Summer school on Structural Estimation of Models in Behavioral Economics using Experimental Data

Location: Laval University, Pavillon J.-A.-DeSève, 1025, Avenue des Sciences-Humaines, Room 2225, Québec City

Dates: May 18-22, 2015

Instructors:
Prof. Charles Bellemare, Laval University
Prof. Sabine Kröger, Laval University

Course Objective and Content:
The aim of this five-day course is to introduce students to structural modeling and estimation of models in behavioral economics. The course will be split in two related parts. The first part will provide an overview of popular models of choice behavior used in the area of behavioral economics and will discuss several issues regarding data collection using experimental methods including choice of design, sample sizes, and statistical power. The second part of the course will discuss estimation of the choice models covered in the first part. In particular, we will discuss specification of preferences and constraints, different ways to incorporating unobserved heterogeneity (parametric and more flexible approaches), identification of model parameters with and without experimental data, as well as performing counterfactual predictions and assessing goodness of fit. A selection of papers will be presented to illustrate each of these themes. We will also discuss how some structural models can be estimated in STATA.

General Course Information:
The sessions are taught in English. Afternoon sessions will be devoted to applications. The afternoon sessions during the first two days will be devoted to laboratory experiments where participants will experience the process of experimental data collection. The corresponding sessions for the last three days of the course will be devoted to tutorials on the estimation of structural models in STATA using data from the laboratory and the field.

Daily Schedule:

9h-10h30 lecture
10h30-10h45 break with coffee/cookies
10h45-12h15 lecture
12h15-13h30 lunch break
13h30-15h00 Computer tutorial – part A
15h15-16h45 computer tutorial – part B

Topics Schedule:

Day 1 Generating data and testing theories of decision making using laboratory experiments
Day 2 Social preferences – theory and experiments
Day 3 Model estimation based on first-order conditions
Day 4 Model estimation using a discrete choice approach
Day 5 Incorporating risk and uncertainty in choice models

Suggested readings:
Andreoni and Miller (2002) : "Giving According to GARP: An Experimental test of the Consistency of Preferences for Altruism", Econometrica, 70, 2, 737-753.

Angrist, J., and J.-S. Pischke (2010): "The Credibility Revolution in Empirical Economics: How Better Research Design is Taking the Con out of Econometrics," *Journal of Economic Perspectives*, 24, 3–30.

Bajari, P., and A. Hortacsu (2005): “Are Structural Estimates of Auction Models Reasonable? Evidence from Experimental Data,” *Journal of Political Economy*, 113, 703–741.

Bellemare, C., L. Bissonnette, and S. Kröger (2010): “Bounding Preference Parameters under Different Assumptions about Beliefs: a Partial Identification Approach,” *Experimental Economics*, 13, 334–345.

Bellemare, C., L. Bissonnette, and S. Kröger (2012): “Flexible Approximation of Subjective Expectations using Probability Questions,” *Journal of Business and Economic Statistics*, 30, 125–131.

Bellemare, C., S. Kröger, and A. van Soest (2008a): “Measuring Inequity Aversion in a Heterogeneous Population using Experimental Decisions and Subjective Probabilities,” *Econometrica*, 76, 815–839.
(2008b): “Preferences, Intentions, and Expectations Violations: a Large-Scale Experiment with a Representative Subject Pool,” *Journal of Economic Behavior and Organization*, 78, 349–365.

Bellemare, C., A. Sebald, and M. Strobel (2008): “Measuring the Willingness to Pay to Avoid Guilt: Estimation Using Equilibrium and Stated Belief Models,” *Journal of Applied Econometrics*, 26, 437–453.

Bellemare, C., and B. Shearer (2011): “On the Relevance and Composition of Gifts within the Firm: Evidence from Field Experiments,” *International Economic Review*, 52, 855–882.

Bruhin, A., H. Fehr-Duda, and T. Epper (2010): “Risk and Rationality: Uncovering Heterogeneity in Probability distortion,” *Econometrica*, 78, 1375–1412.

Bruyn, A. D., and G. E. Bolton (2008): “Estimating the influence of fairness on bargaining behavior,” *Management Science*, 54, 1774–1791.

Cappelen, A., A. D. Hole, E. Sorensen, and B. Tundoggen (2007): “The pluralism of fairness ideals: an experimental approach,” *American Economic Review*, 97, 818–827.

Camerer (2003) : “Behavioral Game Theory: Experiments in Strategic Interaction,” Princeton University Press.

Kagel, J. and A. Roth (1995) : “The Handbook of Experimental Economics,” Princeton University Press.

Keane, M. (2010): “Structural vs. atheoretic approaches to econometrics,” *Journal of Econometrics*, 156, 3–20.

Nevo, A., and M. Whinston (2010): “Taking the Dogma out of Econometrics: Structural Modeling and Credible Inference,” *Journal of Economic Perspectives*, 24, 69–82.

Paarsch, H. (1992): “Deciding between the common and private value paradigms in empirical models of auctions,” *Journal of Econometrics*, 51, 191–215.

Rust, J. (2010): “Comments on: Structural vs. atheoretic approaches to econometrics by Michael Keane,” *Journal of Econometrics*, 156, 21–24.

von Gaudecker, H.-M., E. Wengström, and A. van Soest (2011): “Heterogeneity in Risky Choice Behavior in a Broad Population,” *American Economic Review*, 101, 664–694.