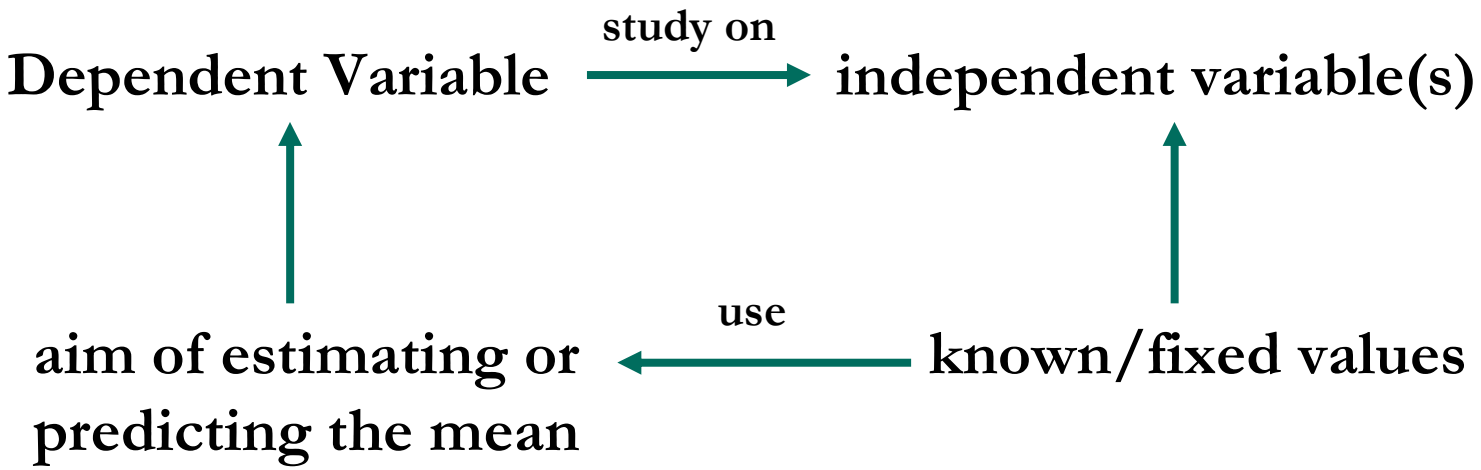
ECONOMETRICS
Nature of Regression Analysis

Lesson Goal

- Understand the nature of regression analysis.

Regression Analysis

- What is Regression Analysis?

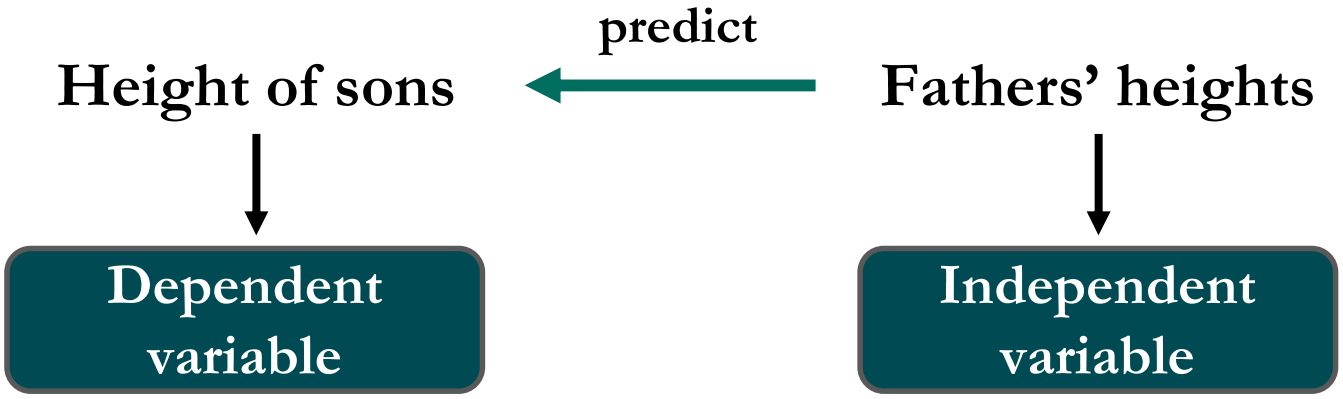


Regression Analysis

- Example

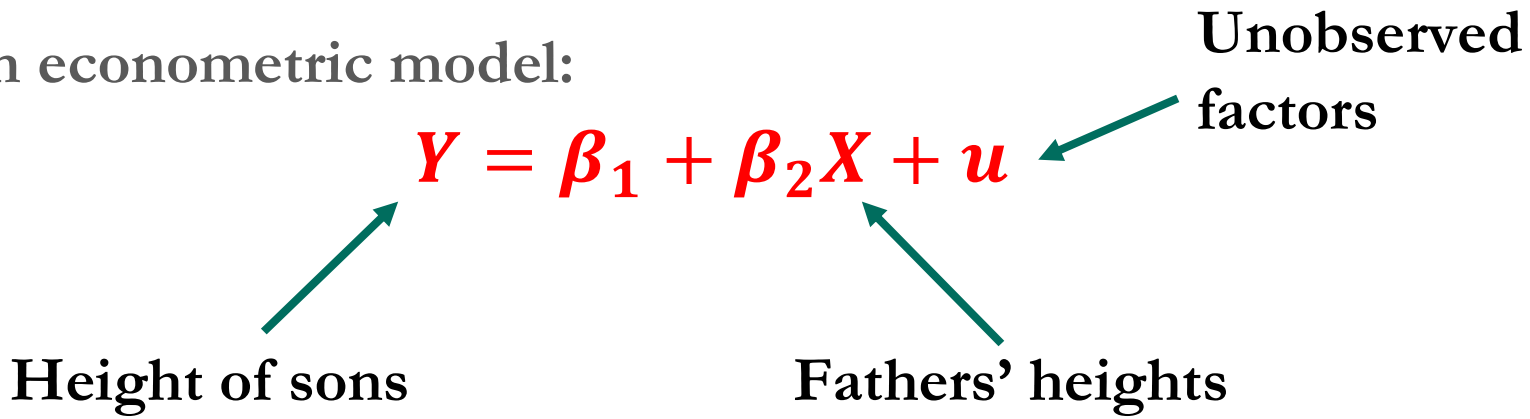
Galton's Universal Law of Regression

- Find out how the average height of sons changes, given the fathers' heights.



Regression Model

- An econometric model:



Terminology and Notation

$$Y = \beta_1 + \beta_2 X + u$$

Dependent Variable	Independent Variable
Explained variable	Explanatory variable
Predictand	Predictor
Outcome	Covariate
Regressand	Regressor
Controlled variable	Control variable

Simple vs. Multiple Regression

- Simple Regression Analysis

$$Y = \beta_1 + \beta_2 X + u$$

Consumption — Income

- Multiple Regression Analysis

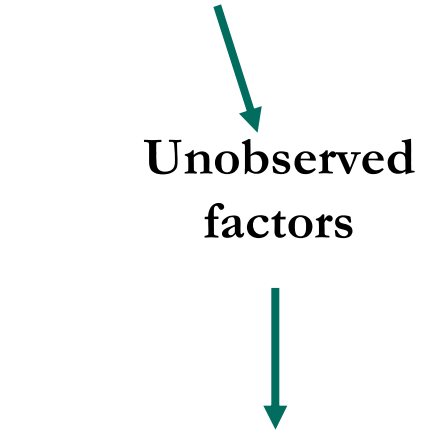
$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots + u$$

Consumption — Income — Wealth — Population — others

Stochastic Error Term

- Unobserved factors?

$$Y = \beta_1 + \beta_2 X + u$$



THANK YOU!

Next Lesson: Stochastic Error Term