

Class 8

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March 1, 2022

Organization

- What's OLS? Why does it matter? What can you do with it?

Wooldridge

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What explains what here and why does it matter?

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- OLS: “ordinary least squares” (?).
- Let’s think about the relationship between *Prestige* and *Schooling*.
What explains what here and why does it matter?
- OK, so when *Schooling* goes up, *Prestige* goes up too. The important question is **how much**. Let’s quantify this a little bit...

OLS

$$y_i = \beta_0 + \beta_1 x_i + e_i$$

OLS

$$\text{Prestige}_i = \beta_0 + \beta_1 \text{Schooling}_i + e_i$$

$$\begin{bmatrix} 64 \\ 53 \\ 67 \end{bmatrix} = \beta_0 + \beta_1 \times \begin{bmatrix} 57 \\ 50 \\ 61 \end{bmatrix} + \begin{bmatrix} 1.3 \\ -0.49 \\ -0.86 \end{bmatrix}$$

OLS

It looks like everything depends on β_1 . Then the one million Euro question is: How do we get β_1 ?

OLS

$$\beta_1 = (X'X)^{-1}X'y$$