MY457/MY557

Causal Inference for Experimental and Observational Studies

Week 11: Regression Discontinuity Design

Paper:

- Pinotti, Paolo. "Clicking on heaven's door: The effect of immigrant legalization on crime." American Economic Review 107, no. 1 (2017): 138-168.

Questions

A) In your group, try to answer the following questions.

1. Why is this study relevant and interesting from a policymaking and academic perspective?

2. Why can we not regress number of crimes committed on immigration status binary, i.e. in a simple logistic regression?

3. What is the key identifying assumption RDD is based on? How does the author argue that the identifying assumption is (likely to be) valid? Which validity/falsification tests and theoretical arguments are provided?

4. Could RDD still have been applied if "the exact timing of the cutoff for each group was **[NOT]** unknown ex ante" (p. 140)? If so, why? If not, why not?

5. Which robustness checks (i.e. alternative statistical decisions) and/or placebo tests does the author conduct? Which additional ones would you conduct?

6. Why do you think the standard error increases with polynomial degree, and decreases with bandwidth size (see Figure 6)? What is the trade-off between high/low polynomial structure, and large/small bandwidth size?

7. Is the RDD estimate local? If so, do you think it may also be a good estimate for observations further away from the cut-off? If so, why? If not, why not?

8. When is measurement errors of the outcome variable a threat to internal validity? How does the author try to convince the reader that this is not an issue?

B) Brainstorm in your group, which other (quasi-)experimental methods, which you have learned in the last eleven weeks, can be used to estimate the effect of immigration status on committing a crime (5min).