignoring the Electoral College), in the 32 presidential elections held since 1880. The relationship is strong and statistically significant in both periods, with almost 80% of all cases behaving as expected.

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Table 2 about here
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As well as accounting for victory or defeat, FISCAL also has an effect on the actual percent of the two-party vote going to the incumbents. This is shown in Table 3, in which are displayed several multiple regression (OLS) models. In the first model, VOTE2 is regressed on FISCAL. Note that the relationship is negative: a switch in fiscal policy from cutback to expansionary costs the incumbents 8 points in the percent of the two-party vote. (FISCAL ranges from -1 to 1, so to estimate its effect on VOTE2 one multiplies its coefficient by two.) The same model is estimated in the 1932-2004 period when, as shown in Figure 3, F broke out of the 2-3% range to which it had been confined in prior years (except in 1920, when the fiscal effects of WWI were still being felt). In this model, implementing fiscal expansion costs the incumbents six points in the two-party vote. The next three models include controls for the state of the economy (GROWTH and ALLNEWS, both variables borrowed from Fair (2002)), consecutive terms in the White House, and the incumbents' party. Note that we used different variables for measuring duration in office: TERMS in 1880-2004 and TERMSA (a variable borrowed from Alan Abramowitz (2004)) in the 1932-2004 period. This is because one measurement works better in one period but not in the other. Even after introducing the aforementioned controls, the penalty for an expansionary policy is still about 6 percent of the two-party vote.

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Table 3 about here
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Be it noted that estimated over the 1916 period (the same as Fair's) the Adj. R-sq. of the multiple regression models is over 0.90 and the SEE shrinks to less than 2.0. That model estimation has performed creditably at election forecasting, even compared to other models which rely on public opinion variables, some as late as two months before Election Day (see Cuzán and Bundrick 2005). In this paper, though, we are more interested in estimating the interrelations between election outcome and fiscal policy, and for that purpose the 1880-2004 and 1932-2004 periods are more appropriate.

In Table 4 we display the relationship between the number of consecutive terms in the White House and fiscal policy over the 1932-2004 period. As expected, the longer the incumbents have occupied the White House, the more likely they have been to implement fiscal expansion. The relationship is weak but in the expected direction. Finally, in Table 5 we show that there is no statistically significant difference between the parties on fiscal policy. Ironically, the distribution (which, again, although it is not statistically significant) suggests that, if anything, it is *Republicans* who have implemented fiscal expansion more often. This runs contrary to conventional wisdom.

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Tables 4 and 5 about here
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Summing up: In this section we have shown that data on voting and spending over the last one and a quarter century are consistent with the hypotheses of the fiscal model. In general, voters appear to punish fiscal expansion. For their part, since 1932 incumbents display a general tendency to spend more the longer they have held on to the presidency.

The Fiscal Model: A Simulation¹¹

In this section we update and extend a simulation of the fiscal model of presidential elections performed previously (Cuzán, Heggen, and Bundrick 2003, Chapter 5). Our purpose is to see what additional insights we can extract from the fiscal model by observing its operation over a long series of simulated "elections." We wish to find answers to the following questions: Does the relation between time in the White House and fiscal policy displayed in Table 4 hold? What if the incumbents consistently pursued a cutback policy or, alternatively, an expansionary policy?

Our political simulation has its roots in the field of water resources systems engineering, a discipline in which the interactive complexities of the hydrologic process preclude simplistic, explicit deterministic solutions (Mays 1997). As in hydrology, the simulation of the fiscal model is designed to duplicate the historical statistical distribution of correlates and outcomes. The simulation is built in successive steps. At every step, each variable is estimated on the basis of one or more variables and an error term, the

coefficients and the variance being derived from the respective historical period used to calibrate the simulation structure. The “correct” sequence is not obvious. There is some arbitrariness involved in the process of construction. Following the theoretical model and the empirical findings presented in previous sections, we chose first to determine the spending policy of the incumbents. We did this by estimating the value of FISCAL from TERMS, plus a normalized error, the magnitude of which is drawn from the historical data. Next, we estimated GROWTH as a function of FISCAL, plus TERMS, plus a normalized error. Then ALLNEWS was made dependent on the values of FISCAL, TERMS, and GROWTH, plus a normalized error. As in the fiscal model, VOTE2 is the ultimate dependent variable, a function of the previous four variables plus a normalized error. The parameters of the simulation, then, were calculated in a step-by-step sequence leading up to a full model for estimating the outcomes of 1,000 simulated elections.

The simulated values for FISCAL, GROWTH, and ALLNEWS generated by this procedure, then, were largely influenced by a random process replicating the spread of the historical data around their respective regressions. In effect, then, it is as if the randomness built into the simulation procedure generated a “sample” of observations fitting the historical pattern. In Table 6 are displayed the historical and simulated means and variances of the variables making up the fiscal model. No statistically significant differences between the two sets are observed. Neither is there a statistically significant difference between the historical and simulated distributions of party reigns by number of terms, as shown in Table 7. (A party reign is a series of consecutive terms in the White House by presidents of the same party.) We conclude that our procedure for simulating the historical distribution of outcomes was successful.

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Tables 6 and 7 about here
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In Table 8 we compare two simulated distributions generated by different fiscal policies. The distribution on the left is obtained by simulating an invariant “leftist” policy of fiscal expansion. Term after term, FISCAL = 1. The distribution on the right results from pursuing an unvarying “rightist” cutback policy. FISCAL = -1 all the time. These extreme spending policy opposites have radically different electoral consequences. Were the incumbents always to pursue the “leftist” policy, almost half of them would be defeated after only one term in the White House. Nearly 80% of the reigns would be exhausted after three terms. The average party reign would be 2.07 terms (vs. the historical 2.21). By contrast, almost 90% of incumbents implementing a “rightist” cutback policy would make it past their first term and more than half of party reigns would exceed three terms. The average number of terms per reign would be 3.83. Thus, if incumbents were interested solely in maintaining themselves in office, they presumably would consistently implement a cutback policy. However, historically they have not behaved this way. Instead, about 1/3 of the time, they have pursued fiscal expansion, a policy that has cost them the White House in all but three cases (recall Table 2a). Why?

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Table 8 about here
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Perhaps it is because, as assumed in the fiscal model, the motivation of presidential incumbents is not to be reelected, but to spend the most that is consistent with reelection. We saw in the previous section (recall Table 4) that since 1932 incumbents have become budgetarily bolder the longer they have been in the White House. As shown in Table 9, the mean value of FISCAL *in the last term of a party reign*, or the “exit term,” goes up the longer the party reign. Whereas no consistent trend for any other variable is observed, FISCAL rises across reigns of increasing duration in both history and the simulation. Thus, it could very well be that in testing the electorate’s fiscal limits, incumbents frequently exceed it. This could be by sheer accident or loss of control (i.e., mismanagement). Or, at least some of the time, the incumbents may come to believe that they can nudge the support function forward through exemplary political leadership. Considering that on average they will be back in the White House after between two and three terms, it may well be a gamble they think it is worth taking.

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Table 9 about here
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Thus, there appears to be a tendency for fiscal policy to be restrained at first but to become more expansionary with every additional term in office. Historically, starting with 1932, in the last term of a party reign the value of FISCAL has grown monotonically from the end of one party reign to the next, rapidly rising from one-termers to three-termers,¹² and flattening out after that. But with so few reigns, and the fact that there was no four-term reign during this period, it would be easy to dismiss this trend as unreliable. With more observations obtained with the simulation, however, the functional relationship between the two variables becomes smoother, the gaps being filled in and the wrinkles ironed out. This is shown in Figure 4. What the relationship suggests is that in their first term in the White House incumbents put reelection first but, once in their second term, the hunger to spend more tends to trump the desire for reelection, particularly when it is not the president himself who faces the risk of being humiliated in defeat. Ironically, constitutionally prohibiting a president from serving more than two full consecutive terms may well have removed an incentive for spending restraint.

Conclusion: A Self-Regulating System?

Together, the empirical findings presented in the previous section and the results of the simulations point to feedback behavior exhibited by the fiscal model that is akin to those familiar to natural scientists, engineers, and social scientists (Richardson 1991, Easton 1965). Abstracting from economic conditions, in Figure 5 we observe two circuits running from TERMS to VOTE2, one directly and the other through FISCAL. As in all self-regulating systems, both circuits are negative. The first circuit runs from TERMS to VOTE2. With every additional term in office, the likelihood of incumbent party defeat rises regardless of fiscal policy or economic conditions. There is progressive erosion in support for the incumbents no matter how well they behave fiscally or how healthy the economy is.

The fiscal model includes a second feedback loop, this one running from TERMS to FISCAL and thence to VOTE2. The longer incumbents remain in office, the more likely the president is to switch to an expansionary fiscal policy. Absent exceptionally good economic growth, this almost invariably guarantees defeat. Therefore, time in the White House appears to work against reelection in two ways: firstly, by causing voter “fatigue” with the incumbents; and secondly, by inducing the latter to increase spending, which in turn leads the electorate to turn them out of the White House. The former effect is well established in the literature. To the best of our knowledge, we are the first to identify the operation of the second feedback loop, going from terms in office, to fiscal expansion, to electoral defeat.

The two feedback loops suggest a fiscal-electoral cycle. Again abstracting from economic conditions, assume that a president in the first term of his party’s reign in the White House adopts a cutback fiscal policy. The incumbents are rewarded with reelection. In their second term, they have the choice of sticking to that policy or switching to an expansionary mode. Assume, for the moment, that the incumbents stay the fiscal course in the second and subsequent terms. (This is the “rightist” policy simulated in Table 8.) No matter: with every additional term in office, voters grow increasingly weary of them. The incumbents’ margin of victory becomes progressively smaller, until they lose the next election. Since 1932, however, incumbents have not restrained their spending indefinitely. Rather, the longer they remain ensconced at 1600 Pennsylvania Ave., the more likely they are to turn toward fiscal expansion. This almost invariably results in their defeat, a new president is elected, and a new cycle begins.

Both feedback loops militate against monopolization of the White House by either party. Their combined effect is to maintain a two-party system in which Democrats and Republicans take turns in the White House every two to three terms, splitting almost equally the time the office has been occupied since 1880. (The mean value of PARTY over the 1880-2004 period is -0.13, or every close to 0. In other words, the data series is almost equally divided between Republican (-1) and Democratic (+1) administrations.) These processes preserve the stability of the two-party system, something observed throughout American history (Sellers 1965).

These findings suggest that the American fiscal-electoral system is characterized by a certain “intelligence” (Shenhar 1990: 172; see also Ashby 1981). A “time for change” effect, captured by the variable TERMS (or TERMA), ensures that, even if the incumbents pursue a cutback fiscal policy time after time, they are increasingly likely to lose the election the longer they remain in office. This preserves the two-party system. Furthermore, following the defeat of the incumbents, what was the opposition party now has a chance to set fiscal policy. Assuming that the new president pursues a cutback policy, he is reelected. In the next term, the incumbents again have to decide how much to spend. If they switch to an expansionary policy, more often than not the incumbent party candidate loses the next election, a new president moves into 1600 Pennsylvania Ave., and the cycle begins anew. This path tends to keep federal spending growth within the bounds of what the electorate will support.

Thus, if the fiscal model is a valid representation of political reality, the American fiscal-electoral system appears to behave “intelligently,” as if it seeks to maintain within limits what, following Ashby (1960: 42), may be regarded as its “essential variables.” One is a competitive two-party system. The other is the rate of spending growth, which keeps the federal budget from absorbing more and more of the economy. It seems, then, as if the American fiscal-electoral system is stable and self-regulating.

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ENDNOTES

1. In this section we borrow liberally from Chapter 2 of Cuzán, Heggen, and Bundrick (2003).
2. Reviewing the performance of almost fifty models of presidential elections estimated over the 1948-2000 period, Bartels and Zaller observe that “no single specification is likely to capture adequately the inferential implications in the available data in situations like the one considered here, where theory and evidence are both relatively weak (2001: 14).”
3. Unless otherwise noted, throughout this paper all allusions to increases or decreases in spending or the size of the budget need to be understood in this proportional sense, i.e., as changes in the *ratio* of spending to GDP.
4. On model-building by analogy, see Morris (1970). See also Black (1950), Katzner (1969), Pribram (1953), Russett (1966), and Sebba (1953).
5. In *The Second Treatise on Government*, John Locke (1980) offers a rationale for a limited government, whereas in *The Social Contract* Jean Jacques Rousseau (1968) envisions a more expansive role for the state.
6. For a discussion of the real income derived from public office, see Hood (1992).
7. See, respectively, Downs (1957), Niskanen (1975), Brennan and Buchanan (1980), and Riker (1962).
8. We do not say “to the right” because, by convention, this word stands for “conservative,” just as “left” is used to denote “liberal.” It might be confusing to describe a more favorable attitude toward government spending on the part of the voters as “a shift to the right,” or a less favorable one as a “shift to the left.” For this reason, we use the more neutral nomenclature of the cardinal points, or terms connoting direction of motion, i.e., forward or backward.
- 9 In *Federalist LXXII*, Hamilton notes that, where a change of the executive has been made by election, “the person substituted is warranted in supposing that the dismissal (sic) of his predecessor has proceeded from a dislike to his measures; and that the less he resembles him, the more he will recommend himself to the favor of his constituents” (Kramnick 1987: 413).
10. On self-regulation, see Ashby (1960).
11. Prior examples of simulations of American presidential elections include Alessina and Rosenthal (1995) and Erikson, Stimson, and McKuen (2002).

¹² By one- or two- or three-termers we mean presidents in the first, second, third, etc.

term of a party reign.