Essays on Public Choice & Political Competition
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The efficacy of campaign funds towards electoral success has been the subject of much study among both political scientists and economists. This thesis contributes to this literature by studying the effects of advertising expenditures on electoral outcomes using data from federal congressional district races in the U.S from 2010 to 2016.

1 Campaign Contributions, Advertising & Electoral Success (job market paper)

This paper estimates a model of political competition using data from congressional district races for the years 2010-2016. The paper asks three questions: (i) What is the impact of campaign contributions on electoral success, measured as votes for a candidate? (ii) What is the impact of advertising expenditure, after controlling for contributions? and (iii) How do the effects for advertising made in support of a candidate (positive advertising) differ from the effects of advertising made against a candidate (negative advertising)? Based on empirical analysis suggestive of strategic complementarity of advertising spending, I develop and estimate a model of political competition in which candidates simultaneously choose advertising expenditures from fixed endowments of contributions in order to maximize their expected plurality. Estimation results suggest a small positive effect of campaign contributions and positive advertising on electoral outcomes, but a negligible effect of negative advertising. There is moreover a strong incumbency advantage. Counter-factual simulations based on the estimated model show a differential effect of banning third party advertising, with Republicans faring better in terms of votes.

2 The Impact of Advertising on Voting and Abstention: Analysis Using Dirichlet Regression (in progress)

In parametric estimation techniques, it is common to assume that structural disturbances are normally distributed. This assumption can be often invalidated, as is the case in the first essay described above. A flexible alternative to assuming joint normality is to assume that the data under question follows a Dirichlet distribution, leading to Dirichlet regression. The Dirichlet distribution is appropriate for compositional data where the variables of interest are bounded between 0 and 1 and add up to 1. Moreover, an advantage of the Dirichlet regression over classical linear regression models is its ability to accommodate skewness and heteroskedasticity. This paper highlights the use of Dirichlet regression using federal level congressional district election results in the U.S for the years 2010-2016. In studying the determinants of electoral participation, the paper finds that expenditures by candidates’ campaign committees do reduce abstention rates, with a slightly stronger effect for Republican candidates. Conversely, independent third party advertising have little effect on turnout rates.
3 Monotone Equilibria in Political Competition Games (in progress)

This paper studies a game theoretic model of two candidate political competition under incomplete information where candidates’ policy choices are multi-dimensional. Exploiting results in monotone comparative statics, we establish and characterize the set of equilibria in which candidates’ best response sets are monotone. The existence result relies on a fixed point theorem due to Smithson(1971), a generalization of Tarki’s (1955) fixed point theorem for partially ordered sets. Unlike previous models of political competition such as in Black(1948), Downs(1957), the model allows for different ideological positions taken by candidates in equilibrium.