Course Description:
This course is the empirical portion of the Graduate Industrial Organization sequence. The goal of the course is to expose you to modern empirical tools that have helped economists understand market structures, market power and the strategic behaviors of firms and consumers. The focus is to prepare you for your researches. You should leave the class with a box of toolkits that you may revisit often in the future. Despite being an “empirical” course, you should be constantly thinking how theory and empirical works complement each other- how theory can be empirically tested and how theoretical model can be adopted into empirical models, in order to estimate theoretically important parameters.

Course Requirements: For this course, you are expected to

- Read the papers assigned for each class meeting
- Prepare a 1-page summary of an assigned paper for each class meeting
- Participate in the class discussions of papers
- Turn in a Computational, databased problem set
- Take an in-class written final exam

You will be evaluated based on the quality of the required work for the course. You may work in groups of 2-3 on the homework assignment; however, you must write your own answers and list all group members on the first page. The one-page summaries must be written independently. You should describe the objectives, contributions, and key ideas of the paper. Typically this should be done with words. Occasionally a key equation will be helpful to convey an essential idea, but resist the temptation to substitute notation and equations for insights about what the mathematics represents.

Course Topics and Readings:

1. Demand Estimation


Applications


Textbook References
• Hayashi (2000). *Econometrics*. (Ch3 has a nice discussion of the standard endogeneity problems in demand estimation in a GMM framework)

• Garces, D. (2010). *Quantitative Techniques for Competition and Antitrust Analysis* (Ch9 has an overview of demand estimation techniques)


2. Antitrust and Horizontal Merger Analysis


3. Static Entry / Exit Models


• Berry, S. and Tamer, E. Identification in Models of Oligopoly Entry. (invited lecture at the 2005 World Congress of the Econometric Society)


4. Moment Inequalities in Applied Work


5. Search and Switching


6. Behavioral Industrial Organization

*Loss Aversion and Reference-Point Dependent Preferences*


Time-inconsistent consumers


Markets with boundedly rational or differentially informed consumers


Overconfidence


Attention/inattention


Behavioral decision-making by firms


7. Two Sided Markets

*Theory*


*Empirics*


8. Single Agent Dynamics, Estimation Approaches, and Dynamic Demand

*Single Agent Dynamics*


*Dynamic Demand*


9. Multi-Agent Dynamics and Games

**Theory, Framework, and Computation:**


**Application**


• Collard-Wexler, A. Demand Fluctuations in Ready-Mix Concrete, ECMA, 2013.


Estimation


Background Reading

1. Basic IO Theory

2. Handbook Chapters in Empirical IO