Spatial Voting in U.S. House Elections
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Abstract
Goal: Estimate the relationship between individuals’ ideological proximity to candidates and vote choice.
Why use U.S. House Elections?
• Provide variation in candidate positions
• Overall visibility of campaigns is low (hard test)
• Variation in campaign intensity, tone, and emphasis may condition effects
Why Use Expert Informants?
• Cost-effective, valid, and reliable approach
• Equivalent scales for incumbents and challengers
• External to voter perceptions but on the same scale as self-placements
Approach:
• Aggregate informant placements while correcting for partisan bias
• Combine results with equivalent voter data to get estimates of latent ideology
• Estimate relationship between proximity and vote choice
• Simultaneous in a Bayesian framework so uncertainty propagates through model

Data on Candidates and Voters
Expert Informant Data
• National presidential convention delegates, state legislators, and individuals identified from Polimetrix’s panel of respondents using an expertise battery
• 4,871 informants from 155 congressional districts (mean of 31 and sd of 3.2)
• Asked to place candidates on 6 issue scales as well as the traditional left-right scale
• Study website: http://electionstudy.ucdavis.edu/
Voter Data
• 2,000 respondents from the 2010 CCES (UCD Module)
• Asked to place themselves on the same 7 scales.

Issues with Expert Informant Data

Issues
Informant Random Error
Informant Bias
Variation in Informant Accuracy
Variation in Sample Size

Current Solution
Should cancel out during aggregation
Assume independents are unbiased
None, weighting was unhelpful
Simultaneous estimation accounts for uncertainty

Aggregating Expert Informant Placements
placements, positions, ∼ N(positions, a (pid, ), )

where:
• i indexes candidates and j indexes informants
• placements, is a 7-by-1 vector of informant i’s placements of candidate j on the 7 issue questions
• positions, is a 7-by-1 vector of aggregate informant estimates of candidate j’s position on the 7 issues
• a is a 7-by-1 vector of unknown parameters. Varies across items but held constant across informants and districts
• pid, is a 3-point measure of the informants’ party identification

Simple Vote Choice Model

Predicted Probability of Voting Republican (95% Credible Intervals)

\[ P(vote_i = 1) = \Phi (\alpha + \beta (prox_i)) \]

where:
• vote, is respondent vote choice
• prox, = (ideologyj − ideologyi)2 − (ideologyj = − ideologyi)2
• \( \alpha \) and \( \beta \) are unknown parameters

Surprisingly strong given the low visibility of House campaigns and the limited knowledge voters have of candidates

Proximity, Party Identification, and Campaign Intensity

Proximity and Vote Choice
• Model allows intercept and slope to vary by party identification and campaign intensity
• Relationship between proximity and vote is much weaker among partisans than independents in low intensity campaigns
• Effect of proximity is stronger in districts with high campaign intensity, difference is most pronounced among partisans

Conclusion and Next Steps

Proximity and Vote Choice
• Expert informants can provide valid measures of candidate positions
• Voters seem to respond to the positions of candidates
• Characteristics of voters (pid) and their environment (campaign intensity) condition the effect of proximity

Next Steps
• Alternative bias correction approaches
• Treat informant placements and candidate positions as ordinal, not continuous
• Introduce a measure of candidate valence