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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.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Question 2

1/1 point (graded)

True or False: In the Dale and Krueger study on the returns to private school you saw in lecture, the private school effect on earnings was much smaller in the model without controls.

a. True

b. False ✔

Explanation

The results Prof. Duflo showed in lecture showed that the private school effect was around 13% in the model without controls, relative to 1.2% in the model with controls. This suggests that the controls are proxying for some unobservable characteristics that are correlated with private school attendance and also affect earnings.

Submit You have used 1 of 1 attempt

✔ 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).

Submit 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.

Submit 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.

a. True

b. False ✔

Explanation
Remember, there's no free lunch! Although you should control for omitted variables, your standard errors pay a price for each additional term you include. So there is a tradeoff between the number of controls you can include and your precision.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Discussion
Topic: Module 10 / Omitted Variable Bias: An Example - Quiz

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