The Political Economy Model: 2016 US Election Forecasts

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We have been forecasting United States presidential elections since the early 1980s, and stand among the first forecasters of these contests (Lewis-Beck and Rice 1982; 1984). Our approach has been to follow a parsimonious structural model, focusing on a few predictor variables based on strong political science theory and measured well in advance of the election itself. Occasionally, we have attempted to "improve upon" the forecasts of these simple models, with mixed results (Lewis-Beck and Tien 1996; 2008). Based upon our historical testing and outside corroborative evidence, we have decided to go back to our beginnings. Hence, we make a full-fledged return to our initial multivariate effort, a political economy model that expresses the incumbent party vote as a function of presidential popularity and economic growth. Below, we first apply the model to presidential elections, then turn to congressional elections. After working through model estimation and the election forecasts, we interpret their meaning.

US PRESIDENTIAL ELECTIONS

In words, the presidential election model can be summarized in the following way (Lewis-Beck and Rice 1984, 7):

$$\text{Presidential Vote} = \text{Political Popularity} + \text{Economic Growth} \quad (1)$$

where the Presidential Vote = the two-party share of the national popular vote for the president's party, Economic Growth = the GNP growth in the first two quarters of the election year, and Political Popularity = the job approval rating for the president in the July Gallup Poll.

This political economy model essentially views the election as a referendum on how well the president has handled economic and non-economic issues. Other things being equal, the better the performance on these two dimensions, the better his or her party will do. Estimating the model with ordinary least squares (OLS) across the post-World War II period yields these results:

$$\text{Vote} = 37.50 + .26 * \text{Popularity} + 1.17 * \text{Growth}$$
$$\quad\quad (14.83)\ (4.45)\quad\quad\quad (2.04) \quad\quad (2)$$

To forecast the 2016 presidential election, we simply plug in the appropriate values of Popularity and Growth. Based on data reported as of August 26, 2016. Popularity = 51 and Growth = .20, which yields the following point estimate:

$$\text{Vote} = 37.50 + .26\ (51) + 1.17\ (.20)$$
$$= 51.0\,\%\ \text{of the popular two-party vote} \quad (3)$$
$$\text{for the Democrat.}$$

How accurate do we expect this forecast to be? First, over the time series of elections, it correctly picked the winning party 14 out of 17 times (missing only 1960, 1968, and 1976), or 83% of the time, based on our out-of-sample testing (table 1). To examine out-of-sample error, we ran a series of jackknife tests. That is, taking each year in turn, we dropped it from the data, re-estimated the model, then predicted that out-of-sample year and examined the forecasting error. We found seven elections with a negative error greater than -1.0. Because our forecast is 51.0, if it has an error greater than -1.0, we would forecast a victory for the wrong party. This translates into a 41% chance that this forecast would be wrong (i.e., 7/17 = .41), leaving a 59% chance that this forecast of a Democratic victory is correct. Such a high level of uncertainty, barely greater than 50/50, suggests that the race will be won or lost by a very small margin of the popular vote. Put another way, it will be a squeaker, too close to call at any meaningful distance before the election itself.

CONGRESSIONAL ELECTIONS

We have also been forecasting US House and Senate elections since the early 1980s (Lewis-Beck and Rice 1984; 1985), with occasional "improved" updates as well (Lewis-Beck and Tien 2010; 2015). For our 2016 congressional forecasts, we also make a return to our original efforts, expressed for the House as follows:

$$\text{House Seat Change} = \text{Political Popularity}$$
$$+ \text{Economic Conditions} + \text{Midterm Status} \quad (4)$$

where House Seat Change = number of seats lost or gained by the president's party, Political Popularity = the job approval rating for the president in the June Gallup Poll, economic conditions = growth rate of real disposable income over the first two quarters of the election year, Midterm Status = 0 for presidential election years and = 1 for midterm election years.

Thus, for the House forecast, we also employ a political economy model based on a classic referendum model, rooted in strong theory. That is, electoral success for the incumbent in House elections depends on how well the

president and his or her party have handled economic and non-economic issues, conditioned on whether it is a midterm. Estimating (OLS) the model in the post-war period yields the following:

How certain is it that Republicans will retain their House majority after the 2016 elections? The model prediction would have to be off by at least 27 seats for the Democrats to regain the House majority. Only once in the model's time series has it missed

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$$
\begin{aligned}
\text{House Seat Change} = &-44.97 + .82*\text{Popularity} \\
&\quad (-3.39)\quad (3.27) \\
&+4.95*\text{Income} - 28.3*\text{Midterm} \\
&\quad (2.88)\qquad\qquad (-4.39)
\end{aligned} \tag{5}
$$

$$
\text{R-squared} = .59, \text{Adj. R-squared} = .55
$$
$$
\text{Root mean squared error} = 18.34
$$

$$
\text{Durbin-Watson} = 1.86, \text{N} = 34 \text{ elections } (1948\text{-}2014)
$$
and the other notation is as with Eq.2.

To use this equation to forecast the 2016 House elections, we plug in the appropriate values (as of July 29, 2016), producing the following seat change estimate:

$$
\begin{aligned}
\text{House Seat Change} = &-44.97 + .82\,(53) + 4.95\,(.83) - 28.3\,(0) \\
&= 3 \text{ seat gain for the Democrats.}
\end{aligned} \tag{6}
$$

by more than that amount (1948). Thus, the model certainty that Republicans will retain their House majority is 97%.

Senate elections, we argue, also respond to the same economic and non-economic evaluations of the president, in the context of certain cyclical factors. In other words, Senate elections are referenda on how well the president has been handling the economy and political issues, conditioned on the political calendar. Only one-third of the Senate seats are up for election every two years. Thus, how many seats the president's party has up for election, plus the midterm status, also influence Senate election outcomes. In words, our Senate forecast reads as follows:

$$
\begin{aligned}
\text{Senate Seat Change} = &\text{Popularity} + \text{Economy} \\
&+ \text{Midterm Status} + \text{Seats Exposed}
\end{aligned} \tag{7}
$$

where Senate Seat Change = number of seats lost or gained by the president's party; Seats Exposed = number of seats the president's party has up for reelection; the other variables are as defined in equation 6. The estimated (OLS) model yields the following results:

$$
\begin{aligned}
\text{Senate} = &2.88 + .14*\text{Popularity} + .89*\text{Income} - 2.52 \\
&\quad (.98)\quad (3.40)\qquad\qquad (3.17)\qquad\qquad (-2.44) \\
&*\text{Midterm} - .70*\text{Seats Up} \\
&\qquad\qquad (-5.75)
\end{aligned} \tag{8}
$$

R-squared = .68, Adj. R-squared = .63, Root mean squared error = 2.92
Durbin-Watson = 1.85, N = 34 elections (1948-2014) and the other notation is as with Eq.2.

$$
\text{R-squared} = .76 \text{ Adj. R-squared} = .73
$$
$$
\text{Root Mean Squared Error} = 2.84
$$

$$
\text{Durbin-Watson} = 2.36 \text{ N} = 17 \text{ elections, } 1948\text{-}2012
$$

Figures in parentheses = t-ratios Asterisk indicates statistical significance = .05, one-tail.

All variables are statistically significant at the 0.05 level, one-tail. This means that the president's party can expect to pick up one additional seat for every seven points added to the president's approval rating, *ceteris paribus*. A better economy, as measured by personal disposable income, also yields additional seats on an almost one-to-one basis (.89). Further, the president's party is disadvantaged in midterm years, with an expected loss of two and one-half seats. Moreover, for every additional 10 seats it has up for reelection, it can expect to lose seven seats, holding all else constant.

Table 1

Presidential Election Predictions with the Political Economy Model

Year	Popular Two-party Vote for Incumbent Party	Jack Knife Forecast	Forecast Error	Winning Party Correctly Predicted?
1948	52.4	50.4	2.0	Yes
1952	44.6	46.3	-1.7	Yes
1956	57.8	54.2	3.6	Yes
1960	49.9	52.3	-2.4	No
1964	61.3	60.4	0.9	Yes
1968	49.6	51.8	-2.2	No
1972	61.8	55.8	6.0	Yes
1976	49.0	52.4	-3.4	No
1980	44.7	39.1	5.6	Yes
1984	59.2	55.0	4.2	Yes
1988	53.9	53.2	0.7	Yes
1992	46.6	47.8	-1.3	Yes
1996	54.7	54.7	0.0	Yes
2000	50.0	56.8	-6.7	Yes
2004	51.2	52.9	-1.7	Yes
2008	46.3	46.7	-0.4	Yes
2012	52.0	50.0	2.0	Yes

What does this mean for Senate control in 2016? Obama's June approval rating is 53%, disposable personal income change over the election year has been .83, and the Democrats have 10 seats exposed in this presidential election year (using data reported as of July 29, 2016). This yields a forecasted gain of four seats for the Democrats, which is exactly what

drawn for the Senate, as partisan control of the chamber could easily tip Republican or Democratic. With respect to control of the House, the forecast differs, for there Republicans almost certainly will stay in charge of that chamber. If Democrat Hillary Clinton became president, it appears most unlikely that she would be able to govern with a unified Congress. ∎

In other words, Senate elections are referenda on how well the president has been handling the economy and political issues, conditioned on the political calendar.

the Democrats need to give them majority party control of the Senate (assuming the Democrats win the presidency and the vice-president then votes with the Democrats). But, if the forecast of four Democratic seats turns out to be three instead (3 - 4 = -1) then Republicans retain control of the Senate. Therefore, if the model is off by one seat (-1) Senate control stays with the Republicans. In the 34 elections in the time series, it has produced an error greater than -1 a total of 13 times (13/34 = .38). Thus, the certainty of this forecast of Democratic control of the Senate is only 62%. Again, barely better than a coin flip.

CONCLUSIONS

Our time tested Political Economy models for the 2016 presidential election point to an extremely tight presidential race that could really go either way. A similar conclusion can be

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