Combined Forecasts of the 2012 Election: The PollyVote

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INTRODUCTION

For the third time since its appearance in 2004, the PollyVote (*www.pollyvote.com*) has demonstrated the value of combining forecasts to predict the two-party popular vote in U.S. presidential elections. The final forecast, calculated on election eve, gave President Obama 51% of the popular vote, which missed the actual election result by only 0.7 percentage points.

The 2012 PollyVote was comprised of forecasts from five component methods:

1. *Trial-heat polls,* using averages calculated by five polling aggregators: RealClear-Politics, Princeton Election Consortium, TPM PollTracker, Pollster at Huffington Post, and Election Projection

2. Vote-share contract prices on the *Iowa Electronic Market*, using seven-day rolling averages

3. The PollyPanel of sixteen *experts on American politics*, responding to monthly surveys, with variable participation rates

4. Fourteen *econometric models*

5. Eight *index models*

To generate the PollyVote predictions, we first calculated unweighted averages of forecasts within the same component prediction method. Then we averaged these across components (also unweighted) to create the PollyVote forecasts.

POLLY'S PERFORMANCE

In its first forecast released on January 1st of 2011, almost two years prior to the election, the PollyVote predicted that President Obama would win the popular vote. Though the predicted margins for Obama varied over the succeeding months, the forecast of an Obama victory remained constant through Election Day. The final forecast, released on the eve of the election, predicted Obama to receive 51.0% of the two-party vote, a miss of 0.7% percentage points (as of end of November).

Corresponding PollyVote errors in 2004 and 2008 were 0.3 and 0.7 percentage points respectively. Thus, the mean absolute error of the PollyVote's final forecasts for the past three elections is 0.6 percentage points. By comparison, the error of the Gallup pre-election poll for all three elections averaged 1.8 percentage points, three times higher.

While the 2012 PollyVote consistently and accurately forecast the reelection of the president, the major competing predictors, prediction markets and polls at times pointed to an opposition Republican victory. Moreover, PollyVote forecasts were less volatile than predictions from markets and polls. The constancy of the predicted 2012 election outcome is similar to the PollyVote performance in the two preceding elections. For 8 months prior to the 2004 election the PollyVote consistently forecast that George W. Bush would win. In 2008 the PollyVote predicted an Obama victory throughout the 14 months prior to the election. Looking at the complete day-by-day results for the three elections, the PollyVote now has a track

record of more than 44 months of correct daily forecasts of the election winner.

POLLY VS. FIVETHIRTYEIGHT

We compared the PollyVote 2012 performance with that of Nate Silver's popular *New York Times* blog, FiveThirtyEight. We found that FiveThirtyEight provided accurate forecasts, though PollyVote was more accurate than FiveThirtyEight for most of the five-month horizon.

Figure 1 reports the error of both approaches from May 31, when Silver released his first forecast, until the election. Any point on the PollyVote or FiveThirtyEight lines in the chart shows the average error across all daily forecasts from that time until the election. For example, on the left side of the chart the value is 0.26 for the PollyVote and 0.43 for FiveThirtyEight, meaning that the mean absolute error for the PollyVote's daily forecasts across the entire 159-day horizon is 0.26 percentage points, and for FiveThirtyEight it is 0.43. However, as the graph shows, FiveThirtyEight was more accurate across the final two weeks prior to Election Day.

CONCLUSION

Previous studies have shown that combining is particularly appropriate in forecasting environments having high uncertainty, which is usually the case with long horizons (Graefe and colleagues, 2012). The PollyVote was designed to provide accurate long-term election forecasts. For short-term predictions, individual methods, such as polls and prediction markets, can also be quite accurate as they contain the most recent information.

REFERENCE
Graefe, A., Armstrong, J.S., Jones, R.J. Jr., & Cuzán, A.G. (2012). Combining forecasts: An application to elections. 2011 APSA Annual Meeting Paper, ssrn.com/abstract=1902850.

Figure 1. PollyVote vs. FiveThirtyEight
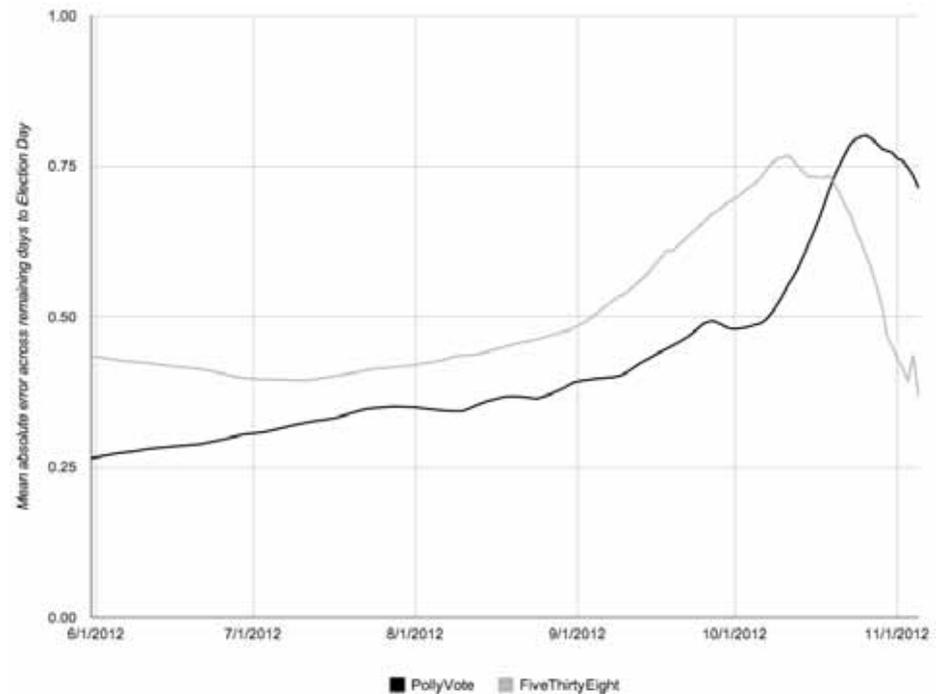
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