Education IV Example, cont. - Quiz

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Question 1

0.0/1.0 point (graded)

Why would your estimate of β in the following simple OLS model be a biased estimate of the effect of education on earnings? (Select all that apply)

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

where Y_i denotes earnings and A_i is whether individual i goes to secondary school

- [x] a. We believe that education is a bad instrument.
- [ ] b. We do not believe that Y and A_i are correlated.
- [x] c. We do not believe that A_i and the error term are uncorrelated

☐ d. We believe that there are omitted variables in these regression, which are correlated both with ϵ and A_i.

✖

Explanation

We do not believe A_i and the error term are uncorrelated because by definition, since ability is an omitted variable that means it is correlated with both A_i and the error term. So C implies your $\hat{\beta}$ would be biased. D is a more explicit version of C, so it is also correct.

B just means your true beta is 0, it says nothing about the interpretability of your $\hat{\beta}$. A is irrelevant because we are not instrumenting anything in the model above.

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Question 2

1.0/1.0 point (graded)

Professor Duflo mentioned that the secondary school study had a 97% tracking rate. Which of the following might be the problem if they had a low tracking rate? (Select all that apply)

☑ a. The final sample for which they have data might not be representative of their initial sample.

- [ ] b. Low tracking rates imply that your instrument was not randomly assigned.
- [ ] c. Low tracking rates imply that your instrument is not correlated with your regressor.
- [x] d. The set of people who dropped out might be different in the treatment and control groups, leading to a final sample that is not comparable in Treatment and Control groups.

✔

Explanation
As Prof. Duflo explained, there are two concerns with low tracking: first, the sample you end up with might be different from the sample you started with. Therefore, you might be worried that you are not estimating what you thought you were or on the relevant population of interest. The second reason one might worry about low tracking rates is that the set of people who couldn't be tracked might be different in both groups. This would imply that the remaining samples in each group are no longer comparable, and your estimates would be biased since they fail to account for that.

B is incorrect, because you might have low tracking rates even in an RCT.

C is incorrect because low tracking rates do not imply anything about whether your instrument is correlated with your regressor.

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Homework due Dec 12, 2016 05:00 IST

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Question 3

1.0/1.0 point (graded)

True or False: As described in the lecture, the fact that the scholarships are randomly assigned, enabled Prof. Duflo and her co-authors to identify the casual effect of assigned scholarships on school completion rates.

- a. True ✔
- b. False

Explanation

In this segment, Prof.Duflo uses the random assignment of scholarships to estimate the causal effect of assigned scholarships on secondary school enrollment rates

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Discussion

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