edX

MITx: 14.310x Data Analysis for Social Scientists

🔖
Bookmarks

- ▸ Module 1: The Basics of R and Introduction to the Course

- ▸ Entrance Survey

- ▸ Module 2: Fundamentals of Probability, Random Variables, Distributions, and Joint Distributions

- ▸ Module 3: Gathering and Collecting Data, Ethics, and Kernel Density Estimates

- ▸ Module 4: Joint, Marginal, and Conditional Distributions & Functions of Random Variable

Module 10: Practical Issues in Running Regressions, and Omitted Variable Bias > Practical Issues in Running Regressions > Alternative Functional Forms & Fixed Effects - Quiz

Alternative Functional Forms & Fixed Effects - Quiz

🔖 **Bookmark this page**

Consider the following model:

$$log(Y_i) = \beta_0 + \beta_1 S_i + \beta_2 log(P_i) + \epsilon_i$$

where Y_i denotes the mean hourly wage for individual i, S_i denotes the number of years of education individual i has completed, and P_i denotes mother's education.

Question 1
0/1 point (graded)
Which of the following statements are true? (Select all that apply)

- ☑ a. β_1 is the elasticity of wage with respect to education.

- ☐ b. Each additional year of education leads to a $(\beta_1 * 100)\%$ change in wages.

- ☑ c. β_2 is the elasticity of wage with respect to mother's education.

- ☐ d. A 1% change in education leads to a $\beta_1\%$ change in wages.

☑ e. A 1% change in mother's education leads to a $\beta_2\%$ change in wages.

✖

Explanation

When your outcome is in logs and your regressor is in logs, the coefficients represent elasticities: your coefficients measure the $\%$ change in your outcome as a result of a 1% **change in your regressor.** If your outcome is in logs, but your regressor is not, the coefficient represents the $\%$ in your outcome resulting from a **unit increase in your regressor.** So in this example, since the model includes S_i and $\log(P_i)$- the correct interpretations of β_1 and β_2 are given by B, C and E. The remaining options are incorrect.

| Submit | You have used 2 of 2 attempts

✖ Incorrect (0/1 point)

Discussion
Topic: Module 10 / Alternative Functional Forms & Fixed Effects - Quiz

| Show Discussion |

11/25/2016

Alternative Functional Forms & Fixed Effects - Quiz | Practical Issues in Running Regressions | 14.310x Courseware | edX