Econometrics
Lecture 4: The Determinants of Corporate Investment

The "grunfeld.data" file contains the well-known Grunfeld investment dataset[1]. This dataset refers to 10 US companies over 20 years (1935-54).

Consider the following model:

$$I_{it} = \beta_1 + \beta_2 F_{it} + \beta_3 C_{it} + \epsilon_{it} \text{ where } t = 1, \ldots, 20, \ i = 1, \ldots, 10 \tag{1}$$

where I_{it} is the real gross investment for firm i in year t, F_{it} is the market value of the firm, and C_{it} is the value of the stock of plant and equipment.

1. Estimate equation (1) using a pooled OLS model.

2. Estimate equation (1) using a Least Squares Dummy Variable model.

3. Estimate equation (1) using a Fixed-Effects model.

4. Test if a pooled OLS model should be preferred to a Fixed-model.

5. Estimate equation (1) using a Random-Effects model.

6. Discuss the results obtained.

7. Test if a Fixed-Effects model should be preferred to a Random-Effects model.

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[1]https://www.proquest.com/openview/780b28fe1f4a3db9ba0b24739e8a23cd?accountid=28385

Notes by Andrea Perchiazzo. Thanks to professor Andrea Monticini.