Algorithm for Expected Percent Correctly Predicted

Our algorithm for the average percentage of districts in which the model correctly anticipated the winner builds upon work by Herron (1999), who proposed the concept of "expected percent correctly predicted" in the context of logit models:

1. Estimate the model (SUR or KK) on data from one election year. Record the parameter estimates, $\hat{b}$, and their variance, $\hat{V}(b)$.

2. Repeat the following steps *S* times

   - Draw 1 vector of parameters from their sampling distribution, a multivariate normal with mean $\hat{b}$ and variance $\hat{V}(b)$.

   - For each electoral district, calculate the expected vote share for each party, conditional on the simulated parameters and the true *x*'s for that district.

   - Calculate the percentage of districts in which the simulated winner (the party with the largest proportion of the simulated vote) was the actual winner of the election. For instance, the simulations might correspond to the correct winner in 490 of the 521 electoral districts. Record the percentage as $\tilde{p}$.

Repeated enough times (say, *S*=500), this procedure will approximate the full sampling distribution of $\tilde{p}$, the percent correctly predicted. The mean of this distribution is ePCP, the expected percent correctly predicted.