WILL THE REPUBLICANS RETAKE THE HOUSE IN 2010?

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This is a revised and expanded version of what was presented at the APSA.
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For the Republicans to regain control of the House, the Democrats need to suffer a net loss of 40 members, or 15.6% of the 257 seats they took in 2008.

Figure 1 displays the record of midterm losses (or, in exceptional years, gained) by the incumbents since 1914 (the first with 435 House members) in terms of seats. Figure 2 does it in percentage terms, starting with the 1870 election, when the Democrats began to recover from the Civil War and Reconstruction.
Figure 1. Midterm Incumbent Seat Loss or Gain
1914-2006
Figure 2. Incumbent Percent Midterm Loss, 1870-2006

N=35
Since 1914, the president’s party has lost more than 40 seats in 10 out of 24 midterm elections (40% of the time); since 1870, the incumbent party’s losses have amounted 15.6% or more of its membership in 16 out of 35 midterm elections (47% of the time).
Moreover, only rarely have the incumbents gained rather than lost seats at midterm. Those exceptional elections took place in 1902, 1934, 1998, and 2002. The first exception occurred scarcely a year after President McKinley’s assassination, the second during the anti-Republican wave that began in 1930 and peaked in 1936, the third may have reflected a backlash against the impeachment of President Clinton, and the last one can be the product of the 9/11/01 rally.
If these exceptions are omitted, the historical odds of incumbent losses breaching what is this year’s party turnover point are very close to even. Next, two models are estimated with data since 1914, one with all elections and the other with midterm elections only.
All Elections Model (AEM), 1914-2008

N=48

IncSeats =

A + β₁(IncSeatsₜ₋₁) +
β₂(Loss’32Win’48)
+ β₃Prez Elect + β₄(GDPpcGr)
− β₅(Midterm) - β₆(Inflation) ± ε

SEE=19.7, Adj. $R^2=0.82$
Midterm Elections Model (MEM)  
1914-2006  
N=24  
IncSeats =  
A + \beta_1 (IncSeats_{t-1}) + \beta_2 (GDPpcGr)  
\ - \beta_3 (Inflation) \pm \varepsilon  

SEE=21.7, Adj. \, R^2=0.66
Next, the performance of the All Elections Model is evaluated in one-step ahead forecasting, starting with the 1994 election. The mean error is 14 seats and the median error is 11 seats. Three of the four largest errors are accounted for by exceptional events.
<table>
<thead>
<tr>
<th>Year</th>
<th>Prediction</th>
<th>Actual</th>
<th>AE</th>
<th>AE as % of Prediction</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>228</td>
<td>204</td>
<td>24</td>
<td>10.5%</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>215</td>
<td>206</td>
<td>9</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>188</td>
<td>211</td>
<td>23</td>
<td>12.2%</td>
<td>impeachment</td>
</tr>
<tr>
<td>2000</td>
<td>203</td>
<td>212</td>
<td>9</td>
<td>4.4%</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>198</td>
<td>229</td>
<td>31</td>
<td>15.7%</td>
<td>9/11</td>
</tr>
<tr>
<td>2004</td>
<td>234</td>
<td>232</td>
<td>2</td>
<td>0.9%</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>207</td>
<td>202</td>
<td>5</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>190</td>
<td>178</td>
<td>12</td>
<td>6.3%</td>
<td>financial crisis</td>
</tr>
<tr>
<td>Mean</td>
<td>14.4</td>
<td></td>
<td></td>
<td>7.1%</td>
<td></td>
</tr>
<tr>
<td>sd</td>
<td>10.3</td>
<td></td>
<td></td>
<td>5.2%</td>
<td></td>
</tr>
<tr>
<td>MdAE</td>
<td>10.5</td>
<td></td>
<td></td>
<td>5.4%</td>
<td></td>
</tr>
</tbody>
</table>
Forecast for 2010

For the purpose of generating a forecast for 2010, it is assumed that for this year, (1) real per capita GDP grows 2% and (2) inflation is limited to 1%.
All Elections Model:
Forecast=230 seats, loss=27 seats
Probability IncSeats>217 =0.73

Midterm Elections Model:
Forecast=227 seats, loss=30 seats
Probability IncSeats>217 =0.66
According to these models and assumptions, the Democrats are likely to retain control of the House.

However, there is a nontrivial chance that 40 or more of their members will be defeated in November, an outcome that would dislodge Nancy Pelosi from the Speaker’s Chair.
To evaluate that possibility in historical perspective, two previous midterm elections, both the first of a new president, will serve as reference points, although neither ultimately involved a party turnover: those 1982 and 1966.
Year: 1982, President: Reagan
GDPpcGr=-2.87%, Inflation=6.20%
IncSeats=166, Loss=26 seats (13.5%)

Out of sample forecasts:
AEM: IncSeats=162, Error=-4
Abs. Error as % of IncSeats forecast=2.5%
MEM: IncSeats=169, Error=+3
Abs. Error as % of IncSeats forecast=1.8%
The state of the economy was a salient issue in 1982, as it is this year, although according to our measures, it was worse then.

If this year the Democrats lose the same share of seats as the Republicans did in 1982, it would amount to 35 seats.

This would signify an absolute error of almost 4% of the forecast with either model, almost twice the 1982 error, although well below the average shown in Table 1.
Year: 1966, President: L. B. Johnson
GDPpcGr=5.29%, Inflation=2.9%
IncSeats=247, Loss=48 seats (16.3%)

Out of sample forecasts:
AEM: IncSeats= 263, Error=16
Abs. Error as % of IncSeats forecast=6.1%
MEM: IncSeats=259, Error=12
Abs. Error as % of IncSeats forecast=4.6%
In 1966, the economy was booming (although inflation was accelerating), but other influences may have taken their toll on the Democrats that year, including a backlash against the Great Society programs.

Similarly, as may be gathered from surveys showing that a majority of respondents either disapprove of President Obama’s performance on health care or favor repeal of the health care legislation enacted earlier this year, it appears that, on balance, the Democrats’ progressive program is encountering a negative public reception.
If the Democrats lose the same share as in 1966, the loss would rise to 42 seats. This would represent an absolute error of 5.2% and 6.6%, respectively with the MEM and AEM, close to their errors in the 1966 predictions (and to the MAE in Table 1.)
In sum, in the race for control of the House, the Democrats have the edge. However, the Republicans have a non-trivial chance of displacing them as the majority party. As well as worrying about 1994, a precedent much discussed these days, the Democrats would do well to be concerned about what happened in 1966, when the public’s mood had critical parallels with today’s. They did not lose control then, but if the same percent of their membership goes down to defeat as it did that year, come January Nancy Pelosi will be turning the Speaker’s Chair to a Republican.
POSTSCRIPT

In “Judgmental Forecasting: A Review of Progress Over the Last 25 Years,” Lawrence et al. (2006) discuss the use of “domain knowledge” to adjust forecasts obtained with statistical models. Domain knowledge includes information about the time series itself, as well as “some additional irregular knowledge that can be useful in either explaining the past behavior of the series or in predicting the future (or both).” They add: “the distinguishing characteristic of such ‘domain knowledge’ is that it represents an ‘unmodelled’ component of the time series.”
In evaluating the probabilities that the Democrats will lose control of the House in light of the outcome of the 1966 election, when the liberal policies of the Johnson administration encountered public resistance similar to what Obama’s domestic agenda has encountered in the last two years, I was invoking an “unmodelled” component. In this postscript, I go a little further, taking advantage of domain knowledge to generate an “adjusted” forecast of the number of seats the Democrats will win in November.
Returning to Figure 1, as noted earlier, in only three of the last 24 midterm elections did the incumbents emerge with a net gain of seats. Nothing suggests that this year will turn out to be exceptional, everything points to it being a “normal” year, at least in the sense that the incumbents will experience a loss of seats, as happens almost all the time.

Accordingly, the All Elections Model and the Midterm Elections Model are re-estimated with the three exceptional years omitted, and revised forecasts for November based on the trimmed series generated.
This procedure yields an “adjusted” point forecast of 224 seats (a loss of 33) for the Democrats with the AEM and 220 seats (a loss of 37) seats with the MEM. Either forecast still leaves the Democrats in control of the House, but with scarcely a handful of seats to spare. However, the probability of a Republican upset is, of course, correspondingly higher than before. It should make Nancy Pelosi nervous.
REFERENCE