Universitat Pompeu Fabra Barcelona

Topics in Economic Theory I:

Bounded Rationality in Choice-Part I

2016-2017 Academic Year
Master of Research in Economics, Finance and Management

1. Description of the subject

- Topics in Economic Theory I
- Total credits: 3 ECTS

Code: 32074
Workload: 75 hours
Term: 1st

- Type of subject: Optative
- Department of Economics and Business
- Teaching team: José Apesteguía

2. Teaching guide

Introduction

The traditional models of decision-making in economics are being seriously revised, in light of recent developments in psychology and behavioral economics. In this course we cover key theoretical developments in modeling non-standard decision-making.

This class is designed both for students with a theoretical, empirical and experimental inclination towards the understanding of decision-making, and for students with an interest in applying behavioral decision-making models to various economic settings.

This course complements with the course *Bounded Rationality in Choice-Part II*, taught by Larbi Alaoui. Students are supposed to take both parts and develop one single research project for the two parts.

Contents

2.1 Review of the classical foundations for decision-making under certainty and uncertainty. We begin with a review of the seminal models of decision-making under certainty and uncertainty, which serve as a foundation for subsequent frameworks.

Readings:
Kreps, D. Notes on the Theory of Choice, Underground Classics in Economics 1988.

Mas-Colell, A., M. Whinston and J. Green, Microeconomic Theory. Oxford University Press, Oxford 1995. Chapter 1, 2 and 3.

Rubinstein, A. Lecture Notes in Microeconomic Theory. Princeton NJ: Princeton University Press 2006. Lectures 1-6.

2.2 Bounded Rationality. The focus of this section is the revealed preference theory of bounded rationality. We will present the most influential boundedly rational models, and discuss the implications of bounded rationality for welfare analysis and the measurement of rationality.

Main readings:
Bernheim, B.D. and A. Rangel (2009), “Beyond Revealed Preference: Choice-Theoretic Foundations for Behavioral Welfare Economics” Quarterly Journal of Economics, 124:51-104.

Manzini, P. and M. Mariotti (2007), “Sequentially Rationalizable Choice,” American Economic Review, 97:1824-1839.

Masatlioglu, Y., D. Nakajima and E.Y. Ozbay (2012), “Revealed Attention,” American Economic Review, 102:2183-2205.

Echenique, F, S. Lee, and M. Shum (2011), “The Money Pump as a Measure of Revealed Preference Violations,” Journal of Political Economy, 119:1201-1223.

Others:

Apesteguia, J and M.A. Ballester (2015), “A Measure of Rationality and Welfare,” Journal of Political Economy, 123(6):1278-1310.

Bordalo, P., N. Gennaioli and A. Schleifer (2012), “Salience Theory of Choice under Risk,” Quarterly Journal of Economics, 1243-1285.

Bossert, W., and Y. Sprumont (2013), “Every Choice Function is Backwards-Induction Rationalizable”, Econometrica, 81: 2521-2534.

Caplin, A. and M. Dean (2011), “Search, Choice and Revealed Preference” Theoretical Economics, 6: 19-48.

Caplin, A., M. Dean and D. Martin (2011), “Search and Satisficing,” American Economic Review, 7: 2899-2922

Cherepanov, V., T. Feddersen and A. Sandroni (2013), “Rationalization", Theoretical Economics, 8: 775-800.

Choi, S., S. Kariv, W. Muller, and D. Silverman (2014), ``Who Is (More) Rational?'' American Economic Review, 104(6), 1518-1550.

Dean, M. and D. Martin (2015), “Measuring Rationality with the Minimum Cost of Revealed Preference Violations," Review of Economics and Statistics, 98(3)524-534.

de Clippel, G. and K. Eliaz (2012), “Reason-Based Choice: A Bargaining Rationale for the Attraction and Compromise Effects” Theoretical Economics, 7:125-162.

Gabaix, X (2014), “A Sparsity-Based Model of Bounded Rationality,” Quarterly Journal of Economics, 1661-1710.

Green, J.R. and D.A. Hojman (2009), “Choice, Rationality and Welfare Measurement,” Harvard Institute of Economic Research Discussion Paper No. 2144; KSG Working Paper No. RWP07-054.

Halevy, Y., D. Persitz and L. Zrill (2015), “Parametric Recoverability of Preferences,” mimeo.

Kalai, G., A. Rubinstein, and R. Spiegler (2002), “Rationalizing Choice Functions by Multiple Rationales,” Econometrica, 70: 2481–2488.

Manzini, P. and M. Mariotti (2012), “Categorize Then Choose: Boundedly Rational Choice and Welfare,” Journal of the European Economic Association, 10:1141-1165.

Masatlioglu, Y., and D. Nakajima (2013), “Choice by Iterative Search.” Theoretical Economics, 8; 701-728.

Rubinstein, Ariel and Yuval Salant (2006), “A Model of Choice from Lists”, Theoretical Economics, 1: 3-17.

Salant, Y. and A. Rubinstein (2008), “(A,f): Choice with Frames,“ Review of Economic Studies, 75: 1287-1296.

Xu, Y. and L. Zhou (2007), “Rationalizability of Choice Functions by Game Trees,” Journal of Economic Theory, 134: 548–556.

2.3 Reference-dependence behavior. In this section we adopt a more applied approach, and will focus on what has arguably been the most influential contributions of the bounded rationality and behavioral economics literatures: reference-dependence behavior. We will lay down the basics of the reference-dependent models and emphasize their applications to a number of settings, including finance, labor, insurance, etc.

Main readings:

Kahneman, D., and A. Tversky (1979), “Prospect Theory: An Analysis of Decision Under Risk”, Econometrica, 47: 263-291.

Masatlioglu, Y. and E. Ok (2005), “Rational Choice with Status Quo Bias,” Journal of Economic Theory, 121, No. 1, 1-29.

Köszegi, B. and M. Rabin (2006), “A Model of Reference-Dependent Preferences”, Quarterly Journal of Economics, 121: 1133-1165.

Others (General):

Abeler, J., A. Falk, L. Goette, and D. Huffman (2011), "Reference Points and Effort Provision." American Economic Review, 101: 470-492

Bogliacino, F. and P. Ortoleva (2013), “The Behavior of Others as a Reference Point” mimeo.

Köszegi, B. and M. Rabin (2009), “Reference-Dependent Consumption Plans,” American Economic Review, 99: 909-936.

Köszegi, B. and M. Rabin (2007), “Reference-Dependent Risk Attitudes,” American Economic Review, 97: 1047-1073.

Sagi, J. (2006), “Anchored preference relations,” Journal of Economic Theory, 130: 283–295.

Sarver, T. (2012), “Optimal Reference Points and Anticipation” Discussion Paper, Center for Mathematical Studies in Economics and Management Science 1566.

Applications of reference-dependent models:

Allen, E.J, P.M. Dechow, D.G. Pope, G. Wu (2016), “Reference-Dependent Preferences: Evidence from Marathon Runners”, Management Science

Barberis, N., M. Huang, and T. Santos (2001), “Prospect Theory and Asset Prices,” Quarterly Journal of Economics, 116: 1-53.

Barberis, N and W. Xiong (2009), “What Drives the Disposition Effect? An Analysis of a Long-Standing Preference-Based Explanation,” Journal of Finance, 64: 751-784.

Benartzi, Shlomo, and Richard Thaler (1995), Myopic loss aversion and the equity premium puzzle, Quarterly Journal of Economics, 110: 73–92.

Camerer, C., L. Babcock, G. Loewenstein, and R. Thaler (1997), “Labor Supply of New York City Cabdrivers: One Day at a Time.” Quarterly Journal of Economics, 112: 407–441.

Card, D. and G.B. Dahl (2011), "Family Violence and Football: The Effect of Unexpected Emotional Cues on Violent Behavior," The Quarterly Journal of Economics, vol. 126: 103-143.

Crawford, V.P., and J. Meng (2011), "New York City Cab Drivers' Labor Supply Revisited: Reference-Dependent Preferences with Rational-Expectations Targets for Hours and Income." American Economic Review, 101: 1912–1932.

Farber, Henry S. (2008), “Reference-Dependent Preferences and Labor Supply: The Case of New York City Taxi Drivers.” American Economic Review, 98: 1069–1082.

Fehr, Ernst, and Lorenz Goette (2007), “Do Workers Work More If Wages Are High? Evidence from a Randomized Field Experiment.” American Economic Review, 97: 298–317.

Genesove, David and Christohper Mayer (2001), "Loss Aversion And Seller Behavior: Evidence From The Housing Market," Quarterly Journal of Economics, 116: 1233-1260.

Heidhues P. and B. Koszegi (2008), "Competition and Price Variation When Consumers Are Loss Averse," American Economic Review, 98: 1245-1268.

Mas, A. (2006), “Pay, Reference Points, and Police Performance,” Quarterly Journal of Economics, 121: 783-821.

Odean, T. (1998), Are investors reluctant to realize their losses? Journal of Finance, 53: 1775–1798.

Teitelbaum, Joshua C., Levon Barseghyan, Francesca Molinari & Ted O'Donoghue (2013), “The Nature of Risk Preferences: Evidence from Insurance Choices,” American Economic Review, 103: 2499-2529.

2.4 Stochastic Choice. There is renewed interest in understanding choice as the outcome of some random process. Stochastic choice models allow the treatment of choice variability in a stylized way, which ultimately facilitates the introduction of certain behavioral considerations. We will review the classical contributions in psychology and economics. We will then introduce the new developments in the area.

Main readings:

Block, H.D. and J. Marschak (1960), “Random Orderings and Stochastic Theories of Response,” in I. Olkin et al, eds., Contributions to Probability and Statistics: Essays in Honor of Harold Hotelling, 97--132. Standford: Standford University Press.

Train, K. E. (2009), “Discrete Choice Methods with Simulation,” Cambridge University Press.

Others:

Agranov, M. and P. Ortoleva (2016), “Stochastic Choice and Preferences for Randomization,’’ Journal of Political Economy, forthcoming.

Busemeyer, J. R. and J. T. Townsend (1993), “Decision Field Theory: A Dynamic-Cognitive Approach to Decision Making in an Uncertain Environment,” Psychological Review, 100.3:432–459.

Caplin, A. and M. Dean (2016), “Revealed Preference, Rational Inattention, and Costly Information Acquisition,” American Economic Review, forthcoming.

Fudenberg, D., R. Iijima, and T. Strzalecki (2015), “Stochastic Choice and Revealed Perturbed Utility,” Econometrica, forthcoming.

Fudenberg, D. and T. Strzalecki (2015), “Dynamic Logit with Choice Aversion,” Econometrica, 83 (2): 651–691.

Gul, F. and W. Pesendorfer (2006), “Random Expected Utility,'” Econometrica, 74: 121-146.

Gul, F., P. Natenzon and W. Pesendorfer (2014), ”Random Choice as Behavioral Optimization,’’ Econometrica, 82: 1873-1912.

Loomes, G. and R. Sugden (1995), ”Incorporating a Stochastic Element Into Decision Theories,“ European Economic Review, 39.: 641-648.

Luce, R. D. (1959), “Individual Choice Behavior; a theoretical analysis.” Wiley: New York. Provider: John Wiley & Sons, Ltd

Manzini, P. and M. Mariotti (2014), ”Stochastic Choice and Consideration Sets,“ Econometrica, 82: 1153-1176.

Matejka, F. and A. McKay (2015), “Rational Inattention to Discrete Choices: A New Foundation for the Multinomial Logit Model,” American Economic Review, 105(1): 272-98.

Mattsson, L-G and J.W. Weibull (2002), “Probabilistic choice and procedurally bounded rationality,” Games and Economic Behavior, 41:61-78.

McFadden, D. (2001), “Economic Choices,” American Economic Review, 91: 351-378.

Tversky, A. (1972), “Elimination By Aspects: A Theory of Choice,” Psychological Review, 79: 281–299.

Woodford, M. (2014), “Stochastic Choice: An Optimizing Neuroeconomic Model,” AER Papers and Proceedings.

Assessment and Grading System

When dealing in class with the four broad topics outlined above, students will select a paper from the reading list to be presented in class. Each student is supposed to present one paper in class, for about 25 minutes each.
The core of the evaluation will be based on a research project to be presented at the end of the course and turned in. The research project should consist on an original idea, that could potentially be converted into a research paper. The content can be theoretical, empirical, or experimental, or combinations of the former.
Class participation is also an important component of the course, and is highly valued.