

WILL THE REPUBLICANS RETAIN CONTROL OF THE
HOUSE OF REPRESENTATIVES IN 2006?

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Paper presented at the Northeastern Political Science
Association, Boston, November 11, 2006

(10/24/06 draft)

Will the Republicans Retain Control of the House of Representatives in 2006?¹

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Models for forecasting the outcome of elections to the U. S. House of Representatives have not been particularly successful (Jones and Cuzán 2006). To cite the most recent example, in 2002, when the Republicans added to their majority, three forecasting models designed by distinguished political scientists had wrongly predicted that the Democrats would regain control of the chamber (Abramowitz 2002, Erikson and Bafumi 2002, Lewis-Beck and Tien 2002).

Given the historical record, it is no doubt Quixotic for anyone to wade in with another model, and to use it for making a prediction about the likely outcome for party control of the House of Representatives in next month's elections. We do so not without trepidation. In fact, given the constraints we imposed on model-building, it is unlikely that our point forecast will come close to the actual. These constraints are the following. Firstly, we set out to build a model that would be estimated over a long and inclusive series of elections, not limited to midterm elections only. We chose the 1914 elections as our earliest observation. That year was only the second time that 435 Representatives were elected, the present number. Only one other model that we know of is estimated with a data series going back that far (Alesina, Londregan, & Rosenthal (1996)), and none takes in earlier elections. Our choice of data series rules out certain variables, namely public opinion polls. We would have been reluctant to use those in any case, for although variables of that nature are no doubt helpful in forecasting, they make for a question-begging model. Finally, we wanted a model built with variables whose values are known or which could be estimated or forecast well ahead of the election, even though we got a late start, beginning construction of the model only in mid-September. In short, our primary objective was to produce a structural model of House elections with, secondarily, some value for forecasting.

The System to Be Modeled

We commence the analysis with a description of the system to be modeled. In Figure 1 we display the division of seats in the House between Democrats (represented by the solid blue line) and Republicans (the broken red line) from 1914 to 2004. Note that for two decades control switched back and forth between the two parties. This was followed by a long period of Democratic hegemony, briefly interrupted by Republican victories in 1946 and 1952. In 1994, the Republicans regained control for the first time in four decades, and have held it since. Their majority, however, has been rather modest, nowhere

¹ Many thanks to Michael Lewis-Beck and Helmut Norpoth for their encouragement and suggestions on an earlier draft. Needless to say, responsibility for any errors rests on us.

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as large as those the Democrats commanded during their hegemonic period. We have reason to doubt, then, that 1994 and 1996 signaled a “realignment” in favor of the Republicans, as Campbell (2006, 3) suggests. On the contrary, we rather suspect that their majority will not last much longer, to be followed by either a reassertion of Democratic dominance or another period where control shifts back and forth between the parties, as in the earliest period of the series. We hasten to clarify that this conclusion is nothing more than an educated guess, informed by the historical record. We have no firm ideas about when the turnover will occur. It could happen this year or at some later date.

Next, in Figure 2 we display the number of seats held by the party of the president, the incumbents. This variable, which we label IncSeats below, is what we seek to explain and forecast in this paper. For three quarters of a century between 1914 and 1980, IncSeats exhibited wide swings. But for most of the period these oscillations largely reflected switches in party control of the presidency, not turnovers in Congress. That is, all but a few times that the presidency was under the control of the Republicans, who usually were the minority in the House, the value of IncSeats would be correspondingly lower. Thus, the swings are an artifice of who controls the White House, not the Congress. Only six times (1916, 1932, 1946, 1952, 1954, and 1994) did the president’s party lose their majority, if they had it, and two of those fell in presidential election years (1932 and 1952), when the incumbents (the Republicans in the former case, the Democrats in the latter) were simultaneously voted out of the White House.

Since 1982, IncSeats has behaved in an uncharacteristic manner. Switches of party in the executive branch have not been accompanied by large swings in the number of House seats held by the incumbents. This reflects the following anomalous facts. First, even as they lost the presidency in 1992, the Republicans gained nine seats. Two years later, in the first midterm election under President Bill Clinton, the Democrats lost their majority. However, they still won more seats than the Republicans did in the previous election. Thus, the 54-seat swing between the parties that took place between 1992 and 1994, evident in Figure 1, is masked. Then, Clinton’s re-election netted his party a mere two seats, and his party’s loss of the White House in 2000 cost them only one seat. Also, contrary to the historical pattern of mid-term election losses, in 1998 and 2002 the incumbents made modest gains. Finally, note that since 1982 there has been no duplication of either the lows (1932, 1976) or the highs (1936, 1964) that characterized the earlier period.

In sum, for approximately the last two decades the number of seats won by the incumbents has behaved atypically in response to both changes in party control of the White House and to midterm effects. Whether this constitutes an anomaly partly associated with the Democrats’ loss of hegemony, and whether the latter is itself an irregularity, which would imply that what is normal is for the Democrats to be in the majority for long stretches, are both unknown. All we can say is that the behavior of the system in recent years exhibits a marked departure from the pattern of the past.

Model-Building

Again, our principal purpose is to construct a structural model of the number of seats won by the incumbents (the party of the president). We build it in steps. First, following Alesina, Rosenthal, and Londregan (1996), we estimate the following equation:

$$\text{IncSeats} = A + \beta(\text{IncSeats}_{t-1}) + \varepsilon$$

That is, we expect the number of seats won by the party of the president to be a function of the size of their representation in the House going into the election, or the result of House elections lagged one two-year term. (Be it noted, though, that Alesina et al. modeled not the number of seats but the percent of the two-party national vote, which they estimated as a function of the previous House elections' vote.)

The results are shown in Table 1, Model 1. The coefficient for lagged seats is 0.75. That is, for every four seats incumbents hold going into the election, they win three. Note, though, that the model accounts for only a little over half of the variance in the dependent variable, and the standard error of the estimate is larger than 30. For what it is worth, this simple model yields a naïve forecast of 217 seats for the incumbents in this year's midterm election. In other words, the point prediction is one seat below what the Republicans need to retain control of the House. But, again, given the large SEE, little confidence can be placed on this forecast.

Next, we progressively incorporate additional variables into the model. In Model 2 we add two categorical variables. One is *PresidentElect*, which indicates whether the incumbents are returned to the White House, scored 1 if they do, -1 if they do not, and 0 if it being a midterm election, the variable is inapplicable. The other is *Midterm*, which takes the value of 1 or 0. Note that winning another term in the White House on average yields 40 new members to the president's party ("the coattail effect") but a midterm election typically costs the incumbents 20 seats.

In the referendum tradition pioneered by Tufte (1975), the annual growth in real Gross Domestic Product per capita is incorporated in Model 3. (For 2006, we estimated its value at 2.6%.) The coefficient for that variable is 1.8, which implies that for every point growth in GDP per capita the incumbents add about two seats to their representation in the House. Note that including this variable affects lagged seats or *Midterm* very little, but it shaves off one-fourth in the coefficient for *PresidentElect*. This reflects the well-established correlate between economic growth and presidential reelection.

Finally, we try to capture unknown factors responsible for two sets of historical facts. The first set consists of two extraordinary elections. Going into November 1932, the Republicans had a one-seat majority in the House. That year they lost 101 seats, the largest on record. By contrast, on election eve in 1948 the Democrats had only 188 seats, but the next day they netted another 75, the largest gain on record. To appreciate the exceptional nature of these results, consider that the average change in *IncSeats* is -14, and

the standard deviation is 34. (Taking the absolute values of this variable, the mean is 27 and the s.d. is 25.) To control for these extraordinary outcomes, we constructed Loss1932Gain1948, which takes the value of -1 in the earlier year, 1 in the latter year, and 0 otherwise. The results are shown in Model 4. Note that introducing this variable reduces the coefficient for GPD growth and PresidentElect by about 25% to 30% while slightly increasing that for lagged seats and Midterm. Also, the new variable improves model fit somewhat and has but a minimal effect on the forecast for 2006.

Lastly, to incorporate into the model whatever historical trend may underlie the data series, in Model 5 we added election year as a variable. The coefficient for Time-trend suggests a weak trend in favor of the incumbents, who since 1914 on average have added one House seat with every five elections that have passed. However, the variable is statistically significant only at the marginal 0.10 level. Also, it hardly disturbs the coefficients for the other variables or model fit. It does, however, raise this year's forecast (relative to Models 2, 3, or 4) by an average of 10 seats.

Ironically, the point forecast obtained with this six-variable model is nearly identical to the naïve forecast of Model 1. Thus, when it comes to a forecast for 2006, we are back where we started. But the Adj. R-sq. having risen to a respectable 0.81 and the SEE been reduced by 1/3, our confidence in the forecast is slightly higher; but only a little, though, because at 21 the SEE is still large.

In Table 1 are displayed statistics for comparing the performance of Models 3, 4, and Model 5 on out-of-sample forecasting. All models call about 90% of all elections correctly for the incumbent party, although Models 4 and 5 have a somewhat lower mean absolute error (MAE) of the forecast. Also displayed is the call rate for the "difficult" elections. By a difficult election we mean one in which the incumbents have a reasonable chance of losing their majority in the House, a condition that was pretty much absent during periods of Democratic hegemony (1934-1944 and 1962-1992). Excluding the easy elections presents the models with a tougher test. Indeed, the call rate for the difficult elections goes down with all three models, to 75-80%. Presumably, this year's election belongs to this set.

As evident in Table 1, the point forecast in all five models falls below 218. Of the non-naïve model forecasts, the best incumbent showing is obtained with Model 5, which has them winning 216 seats. According to this model, the probability of the Republicans retaining control (i.e, winning at least 218 seats) is 0.46. So at best their chances are no better than a toss-up. Averaging the point forecasts of Models 4 and 5, which are the best fitting models with comparable goodness-of-fit statistics, yields a forecast of 212, for a loss of 20 seats. Thus, we expect the Democrats to regain control of the chamber in November.

Several caveats, however, are in order. First, as noted previously, the SEE is large. The actual outcome can easily be 20-25 seats larger or lower than the point forecast. Also, as already noted, the call rate with the difficult elections, the set to which this year's election belongs, is no more than 80%. In fact, of the last six elections, Model 4 missed

two and Model 5, three. This is consistent with the observation made earlier about the system behaving uncharacteristically in recent times.

In sum, on the basis of the statistical results obtained, we forecast a turnover in the House in favor of the Democrats. Given our limited knowledge of the system, however, we are only moderately confident that this will in fact turn out to be the case.

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Figure 1. Distribution of Seats in the U.S. House of Representatives by Party, 1914-2004

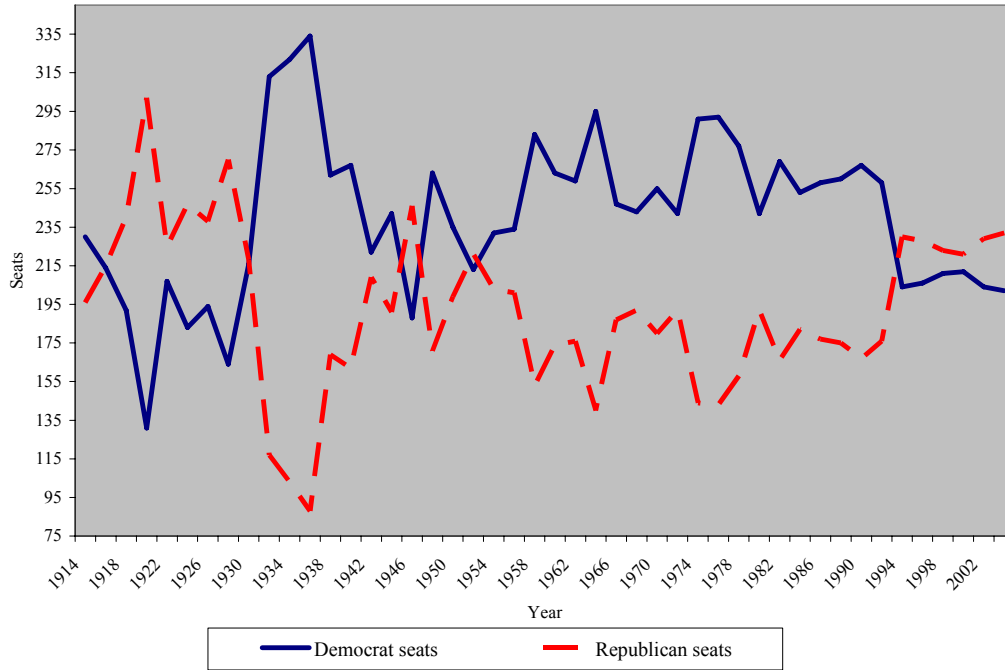


Figure 2. Seats Won by the Incumbents (the Party of the President) in the U.S. House of Representatives, 1914-2004



Table 1. Estimating the Number of House of Representatives Seats Won by the Incumbents (the Party of the President), 1914-2006
(N = 46; t-statistics in parentheses)

VARIABLE	Model 1	Model 2	Model 3	Model 4	Model 5
IncSeats _{t-1}	0.74 (7.23)	0.79 (8.70)	0.77 (9.05)	0.80 (10.95)	0.86 (10.82)
PresidentElect		20.14 (3.48)	15.61 (2.84)	10.65 (2.17)	11.25 (2.34)
Midterm		-20.44 (-2.40)	-17.24 (-2.20)	-20.44 (-3.00)	-21.74 (-3.23)
PercapGDPgrowth			1.84 (2.96)	1.41 (2.56)	1.32 (2.44)
Loss1932Win1948				63.12 (3.90)	62.39 (3.93)
Time-trend					0.21 (1.66)
Constant	44.18 (1.83)	40.85 (2.01)	42.74 (2.29)	35.78 (2.28)	11.87 (0.55)
SEE	32.31	26.81	24.52	21.15	20.69
Adj. R-sq.	0.53	0.68	0.73	0.799	0.81
1 st Order Auto-correlation	-0.17	0.01	0.10	0.20	0.10
Durbin-Watson h*	-1.60	0.09	0.84	1.61	0.85
Two-tail p-value for D-W	0.11	0.92	0.40	0.11	0.40
MAE out-of-sample forecasting			20.9	17.7	17.8
SD out-of-sample forecasting			16.3	13.5	13.2
Call rate (all elections)**			87%	91%	87%
Call rate (excluding “easy” elections)***, N=25			75%	83%	75%
Forecast for 2006	217	205	208	207	216
Probability that Incumbents will win more than 217 seats			0.38	0.30	0.46

* The extended Durbin-Watson (the h statistic) was used since one of the regressors is a lagged dependent variable. Clearly any hint of autocorrelation suggested in Model 4 is corrected by adding another independent variable in Model 5.

**The call rate refers to the percent of elections where both the number of House seats forecast and the actual were on the same side of 218, this being the minimum required to control the chamber. All models missed the elections of 1916, 1994, and 2002. Also, both Models 3 and 5 missed the 1930 and 1996 elections. Additionally, Model 3 missed the election of 1948, Model 4 that of 1952, and Model 5 the election of 1926.

*** The “easy” elections are the 6 elections held between 1934 and 1944 and the 16 elections held between 1962 and 1992, periods during which the Democrats reigned hegemonically in the House of Representatives.

Data Appendix

Year	IncSeats	DemSeats	RepSeats	Incwinsprez	Midterm	GPCpcgrowth
1912	134	291	134	-1	0	3.06
1914	230	230	196	0	1	-9.41
1916	214	214	215	1	0	12.27
1918	192	192	240	0	1	9.08
1920	131	131	302	-1	0	-2.75
1922	225	207	225	0	1	4.1
1924	247	183	247	1	0	1.13
1926	238	194	238	0	1	5.11
1928	270	164	270	1	0	-0.09
1930	218	216	218	0	1	-9.58
1932	117	313	117	-1	0	-13.56
1934	322	322	103	0	1	10.1
1936	334	334	88	1	0	12.29
1938	262	262	169	0	1	-4.19
1940	267	267	162	1	0	7.89
1942	222	222	209	0	1	17.81
1944	242	242	191	1	0	9.22
1946	188	188	246	0	1	-15.83
1948	263	263	171	1	0	2.48
1950	235	235	199	0	1	6.88
1952	213	213	221	-1	0	2.24
1954	203	232	203	0	1	-2.47
1956	201	234	201	1	0	0.12
1958	153	283	153	0	1	-2.64
1960	174	263	174	-1	0	0.38
1962	259	259	176	0	1	4.47
1964	295	295	140	1	0	4.34
1966	247	247	187	0	1	5.4
1968	243	243	192	-1	0	3.81
1970	180	255	180	0	1	-1.11
1972	192	242	192	1	0	4.05
1974	144	291	144	0	1	-1.43
1976	143	292	143	-1	0	4.3
1978	277	277	158	0	1	4.45
1980	242	242	192	-1	0	-1.39
1982	166	269	166	0	1	-2.87
1984	182	253	182	1	0	6.26
1986	177	258	177	0	1	2.52
1988	175	260	175	1	0	3.19
1990	167	267	167	0	1	0.73
1992	176	258	176	-1	0	1.9
1994	204	204	230	0	1	2.75
1996	206	206	228	1	0	2.5

Appendix 3. Data (continued)

Year	IncSeats	DemSeats	RepSeats	Incwinsprez	Midterm	GPCpcgrowth
1998	211	211	223	0	1	2.96
2000	212	212	221	-1	0	2.5
2002	229	204	229	0	1	0.6
2004	232	202	232	1	0	2.89
2006	.	.	.	0	1	2.6 (est)

Sources.

For seats: U. S. House of Representatives, Office of the Clerk, "Political Divisions of the House of Representatives (1789 to Present)."

URL: http://clerk.house.gov/histHigh/Congressional_History/partyDiv.html.

For GDP: Louis D. Johnston and Samuel H. Williamson, "The Annual Real and Nominal GDP for the United States, 1790- Present." Economic History Services, October 2005.

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