

MITx: 14.310x Data Analysis for Social Scientists

Heli

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An Introduction to the Regression Analysis - Quiz

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Question 1

1/1 point (graded)

In this lecture segment, we learned about the simple linear regression equation:

$$Y_i = \alpha + \beta X_i + \epsilon_i$$

In cases where it is appropriate to think of the relationship as a causal relationship, the impact of changing X on outcomes of Y is captured by:

$$\alpha + \beta$$



 \circ α

$$\alpha + \beta + \epsilon$$

- Module 5: Moments of a Random Variable. Applications to Auctions, & Intro to Regression
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- Module 7: Assessing and **Deriving Estimators -**Confidence Intervals. and Hypothesis Testing
- Module 8: Causality, **Analyzing Randomized** Experiments, & **Nonparametric** Regression

Causality

Finger Exercises due Nov 21, 2016 at 05:00 IST

Analyzing Randomized Experiments

Finger Exercises due Nov 21, 2016 at 05:00 IST

Explanation

Imagine an experiment where all other factors in the world are kept unchanged but X is varied. The causal impact of changing X on outcomes of Y is given by β .

Submit

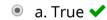
You have used 1 of 2 attempts

Correct (1/1 point)

Question 2

1/1 point (graded)

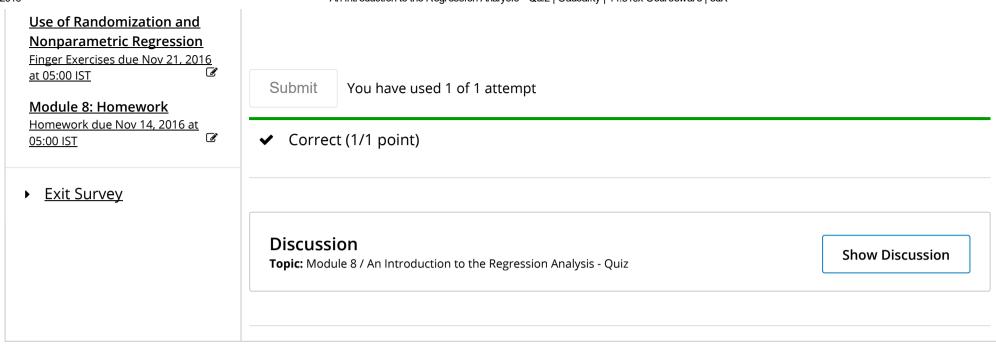
True or False: In order to interpret a regression equation as representing a causal relationship, we need to include as control variables any variables that might impact both X and Y.



b. False

Explanation

True. If there exist any variables that are correlated with X and also effect Y, then we would need to include those variables as control variables in any regression equation that seeks to measure the causal relationship between X and Y, otherwise we will get omitted variable bias (which we will discuss in further detail later in the semester).



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