1 Course organization

- The course takes place on Tuesdays, 14:30 - 17:30, at DIW in Room 3.3.002A (Schmoller).
- Credit points: 6 ECTS. 7 three hour sessions + final exam session.
- First session: April 24th, 2018
- Final session: July 10th (Exam), 2018
- Compulsory reading in bold.
- Evaluation: if this course is taken for credits, the final grade will be determined by
  - 2 problem sets (to be completed in groups of max. 2 participants), weighted 1/3 each, and
  - a final exam, weighted 1/3.

2 Course objectives

- Discuss advantages and limitations of structural econometric models. Give students an understanding of why and when adding structure is important.
- Provide insights into strategy (especially, identification) in important papers in structural Labour, Public & IO literature. Give a feel of how one may go about establishing a structural model.
- Establish basic estimation techniques & numerical methods such as Simulation, Numerical integration and Discretisation.
- Develop matrix programming skills using Matlab. Loops vs. vectorisation; readability vs. speed; sustainable coding for several projects.

3 Introduction to Structural Approaches (April 24, PH)


References


4 Static discrete choice in IO (May 8, HU)

- Estimating demand and supply parameters in markets with differentiated products using aggregate (product-level) data.
- Coding exercise: preliminaries.

References


5 Static discrete choice in IO (May 15, HU)

- Recap Berry et al. (1995).
- Coding exercise: Berry et al. (1995) nested fixed-point (NFP) algorithm.
- Discuss extensions and alternative estimation methods.

References


6 Dynamic discrete choice in IO (May 22, HU)

- Introduction to dynamics.

References


7 Dynamic discrete choice in IO (June 5, HU)

- Coding exercise: Rust (1987)
- Examples of applications to demand estimation.
- Conditional choice probability (CCP) estimation.

References


8 Dynamic discrete choice in Labour I (June 12, PH)

- Dynamic incentives to labour supply: investing in human capital
- More on Discretisation
- Interpolation

Reference


9 Dynamic discrete choice in Labour II (July 3, PH)

- Dynamic incentives to labour supply: the role of education, full time and part time experience
- Identification and validation of structural parameters
- Policy Simulation

Reference

10 Exam (July 10)

11 Further reading

**IO: Static demand**


**IO: Dynamic discrete choice**


Bajari, Patrick, Chernozhukov, Victor, Hong, Han, and Denis Nekipelov (2009), “Nonparametric and semiparametric analysis of a dynamic discrete game,” working paper.


