

MITx: 14.310x Data Analysis for Social Scientists

Heli



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Entrance Survey

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Module 1: The Basics of R and Introduction to the Course > Introductory Lecture > Data Can Be Deceitful, Part II - Quiz



Question 1

(1 point possible)

Positive externalities of education refer to "spillover" benefits of education above and beyond the direct benefits of children receiving an education. Which of the following are examples of positive externalities of education? (Check all that apply)

- a. As parents, individuals who were better educated as children may make better health and nutrition choices for their children
- b. Better-educated children achieve higher scores on nationwide, standardized tests
- c. Better-educated children earn more income as adults
- d. Better-educated children that become politicians or businesspeople may choose to enact policies or create business that help their broader community

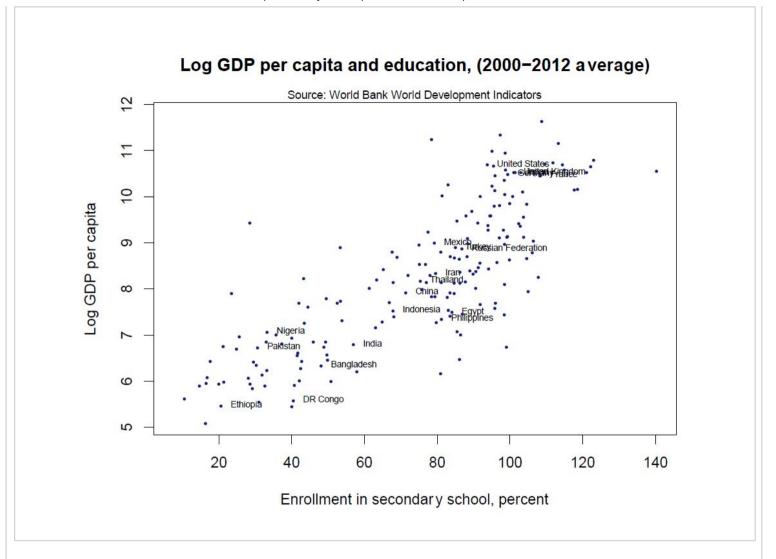


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Question 2

(1/1 point)

The graph below shows that GDP per capita and education levels are highly correlated. One interpretation of this could be that higher education causes higher GDP per capita. Which of the following are discussed as reasons that we may be hesitant to conclude that education causes higher incomes? (Check all that apply)



☑ a. Hidden or omitted variables: There is a third factor that increases education and income which is not accounted for here

- b. Measurement error: One of the variables is inaccurately measured, or measured in such a way that is not comparable across countries
- c. Reverse causality: Higher incomes cause higher education, rather than the other way around



d. Heterogeneity: Countries differ on many dimensions and we cannot compare outcomes like GDP per capita or education levels across countries.



FXPI ANATION

Reverse causality and hidden/omitted variables are discussed in class as reasons that we should use caution before concluding that higher education leads to higher GDP. There could be other third factors that contribute to higher incomes as well as higher education levels which are not included in this simplistic model. There could also be some reverse correlation at play, where it is not necessarily the case that higher education leads to higher income, but rather than higher levels of income lead to higher education levels. In this example of outcomes as complex as national GDP per capita and education levels, there are likely many interrelated factors and interactions at play beyond what is included in this simplistic model.

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