Graduate Program in Economics

IDEA

Course: Policy evaluation*

Faculty: Joan Llull

Term: 1st Semester

Module: (will be introduced by the program)

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Office Hours: upon request

Description:

** Microeconometrics is a prerequisite for this course*

This course introduces the students to frontier econometric methods for policy evaluation. The course consists on two parts. The first one introduces the treatment effects analysis that is useful for ex-post policy evaluation. The second part introduces students to the usage of structural dynamic discrete choice models that allow us implement ex-ante policy evaluation.

Objective:

The main goal of this course is to provide students with a frontier econometric toolbox that allows them to produce high level empirical analyses and policy evaluations. This course is suitable for any second year student that is taking the Microeconometrics course, including those with empirical interests, but also for macro- and micro-oriented students who aim at providing empirical foundations to their research. The course devotes a special emphasis in the implementation of the different techniques, with problem sets in which students are expected to use each of the techniques presented in class in the analysis of real data.

Outline:

1. Treatment Effects
    a. Potential outcomes and causality
    b. Social experiments
    c. Matching
    d. Instrumental variables
    e. Regression discontinuity
    f. Difference in differences
2. Dynamic Discrete Choice Structural Models
    a. Full solution techniques
    b. Conditional choice probability estimation
    c. An introduction to dynamic discrete games with incomplete information

References:

(These are core references. References for applications to be given in the course)

Treatment Effects

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Card, D. E. and A. B. Krueger (1994), "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," *American Economic Review*, 84, 772-793.

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Dearden, L., C. Emmerson, C. Frayne, and C. Meghir (2009), "Conditional Cash Transfer and School Dropout Rates", *Journal of Human Resources*, 44, 827-857.

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Snow, J. (1855), *On the Mode of Communication of Cholera*, Churchill, London. Reprinted by Hafner, New York, 1965.

Vytlacil, E. (2002), "Independence, Monotonicity, and Latent Index Models: An Equivalence Result", *Econometrica*, 70, 331-341.

Dynamic discrete choice structural models

Main reference: Aguirregabiria, V. and P. Mira (2010), "Dynamic Discrete Choice Structural Models: A Survey", *Journal of Econometrics*, 156: 38-67

Main reference: Arcidiacono, P. and P. B. Ellickson (2011), "Practical Methods for Estimation of Dynamic Discrete Choice Models", *Annual Review of Economics*, 3, 363-394.

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Aguirregabiria, V. (2019), *Empirical Industrial Organization: Models, Methods, and Applications*, mimeo, University of Toronto.

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Altug, S. and R. A. Miller (1998), "The Effect of Work Experience on Female Wages and Labor Supply", *Review of Economic Studies*, 65, 45-85.

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Bajari, P., C. L. Benkard, and J. Levin (2007), "Estimating Dynamic Models of Imperfect Competition," *Econometrica*, 75, 1331-1370.

Berndt, E. K., B. H. Hall, R. E. Hall, J. A. Hausman (1974). "Estimation and Inference in Nonlinear Structural Models", *Annals of Economic and Social Measurement* 3, 653-665.

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Lee, D. and K. I. Wolpin (2006), "Intersectoral Labor Mobility and the Growth of the Service Sector", *Econometrica*, 74, 1-46.

Llull, J. (2018), "Immigration, Wages, and Education: A Labor Market Equilibrium Structural Model," *Review of Economic Studies*, 85, 1852-1896.

Llull, J. (2023), "Selective Immigration Policies and the U.S. Labor Market," working paper, Universitat Autònoma de Barcelona.

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Pesendorfer, M. and P. Schmidt-Dengler (2008), "Asymptotic Least Squares Estimators for Dynamic Games," *Review of Economic Studies*, 75, 901-928.

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Rust, J. (1994), “Structural Estimation of Markov Decision Processes”, in R. E. Engle and D. L. McFadden (eds.), *Handbook of Econometrics*, Vol. 4, Ch. 51

Todd, P. and K. Wolpin (2006), “Assessing the Impact of School Subsidy Program in Mexico: Using a Social Experiment to VA.date a Dynamic Behavioral Model of Child Schooling and Fertility”, *American Economic Review*, 96, 1384-1417.

Wolpin, K. I. (1984), “An Estimable Dynamic Stochastic Model of Fertility and Child Mortality,” *Journal of Political Economy*, 92, 852-874.

Grading:

50% Final exam. 50% Problem sets.*

*Students taking this course are also taking Microeconometrics, which is a prerequisite.

Final exam will consist of a single, combined exam for the two courses.