

MITx: 14.310x Data Analysis for Social Scientists

Heli



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Omitted Variable Bias: An Example - Quiz

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Question 1

1/1 point (graded)

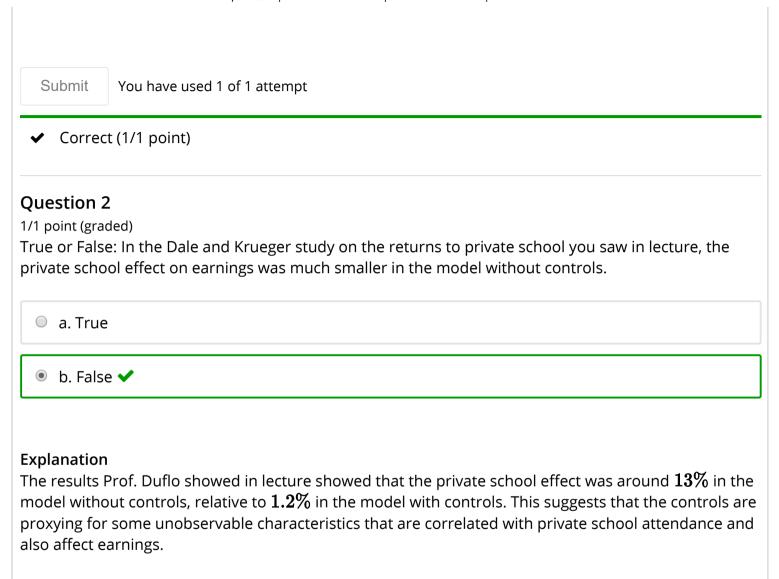
What, if anything, can you to preserve your number of observations if you have missing data in some of your regressors?

- a. Nothing you can do.
 - b. Replace missings with 0 and include a dummy for missing. 🗸
- c. Omit these regressors from your model.

Explanation

One way to handle missing data, and preserve the number of observations, is to replace missings with 0s, and include a dummy variable for missing as a control in your regression, assuming this variable does not take the value 0. The intuition for this is that you can correctly estimate your coefficient by doing this, since your indicator variable controls for any differences in outcomes between observations with missing data, and observations without.

- Module 5: Moments of a Random Variable,
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- Module 6: Special
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- Module 7: Assessing and Deriving Estimators -Confidence Intervals, and Hypothesis Testing
- Module 8: Causality,
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- Module 9: Single and Multivariate Linear Models
- Module 10: Practical Issues in Running



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You have used 1 of 1 attempt

Regressions, and **Omitted Variable Bias**

Practical Issues in Running Regressions Ø.

due Dec 5, 2016 05:00 IST

Omitted Variable Bias

due Dec 5, 2016 05:00 IST

Module 10: Homework

due Nov 28, 2016 05:00 IST

Module 11: Intro to Machine Learning and **Data Visualization**

Correct (1/1 point)

Question 3

1/1 point (graded)

According to the true model, what is the effect of private school on future earnings?

- a. There is no significant effect of private school on earnings 🗸
- b. There is a significant positive effect of private school on earnings
- c. There is a significant negative effect of private school on earnings
- d. There is an ambiguous effect of private school on earnings.

Explanation

The coefficient is .013. The standard deviation is .025. This means the t-stat (approx. .013/.025) will be far less than 1.96 (the minimum t-stat that would be significant at the 5% level).

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You have used 1 of 2 attempts

Correct (1/1 point)

Question 4

1/1 point (graded)

In the model with only a dummy for private college, the coefficient on private college is:

- a. unbiased
- b. upward biased
- c. downward biased
- d. the direction of the bias is ambiguous

Explanation

The coefficient is upward biased, since it is smaller and insignificant in the true model.

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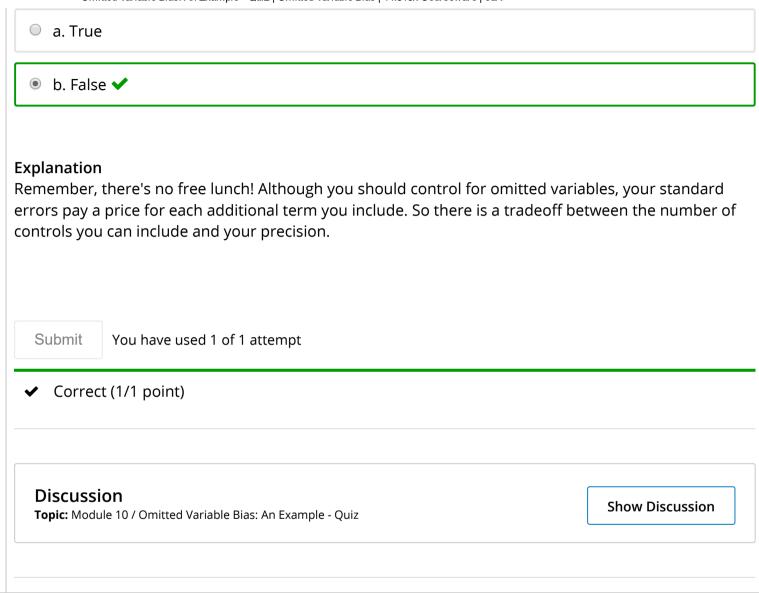
You have used 1 of 2 attempts

✓ Correct (1/1 point)

Question 5

1/1 point (graded)

True or False: If you have more variables, you should always include them as controls in order to reduce the chances of OVB.



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