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Forecasting the 2008 Presidential Election: A Challenge for the Fiscal Model

In 2004, for the first time the fiscal model was employed for the purpose of real-time, *ex ante* forecasting of a presidential election. The results were encouraging (Cuzán and Bundrick 2005). This year, however, the model encounters a set of challenging conditions, relevant only to it, never seen in the data before. In this paper, we briefly summarize the model, describe the problem, wrestle with ways to address it, and conclude with a forecast for November.

Assumptions, Measurement, Performance

The fiscal model of presidential elections rests on the premise that the share of the two-party vote going to the incumbents, VOTE2, is inversely related to changes in F, the ratio of federal outlays to gross domestic product (GDP).¹ (See Table 1 for definitions and measurement of all variables.) Throughout this

paper, changes in spending are to be understood in this relative sense. The intuition is that F represents the equivalent of a fee that the federal government charges the polity for its services. As with any commodity, the

higher the federal fee, the smaller the quantity demanded. Unlike consumers, however, voters are not able to reduce their purchases from Washington when its fee goes up. Instead, assuming there has been no change in their evaluation of federal goods and services, they do the next best thing. Switching metaphors, on Election Day they “fire” the incumbents. Viewed in this light, an election is equivalent to a retrospective-minded referendum on, *ceteris paribus*, the president’s fiscal policy.

FISCAL, a binary variable derived from the first and second derivative of F (F1 and F2, respectively), captures the direction and rate of change in spending. If FISCAL = 1, policy is expansionary. A cutback policy, signified by FISCAL = -1, indicates either a reduction of expenditures or a deceleration in their rate of growth. By itself, FISCAL turns out to be a powerful predictor of presidential election outcomes. For well over a century, when policy has been cutback, incumbents returned to the

White House 85% of the time. By contrast, in 75% of the cases where policy was expansionary, the electorate voted for the opposition party. Omitting 1912, when the Republicans split into two, 80% of all presidential elections held since 1872 behave as expected. Similar results are obtained with FPRIME, a simpler, yet more exacting spending measure. FPRIME is scored 1 if the budget has grown between election years (POLICY is expansive), and -1 if it has shrunk (POLICY is contractionary). Over 90% of incumbents who pursued a contractionary policy won reelection, while only 35% of those implementing an expansive policy did so. (All fiscal data are included in the Appendix.)

Note that the two variables do not always characterize POLICY in the same way. They coincide under two conditions. When FISCAL = 1, so FPRIME = 1, as the former cannot be positive unless the latter is. This means that in the current term the budget has grown at the same or faster rate than in the previous presidential term. Thus, spending has increased unambiguously. Policy is expansionary, and the two variables should have approximately the same impact on election outcome. If FPRIME is negative, this means that spending has actually shrunk; hence, FISCAL is also negative. Policy is contractionary. Again, measured with either variable, the effects on the election should be similar. The discrepancies arise when FPRIME registers a positive change but FISCAL a negative one. This happens whenever the increase in spending during the current term is smaller than in the previous term. Then the characterization of policy, and thus its hypothesized electoral consequences, differs fundamentally, depending on the spending measure. If it is FPRIME, policy is expansive, and the incumbents are predicted to lose; if FISCAL, policy is cutback, and the in-party is anticipated to win. This is because the latter differentiates policy according to the rate of growth in spending, while the former does not. FISCAL embodies the assumption that the electorate rewards a president equally for reducing the rate in spending growth relative to the previous term or for actually slashing the budget. This is why we say that FPRIME is at once simpler and more exacting than FISCAL: it assumes that voters hold the incumbents accountable for budget expansion regardless of its rate of growth. We will return to this difference between the two variables presently, for it

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Table 1
Variable Definitions and Measurements

Variable	Definition and Measurement
VOTE2	Percent of the two-party vote won by the incumbent party candidate, except that in the 1912 election Fair combined the vote totals of Taft and T. Roosevelt, and in the 1924 election he assigned 23% of the Lafayette vote to President Coolidge and the rest to the Democratic candidate (Fair 2006)
F	Federal expenditures as a percent of GNP (through 1960) or as a percent of GDP (1964–2000): $F = (\text{federal outlays}/\text{GNP or GDP}) \times 100$
F1	Arithmetic change in F between election years: $F1 = F_t - F_{t-1}$, where $t = \text{election year}$, $t - 1 = \text{previous election year}$
F2	Arithmetic change in F1 between election years: $F2 = F1_t - F1_{t-1}$
FISCAL	FISCAL = 1 if $F1 > 0$ and $F2 \geq 0$; FISCAL = -1 if $F1 < 0$ or $F2 < 0$
FPRIME	FPRIME = 1 if $F1 > 0$; FPRIME = -1 if $F1 < 0$
POLICY	POLICY is (a) expansionary if FISCAL = 1; (b) expansive if only FPRIME = 1; (c) cutback if only FISCAL = -1; (d) contractionary if FPRIME = -1
GROWTH	The “growth rate of real per capita GDP in the first three quarters of the election year (annual rate)” (Fair 2006)
ALLNEWS	ALLNEWS = Fair’s GOODNEWS, “number of quarters in the first 15 quarters of the administration in which the growth rate of real per capita GDP is greater than 3.2 percent at an annual rate,” except that the true values of the variables are entered in 1920, 1944, and 1948, whereas Fair zeroes them out (Fair 2006)
ALLPRICES	ALLPRICES = Fair’s INFLATION, the “absolute value of the growth rate of the GDP deflator in the first 15 quarters of the administration (annual rate)” except that the true values of the variables are entered in 1920, 1944, and 1948, whereas Fair zeroes them out (Fair 2006)
PARTY	PARTY = 1 if the Democrats occupy the White House, and -1 if the Republicans do

makes all the difference in the characterization of policy in the second term of the Bush presidency and, more to the point, the forecast for November.

The relation between POLICY and VOTE2 persists in the presence of four control variables. Three are borrowed from Ray Fair’s presidential vote equation: two assaying the state of the economy, GROWTH and ALLNEWS, and DURATION, a weighted index of the number of consecutive terms the incumbents have occupied the White House (Fair 2006). The first two are hypothesized to redound to the benefit of the incumbents, and the last to work against them. PARTY is also included, because not only Fair but Alesina and Rosenthal (1995) found that Republicans tend to do better than Democrats at the polls.

Table 2 displays the fiscal model, combining either FISCAL or FPRIME with the four aforementioned controls, estimated over two different periods, 1880–2004 and 1916–2004. The longer period includes all 32 elections for which Fair provides data. The shorter interval is the one over which Fair estimates his equation and the fiscal model has been calibrated for the purpose of forecasting, as in 2004. Henceforth we will label a fiscal model estimated over the longer period as “long” and one estimated over the shorter period as “short.” In both models, long and short, the coefficients of all variables have the correct sign, and are statistically significant. Note that a switch in policy from cutback to expansionary, or from contractionary to expansive, costs the incumbents approximately 4–5% of the two-party vote (FISCAL and FPRIME range from -1 to 1, so to estimate the impact of either on VOTE2 one multiplies their coefficients by two). Across all models, from 85% to 95% of the out-of-sample elections are called correctly, with a mean absolute error (MAE) of less than 2.0 in the short models, which have a better fit with the data, and less than 3.0 in the long ones.

In Table 3 we further explore the performance of both versions of the fiscal model. In out-of-sample forecasting, the two models are in close agreement with themselves between periods, as well and between themselves within periods. The average

Pearson’s r correlation between any two predictions of VOTE2 is 0.96. The mean absolute difference between the two sets of predictions is 1.57 (s.d. = 1.31) with the long models, and 1.37 (s.d. = 0.96) with the short ones. Also, over 90% of the time the long models coincide in their predictions of the winner (whether or not these calls were made correctly), while the short models do so more than 95% of the time. With so much agreement among the models, one might be tempted to conclude that one is just as good as the other for the purpose of forecasting this year’s election. But a closer inspection of the individual errors, particularly of the election outcomes wrongly predicted, the “miscalls,” tells a different story.

The unshared miscalls of the long models are the predictions for 1884, 1888, and 1980, all of which occurred only with FISCAL in the model. The discrepant errors with the short models are those of 1968, which the model with FPRIME got wrong, and, again, that of 1980, which the model with FISCAL miscalled. All such unshared mistakes but the last concern close elections that one model or the other missed by one or two points. Not so with the 1980 election, the most recent error of any of the models. Short or long, the model with FISCAL called the election for the incumbents, over-predicting President Carter’s vote by 6–7 points, whereas in fact he lost badly to Ronald Reagan. Note, too, that this is the largest error of the short model with FISCAL. By contrast, the largest error with its FPRIME sibling fell (harmlessly) on the same side of the election outcome in 1932, where it under-predicted President Hoover’s share of the vote, while still correctly calling the election a defeat for the incumbents. Thus, as a practical matter, the 1980 error incurred with the short model with FISCAL is far more serious. In fact, it was a blunder, by which we mean wrongly predicting the winner of an election that was nowhere near close. In this case, the spread between the two presidential candidates was more than 10 points.

Therefore, we conclude that although in terms of the MAE both models with FISCAL perform somewhat better than their

Table 2
The Fiscal Model: Two Versions, Two Periods (*t*-statistics in parenthesis)

Predictor	Dependent Variable: VOTE2 (Incumbent share of two-party vote)			
	1880–2004		1916–2004	
FISCAL	-2.78 (-4.68)		-2.49 (-5.15)	
FPRIME		-2.62 (-4.54)		-2.13 (-4.92)
GROWTH	0.55 (5.30)	0.53 (4.96)	0.66 (8.32)	0.68 (8.35)
ALLNEWS	0.60 (2.82)	0.75 (3.44)	0.85 (5.46)	0.92 (5.74)
DURATION	-2.80 (-3.28)	-4.11 (-4.74)	-2.79 (-3.55)	-4.16 (-5.70)
PARTY	-1.99 (-3.45)	-1.56 (-2.67)	-2.72 (-5.97)	-2.12 (-4.69)
INTERCEPT	49.09 (32.57)	50.06 (33.20)	47.82 (42.62)	48.81 (43.55)
SEE	3.12	3.16	1.96	2.01
Adj. R ²	0.74	0.73	0.92	0.91
D.W.	1.95	1.74	1.94	1.67
1 st Order Auto-corr.	-0.06	0.07	0.03	0.15
N	32	32	23	23
MAE (out-of-sample)	2.61	2.48	1.71	1.91
Call Ratio	84%	94%	87%	87%
Largest Error (year)	-8.05 (1904)	8.65 (1892)	6.2 (1980)	-6.2 (1932)
Elections Missed	1884, 1888, 1892, 1976, 1980	1892, 1976	1948, 1976, 1980	1948, 1968, 1976

siblings, when it comes to maximizing the call rate or avoiding blunders, the models with FPRIME are preferable. As we shall see, the 2008 election is one of those rare cases where the models will not share an error: one is predicting a third term for the Republicans and the other a return of the Democrats to the White House. This is the challenge to the fiscal model that gives the title to this paper. To this challenge we now turn.

President Bush's One-of-a-Kind Politico-Fiscal Record

Whether measured by FISCAL or FPRIME, the Bush administration is atypical; in one respect, even unique. Since the 1870s, less than a handful of first-term presidents have implemented an expansionary policy. They are Benjamin Harrison (1892), Herbert Hoover (1932), Ronald Reagan (1984), and George W. Bush. Of these, only Reagan and Bush won reelection. In fact, only Franklin D. Roosevelt managed to win reelection by a like policy—but in his third term, during World War II. Moreover, only three other times has a president won reelection at the end of a term in which POLICY, though cutback as measured by FISCAL, was expansive according to FPRIME: William McKinley (1900), Franklin Roosevelt (1936), and Lyndon Johnson (1964). So in one and a quarter centuries only five presidents have returned to the White House after implementing a policy that was either expansionary or expansive. Of these,

two were charismatic (Roosevelt and Reagan), and one was coming up for election in his own right after being elevated to the presidency following the assassination of his predecessor (Johnson), a tragedy that may have elicited public sympathy for the incumbents. Neither condition held for George W. Bush, which may account, at least in part, for his meager victory margin; it was not only much narrower than any of the others, but one of the thinnest on record, the smallest of any other sitting president since Grover Cleveland's in 1888 (when he lost in the Electoral College).

Bush is also atypical in that his is one of only two administrations that pursued an expansive policy (FPRIME = 1) two terms in a row, the previous being the Kennedy-Johnson administration. In fact, the net increase in F over Bush's two terms (estimated at 2.4%) is larger than that of any other presidency since Kennedy-Johnson (2.7%). However, in the case of the latter, the sequence was a cutback policy in the first term (FISCAL = -1), which resulted in a near-record reelection, followed by an expansionary policy in the second term (FISCAL = 1), which ended in defeat. Bush is alone in having done the reverse (FISCAL = 1 in the first term, FISCAL = -1 in the second).

Summing up: President Bush's administration is highly unusual or unique in that (1) he is only one of three presidents to have been reelected at the end of a term of unambiguous fiscal expansion, and only one of two first-term presidents to have done so; (2) his 2004 reelection margin was the second smallest since the present two-party system came into being; (3) his administration is only one of two where

policy as measured by FPRIME has been expansive for two consecutive terms; (4) during his presidency, federal spending has grown more than in any other since 1968; and (5) finally and most importantly, although in the term that is coming to an end spending growth has slowed down, describing a cutback policy, it represents a deceleration with respect to his own first term, not to the last term of the previous opposing political party's administration, as in 1900 (McKinley), 1936 (Roosevelt), or 1964 (Johnson).² This last fact, especially, makes us doubt whether the fiscal model with policy measured by FISCAL will yield an accurate forecast for 2008.

Choosing a Forecast for 2008

To forecast the outcome of this year's election, we rely on Fair's forecasts of the economic variables, made with his own model of the economy. Taking Fair's January 31, April 30, and July 31 values for GROWTH and ALLNEWS (respectively 1.8 and 2, 1.5 and 2, and 1 and 3), Table 4 displays point predictions of VOTE2 obtained with the fiscal models. The models with FISCAL, short and long, forecast a Republican victory with 53% of the two-party vote, or just under their 1988 showing. By contrast, those with FPRIME forecast approximately the reverse, a Democratic comeback by a margin lying somewhere between their 1976 and 1992 wins. The question then becomes, to which forecast should we attach the greater credence?

Table 3
Out-of-Sample Predictions of Fiscal Model,
by Period and Specification

YEAR	VOTE2	Predictions			
		1880–2004		1916–2004	
		FISCAL	FPRIME	FISCAL	FPRIME
1880	50.22	58.12	57.13		
1884	49.85	50.54	47.85		
1888	50.41	48.22	50.46		
1892	48.27	55.40	56.92		
1896	47.76	48.03	44.30		
1900	53.17	57.93	53.56		
1904	60.01	51.96	51.83		
1908	54.48	51.05	51.13		
1912	54.71	57.15	56.52		
1916	51.68	53.19	55.27	51.58	53.64
1920	36.12	39.07	40.67	36.69	37.88
1924	58.24	57.59	60.34	59.49	60.86
1928	58.82	57.73	57.69	59.39	58.41
1932	40.84	38.34	38.39	36.37	34.61
1936	62.46	61.63	57.59	63.21	60.14
1940	55.00	53.96	55.08	54.02	54.62
1944	53.77	50.27	53.37	53.89	56.18
1948	52.37	50.29	50.19	48.98	48.54
1952	44.60	43.88	44.23	43.97	44.09
1956	57.76	55.85	57.13	55.99	56.42
1960	49.91	48.58	48.71	49.73	49.45
1964	61.34	58.24	54.97	58.99	55.98
1968	49.60	48.32	49.69	48.96	50.41
1972	61.79	59.12	60.05	60.01	60.51
1976	48.95	50.83	50.86	52.58	52.41
1980	44.70	51.86	48.23	50.93	47.49
1984	59.17	55.27	57.59	58.10	60.12
1988	53.90	54.76	54.31	55.44	54.11
1992	46.55	47.70	46.83	48.51	47.53
1996	54.74	53.91	55.99	52.62	54.59
2000	50.27	52.86	54.15	52.76	53.41
2004	51.23	50.08	51.14	50.38	51.70

Note: Miscalls, where the winner is wrongly predicted, are shown in bold italics.

In two sections back, we argued that if the object is to minimize the average error across all elections, one should prefer the models with FISCAL, but if one wishes to avoid a blunder, one should favor the models with FPRIME. Although none of the models forecasts a blowout for either party, they are sufficiently apart so that if one has it about right, the other will turn out to be, if not a blunder, a major error, about the size of the two or three largest incurred by the short models. Having argued in the previous section that due to the atypical and unique nature of the Bush administration, the 2008 forecast of the model with FISCAL is questionable, our desire to avoid a blunder is one reason to go with the forecast issued with the FPRIME version of the model.

Since the fiscal model borrows three variables from Fair, another consideration has to do with what his equation is predicting, for the latter's out-of-sample predictions of VOTE2 correlate strongly with those of both short fiscal models (Pearson's $r = 0.84$ in each instance). Fair's July 31 forecast is for the Republican candidate to take 48.5% of the two-party vote. This is within a point of that obtained with the fiscal model with FPRIME. Along these lines, it bears noting that in out-of-

Table 4
2008 Presidential Election Forecasts, by
Model and Period

Fiscal Model	Date of Fair's Economic Forecasts		
	January 31	April 30	July 31
With FISCAL			
Long	53.26	53.09	53.42
Short	53.12	52.92	53.44
With FPRIME			
Long	47.33	47.18	47.67
Short	47.72	47.51	48.10

sample forecasting, Fair's equation misses eight elections, those of 1916, 1948, 1960, 1968, 1976, 1988, 1992, and 2000. Note that all three miscalls made with the short model with FPRIME are included in this set, but in the case of the short model with FISCAL, only two of the three are—the latter's 1980 blunder being the only exception. So this comparison, too, weighs in on the side of the models with FPRIME.

A final aid in making a choice between the two forecasts has to do with the fiscal model's predictions of a variable that is highly correlated with VOTE2, has been used successfully in presidential elections forecasting, and whose value, or at least that of a close substitute, is available four months ahead of the election. That variable is the net presidential approval rating, obtained by subtracting the percent of survey respondents who disapprove of the president's performance from those who approve it in Gallup's final poll in June (available from the Roper Center). This variable, one of three in Abramowitz's "time for change" model, which he calls "JUNEAPP," alone accounts for about two-thirds of the variance in VOTE2 (Abramowitz 2008). Given that a president's approval rating midway through the election year is so closely correlated with the incumbent party's candidate's showing at the polls, it should come as no surprise that, as we have shown elsewhere, a reduced fiscal model that includes FISCAL, ALLNEWS, and PARTY accounts for most of the variation in JUNEAPP (Cuzán and Bundrick 2006).

In Table 5, columns 2 and 3, we display the results of modeling JUNEAPP with both fiscal models. Neither model has a tight fit with the data, although the one with FISCAL does better in this regard. On the other hand, with this model the Durbin-Watson statistic (DW) is significant for positive autocorrelation. This suggests that there is a missing variable. We know from previous research that changes in the price level are correlated with presidential approval (Erikson, MacKuen, and Stimson 2002). Adding ALLPRICES, an inflation measure borrowed from Fair (2006), whose value as of April 30 Fair puts at 3.0, corrects the problem and improves model fit in both models, while hardly disturbing the other coefficients. For the purpose of this paper, though, it is the JUNEAPP forecasts that are of interest. Note that, as with VOTE2, the predictions differ substantially, the pair generated by the model with FISCAL being far rosier for the incumbents than the one with FPRIME. While the former has it as 22 with the uncorrected model and 26 with the corrected model, the corresponding predictions with FPRIME are -2 and 2 , respectively.

In fact, however, the median value of President Bush's net approval rating in the late June polls available at Real Clear Politics is -35 . That the actual value of JUNEAPP is closer to the forecasted value generated with the fiscal model with FPRIME is yet another reason to surmise that the forecast for November obtained with this model is to be trusted more.

Table 5
Predicting Net Presidential Approval (JUNEAPP)
with Reduced Fiscal Models, 1948–2008 (t-statistics
in parenthesis; N = 15)

Predictor	Dependent Variable: JUNEAPP			
FISCAL	-12.86 (-2.55)		-13.10 (-3.06)	
FPRIME		-10.09 (-1.87)		-9.41 (-1.88)
ALLNEWS	7.23 (2.99)	7.82 (2.90)	6.51 (3.12)	7.12 (2.82)
PARTY	-19.11 (-3.30)	-15.98 (-2.62)	-18.22 (-3.68)	-15.01 (-2.65)
ALLPRICES			-3.93 (-2.28)	-3.48 (-1.69)
INTERCEPT	-31.61 (-2.27)	-31.70 (-2.07)	-12.81 (-0.89)	-14.81 (-0.85)
SEE	18.3	20.01	15.55	18.59
Adj. R ²	0.49	0.39	0.63	0.48
D.W.	1.08	1.55	1.88	2.18
1 st Order Auto-corr.	0.42	0.19	0.01	-0.11
Mean Absolute Error (MAE)	13.8	14.67	11.42	12.81
Prediction for 2008	22	-2	26	2

In conclusion, we will go with the short FPRIME model forecast. Accordingly, we anticipate that the Republicans will lose the White House in a close election, taking about 48% of the two-party vote. The probability that they will take *less* than 50% is 0.80. Needless to say, our confidence in this forecast would be greater if the corresponding model with FISCAL were in approximate agreement.

Notes

1. Space does not permit more than a most summary description of the theoretical underpinnings of the model, which has a “supply” as well as a “demand” side. For elaboration, graphic illustrations, and responses to criticisms, see Cuzán, Heggen, and Bundrick (2003; 2006) and Cuzán and Bundrick (2004; 2005).

2. In an earlier paper, we offered an explanation for why a mere deceleration in spending growth on the part of a new administration brought electoral dividends. See Cuzán and Bundrick (2004).

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Data Appendix

Year	F	F1	F2	FISCAL	FPRIME	VOTE2
1872	3.26	-2.08	5.93	-1	-1	56.00
1876	3.35	0.09	2.17	1	1	48.00
1880	2.55	-1.8	-0.89	-1	-1	50.22
1884	2.22	-0.33	0.47	-1	-1	49.85
1888	2.16	-0.06	0.27	-1	-1	50.41
1892	2.41	0.25	0.31	1	1	48.27
1896	2.65	0.24	-0.01	-1	1	47.76
1900	2.79	0.14	-0.10	-1	1	53.17
1904	2.55	-0.24	-0.38	-1	-1	60.01
1908	2.38	-0.17	0.07	-1	-1	54.48
1912	1.75	-0.63	-0.46	-1	-1	54.71
1916	1.48	-0.27	0.36	-1	-1	51.68
1920	6.95	5.47	5.74	1	1	36.12
1924	3.43	-3.52	-8.99	-1	-1	58.24
1928	3.05	-0.38	3.14	-1	-1	58.82
1932	7.96	4.91	5.29	1	1	40.84
1936	10.13	2.17	-2.74	-1	1	62.46
1940	9.02	-1.11	-3.28	-1	-1	55.00
1944	44.93	35.91	37.02	1	1	53.77
1948	12.61	-32.32	-68.23	-1	-1	52.37
1952	18.49	5.88	38.20	1	1	44.60
1956	16.35	-2.14	-8.02	-1	-1	57.76
1960	17.85	1.5	3.64	1	1	49.91
1964	18.50	0.65	-0.85	-1	1	61.34
1968	20.50	2	1.35	1	1	49.60
1972	19.60	-0.9	-2.90	-1	-1	61.79
1976	21.40	1.8	2.70	1	1	48.95
1980	21.70	0.2	-1.50	-1	1	44.70
1984	22.10	0.5	0.10	1	1	59.17
1988	21.20	-0.9	-1.30	-1	-1	53.90
1992	22.10	1	1.80	1	1	46.55
1996	20.30	-1.9	-2.70	-1	-1	54.74
2000	18.20	-2.1	-0.20	-1	-1	50.27
2004	19.62	1.42	3.52	1	1	51.23
2008e	20.61	0.99	-0.43	-1	1	
Mean	12.18	0.41	0.26	-0.31	0.03	52.26
s.d.	9.95	8.52	15.16	1.0	1.0	5.97

Sources: VOTE2: Fair (2006). See Table 1 for explanation of 1912 and 1924 values. F, F1, F2: Prior to 1964, see Cuzán, Heggen, and Bundrick (2003). From 1964 to 2000, see Congressional Budget Office, "Historical Budget Data," Table 6 Outlays for Major Spending Categories, 1962 to 2004; after 2000, GPO Access, Economic Indicators. See also Office of Management and Budget, *Budget of the United States Government*, Fiscal Year 2006, "Historical Tables," Table 1.2. There are small discrepancies between the CBO and the BOB data that make for trivial differences in the estimates of F, F1, and F2 (but not FISCAL or FPRIME). 2008 values are estimates.