Structural Estimation

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Syllabus

- Syllabus on https://github.com/rickecon/StructEst_W18/
- Go through syllabus
- How to submit assignments
- Tutorials

Assignment	Quantity	Points	Total Points	Percent
Problem Sets	5	10	50	62.5%
Project initial presentation	5	5	6.3%	
Project final presentation	5	5	6.3%	
Project paper	1	20	20	25.0%

Model

Def: Model

A set of cause and effect mathematical relationships between variables used to explain, predict, and understand phenomena.

- Exogenous variables: inputs to the model, taken as given, from outside the model
- Endogenous variables: output of the model, dependent exog. vars.

Data generating process (DGP)

Def: Data generating process (DGP)

- Def. 1: A complete description of the mechanism that causes some observed phenomenon with all its dependencies (too complex)
- Def. 2: A simplified model version of the process that causes some observed phenomenon with its key dependencies.
  - This DGP or model must be specified in such a way that it could be used to simulate data.

Structural Model

Def: Structural Model

Model in which the equations derived from individual optimization or firm optimization (behavioral equations).

- Includes linear models and linear approximations
- Most often nonlinear, dynamic

Reduced Form model

Def: Reduced Form Model

Models in which equations are either not derived from behavioral equations or are only implicitly a linear approximation of some other model.

- Most often static
- There can be gray area or overlap between these two definitions
- Includes machine learning

PS1

- Set up Problem Set 1: structural vs. reduced form short paper

Estimating utility parameters

- Show estimation of χ_s^n parameters in overlapping generations model