Econometrics – Exam 3

Fall 2019

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1)

What are two conditions necessary to have a valid instrument?

2)

How can Instrumental Variables regression solve omitted variable bias?

3)

You’d like to estimate the elasticity of supply for a good. Please outline the steps in order to do that.

4)

How does Regression Discontinuity allow us to get an unbiased estimate of a treatment effect?

5)

How does Difference in Differences estimation allow us to get an unbiased estimate of a treatment effect?

6)

What is the intuition behind using propensity score matching as a causal estimation procedure? What problem does it solve and what problem does it not solve?

7)

In order to get internal validity, the following assumption must hold: E[ε|X] = 0.

Why might nonparametric models meet this assumption better than parametric models?

8)

For each of the following terms, please define and explain carefully:

Counterfactual

Exogenous / Endogenous

Local Average Treatment Effect (LATE)

Synthetic Controls

Overfitting