

MITx: 14.310x Data Analysis for Social Scientists

Help



- Module 1: The Basics of R and Introduction to the Course
- Entrance Survey
- Module 2:

 Fundamentals of
 Probability, Random

 Variables, Distributions, and Joint Distributions
- Module 3: Gathering and Collecting Data,
 Ethics, and Kernel
 Density Estimates
- Module 4: Joint, Marginal, and Conditional Distributions &

Module 12: Endogeneity, Instrumental Variables, and Experimental Design > Endogeneity and Instrumental Variables > The Problem of Endogeneity - Quiz

The Problem of Endogeneity - Quiz

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Question 1

1.0/1.0 point (graded)

True, false or uncertain: Unlike simple regression-based methods, difference-in-differences and regression discontinuity designs *always* provide us with causal estimates.

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	3	True
	a.	Huc

b.	False	e 🗸

c. Uncertain

Explanation

The interpretation of your estimates depends on the validity of your assumptions in whatever design you use. If you cannot credibly claim that the parallel trends assumption is satisfied, then estimates obtained from a differences-in-differences design cannot be interpreted causally. Similarly, for regression discontinuity design, if there are reasons to believe that people can manipulate the threshold to decide what side of the cutoff they are on, then that will undermine your estimates.

<u>Functions of Random</u> <u>Variable</u>

- Module 5: Moments of a Random Variable,
 Applications to
 Auctions, & Intro to
 Regression
- Module 6: Special
 Distributions, the
 Sample Mean, the
 Central Limit Theorem,
 and Estimation
- Module 7: Assessing and Deriving Estimators
 Confidence Intervals, and Hypothesis Testing
- Module 8: Causality,
 Analyzing Randomized
 Experiments, &
 Nonparametric
 Regression
- Module 9: Single and Multivariate Linear

Ultimately, the causal interpretation of your coefficients hinges on the credibility of the set of assumptions you are making irrespective of your design.

Submit

You have used 1 of 1 attempt

Question 2

1/1 point (graded)

If it is plausible that the outcome variable affects the regressor of interest, then: (Select all that apply)

- ☑ a. There is an endogeneity problem
- b. One should add more control variables
- c. One should use difference-in-differences
- d. One should use regression discontinuity



Explanation

There is an endogeneity problem, because the coefficient will measure the effect of the regressor on the outcome variable AND the effect of the outcome variable on the regressor.

Models

- Module 10: Practical Issues in Running Regressions, and Omitted Variable Bias
- Module 11: Intro to Machine Learning and Data Visualization
- Module 12:

 Endogeneity,
 Instrumental
 Variables, and
 Experimental Design

Endogeneity and Instrumental Variables

Finger Exercises due Dec 14, 2016 05:00 IST

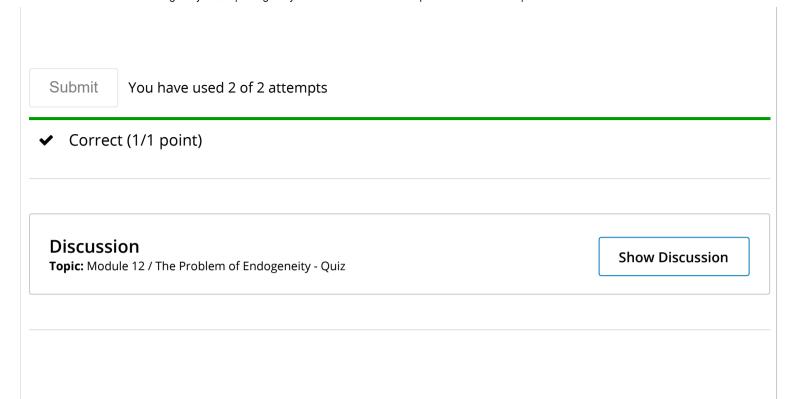
Experimental Design

Finger Exercises due Dec 14, 2016 05:00 IST

Module 12: Homework

<u>Homework due Dec 12, 2016</u> 05:00 IST

Exit Survey



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