Political Science 406: Lab 7: Synthetic Controls, Sensitivity Analysis, and Bounds

Due on May 24, 2024

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Problem 1

In-Your-Face Television

Consider Mutz's 2007 APSR article, "Effects of "in-your-face" television discourse on perceptions of a legitimate opposition." The data for several of the analyses is available on the course website as mutz.csv. The treatment variable, *treat* is randomly assigned and reflects whether a research subject saw a civil or uncivil debate between a Democrat and a Republican. Outcome variables include *mfvcanth* for the feeling thermometer score for your own candidate; *lfvcanth*, for the feeling thermometer score for the other candidate; *own*, for the perceived legitimacy of policy arguments for the participant's own issue stance; and *other*, for the perceived legitimacy of policy arguments for the opposite issue stance. Carry out a significance test for the hypothesis that the treatment affects this set of outcome variables.

Problem 2

In-Your-Face Television

Look only at the bivariate relationship between *treat* and *lfvcanth*. How strong would omitted variables need to be in order to substantially affect the estimated relationship? Answer using both sensitivity analysis and extreme bounds analysis. (For the extreme bounds analysis, you may choose to dichotomize the outcome variable at the value 50 if that is helpful.)

Problem 3

Trump and Immigration

Can we use a synthetic controls strategy to come up with a statistical test of the effect of Trump's election on (legal and/or illegal) immigration to the U.S.? Provide a proposed research design complete with necessary data and estimator, explain the required assumptions, and discuss the strengths and weaknesses of your proposal. Then show your results.