

The effect of state and national advertising campaigns on US Presidential elections when differences across states matter

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Abstract

We provide a stochastic electoral model of the US Presidential election where candidates use two instruments in their state and national electoral campaigns—policy and advertising—to address different aspects of the campaign when differences across states matter. Policies are those candidates want to implement if elected with the advertising component aimed at giving voters a further impetus to vote for candidates.

Prior to the election candidates announce their policies and advertising (ad) campaigns at the state and national levels with advertising campaigns being messages sent to voters. Voters are identified by their state of residence, their ideal policy, the ideal number of message they would like to receive from candidates called their *campaign tolerance level*, their sociodemographic characteristics, and their perceptions of candidates' traits and competencies. Voters care about the policies candidates propose for their state as well as that the national level relative to their ideal policy and about candidates' message frequency in their state and at the national level relative to their campaign tolerance level. Candidates' objective is to maximize their expected vote shares at the state and national levels.

In the strict (weak) local Nash equilibrium (LNE) of the election the expected state and national vote shares of all candidates are greater than the sufficient (necessary) pivotal vote shares respectively at the state and national levels. The sufficient pivotal state (national) vote share rises when voters give greater weight to the policy or advertising dimensions at the state (national) level. The necessary state (national) pivotal vote share may increase or decrease in the importance voters give to the policy or advertising dimensions at the state (national) level. If the expected vote share of at least one candidate is lower than the necessary pivotal vote share in at least one state or at the national level, then candidates' critical state (national) campaigns are not a LNE at the state (national) level and thus not a LNE of the election.

Key words: stochastic votes, policies, advertising campaign, campaign tolerance, valences, local Nash equilibrium, pivotal probabilities, pivotal vote shares

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