

Syllabus

[cmcd.economia@fgv.br]

Course: Topics in Structural Econometrics

Professor:

2018 FIRST SEMESTER

PROGRAM

I hope to focus on applied and theoretical econometrics of dynamic programming discrete choice (DPDC) models, games and general equilibrium models. (The emphasis of the course will nevertheless be “endogenously” determined. We might not be able to cover everything or we might cover other topics, if time allows. Potential additional or alternative topics would be the estimation of production functions or the use of expectations data in structural models.) Lectures will focus on the theoretical material but will be complemented by some discussion of empirical applications.

BIBLIOGRAPHY

Course Plan (check website for updates): **((S):** Survey)

Preliminaries:

- Heckman (2008) “Econometric Causality”, *International Economic Review*, 76(1).
- Koopmans and Reiersol (1950), “The Identification of Structural Characteristics”, *Annals of Mathematical Statistics*, V.21 (especially sections 1 and 2).
- Marschak (1953), “Economic Measurement for Policy and Predictions” in Hood and Koopmans, *Studies in Econometric Methods* (available at <http://cowles.econ.yale.edu/P/cm/m14/index.htm>).
- McFadden (1981), “Structural Discrete Probability Models Derived from Theories of Choice” in Manski and McFadden, *Structural Analysis of Discrete Data and Econometric Applications* (available at <http://elsa.berkeley.edu/~mcfadden/discrete.html>).

DPDC :

- **(S)** Arcidiacono and Ellickson (2011), “Practical Methods for Estimation of Dynamic Models”, *Annual Review of Economics*.
- Arcidiacono and Miller (2012), “CCP Estimation of Dynamic Discrete Choice Models with Unobserved Heterogeneity”, *Econometrica*.

- Arcidiacono, Hotz and Kang (2012) "Modeling College Major Choice using Elicited Measures of Expectations and Counterfactuals", *Journal of Econometrics*, Vol. 166, No. 1 (January), 3-16.
- Aguirregabiria and Mira (2002) "Swapping the nested fixed point algorithm: A class of estimators for discrete Markov decision models", *Econometrica*, V.70.
- **(S)** Aguirregabiria and Mira (2010), "Dynamic Discrete Choice Structural Models: A Survey", *Journal of Econometrics*, V. 156.
- Eckstein and Wolpin (1989), "Dynamic Labor Force Participation of Married Women and Endogenous Work Experience", *Review of Economic Studies*, V. 56(3)
- Gourieroux, Monfort and Renault (1993), "Indirect Inference", *Journal of Applied Econometrics*, V. 8
- Gowrinsankaran and Rysman (2012), "Dynamics of Consumer Demand for New Durable Goods" *Journal of Political Economy*, 120, pp.1173-1219.
- Hotz and Miller (1993) "Conditional choice probabilities and estimation of dynamic models", *Review of Economic Studies*, V.60.
- Hotz et al. (1994) "A simulation estimator for dynamic models of discrete choice", *Review of Economic Studies*, V.61.
- Judd and Su (2012) "Constrained Optimization Approaches to Estimation of Structural Models", *Econometrica*.
- Kasahara and Shimotsu (2009), "Nonparametric Identification of Finite Mixture Models of Dynamic Discrete Choices", *Econometrica*, V.77.
- Keane and Wolpin (1994), "The Solution and Estimation of Discrete Choice Dynamic Programming Models by Simulation and Interpolation: Monte Carlo Evidence", *Review of Economics and Statistics*, V. 76
- Keane and Wolpin (1997), "The Career Decisions of Young Men", *Journal of Political Economy*, V. 105.
- Lerman and Manski (1981), "On the Use of Simulated Frequencies to Approximate Choice Probabilities" in Manski and McFadden, *Structural Analysis of Discrete Data and Econometric Applications* (available at <http://elsa.berkeley.edu/~mcfadden/discrete.html>).
- McFadden (1989), "A Method of Simulated Moments for Estimation of Discrete Response Models Without Numerical Integration", *Econometrica*, V. 57(5).
- MaCurdy (1981), "An Empirical Model of Labor Supply in a Life-Cycle Setting", *Journal of Political Economy*, V. 89(6)
- Magnac and Thesmar (2002), "Identifying Dynamic Discrete Decision Processes", *Econometrica*, V.70
- Pakes (1986), "Patents as Options: Some Estimates of the Value of Holding European Patent Stocks". *Econometrica*, V. 54(4)
- Pakes and Pollard (1989), "Simulation and the Asymptotics of Optimization Estimators", *Econometrica*, V. 57(5)
- Rust (1987) "Optimal Replacement of GMC Bus Engines: An Empirical Model of Harold Zurcher", *Econometrica*, V.55
- **(S)** Rust (1994), "Structural estimation of Markov Decision Processes", *Handbook of Econometrics*, V.4.
- Pantano and Zengh (2013), "Using expectations data to allow for unobserved heterogeneity in Hotz-Miller estimation strategies" (Working Paper).

- Stern (1992), "A Method for Smoothing Simulated Moments of Discrete Probabilities in Multinomial Probit Models", *Econometrica* , V. 60
- van der Klaauw, W. (2011) "On the Use of Expectations Data in Estimating Structural Dynamic Choice Models", *Journal of Labor Economics*.

GE Models :

- Epple, Romano and Sieg (2006), "Admission, Tuition and Financial Aid Policies in the Market for Higher Education", *Econometrica* , V. 74(4)
- Ferreyra (2007), "Estimating the Effects of Private School Vouchers in Multidistrict Economies", *American Economic Review* , V. 97(3)
- Heckman, Lochner and Taber (1998), "Explaining Rising Wage Inequality: Explorations with a Dynamic General Equilibrium Model of Labor Earnings with Heterogeneous Agents", *Review of Economic Dynamics* V. 1
- Lee and Wolpin (2006) "Intersectoral Labor Mobility and the Growth of the Service Sector", *Econometrica* , V. 74
- Abbott, Galipolli, Meghir and Violante (2013) "Education Policy and Intergenerational Transfers in Equilibrium", Working Paper.
- Dix-Carneiro (forthcoming) "Trade Liberalization and Labor Market Dynamics", *Econometrica*.

Games:

- Aguirregabiria and Mira (2007), "Sequential estimation of dynamic discrete games", *Econometrica* , V.75
- **(S)** Berry and Tamer (2006) "Identification in Models of Oligopoly Entry", in Blundell, Newey and Persson, *Advances in Economics and Econometrics* , V.2, Ninth World Congress
- Bresnahan and Reiss, "Econometric Models of Discrete Games", *Journal of Econometrics* , V.48
- Bajari, Benkard and Levin (2007), "Estimating Dynamic Models of Imperfect Competition", *Econometrica* , V.75
- Bajari, Hong and Ryan (2010), "Identification and Estimation of a Discrete Game of Complete Information", *Econometrica* , V.78.
- Bajari, Hong, Krainer and Nekipelov (2010), "Estimating Static Models of Strategic Interactions", *Journal of Business and Economic Statistics* , V.28.
- Ciliberto and Tamer (2009), "Market Structure and Multiple Equilibria in Airline Markets", *Econometrica* , V.77.
- **(S)** de Paula (2013), "Econometric Analysis of Games with Multiple Equilibria", *Annual Review of Economics* .
- Kasahara and Shimotsu (2012), "Sequential Estimation of Structural Models with a Fixed Point Constraint", *Econometrica* , V.80.
- Pesendorfer and Schmidt-Dengler (2008), "Sequential estimation of dynamic discrete games: A comment", *Econometrica* , V.76
- Tamer (2003), "Incomplete Simultaneous Discrete Response Model with Multiple Equilibria", *Review of Economic Studies*

GRADING

The course evaluation will be a final take home exam. More details to follow.

PROFESSOR - EMAILS

DETAILED PROGRAM
