Final Homework

Regression Discontinuity Questions:

1. Write out the basic equation for an RD estimator. Explain the identification approach.

2. What are the two main “assumptions” that need to be satisfied for an RD estimator to be valid?

3. What methods can be used to validate those assumptions?

4. Why do RD methods typically use polynomial functional forms or nonparametric methods in estimation?

Blundell and Dias paper

1. List the six types of estimation methods Blundell and Dias describe. Briefly explain each one (a sentence or two).

2. Blundell and Dias describe several different estimators of the effect of a “treatment”: the population average treatment effect (ATE), the average assigned to treatment effect (ATT) or “intent to treat” effect, the local average treatment effect (LATE), and the marginal treatment effect (MTE). Explain what they mean by each of these. Which estimators identify which treatment effects?

3. What do they describe as the weaknesses of each model?

4. How are regression discontinuity design and IV methods related? How are the control function and the IV methods related?

5. Explain how BD empirically evaluate the strengths and weaknesses of each estimator.