Economics 854: Empirical Industrial Organization  
(a.k.a. Industrial Organization II)  
Fall 2011, Professor Julie Holland Mortimer

Course Summary

In this course, we study imperfect competition among firms, with an emphasis on empirical work. We learn how to implement empirical methods commonly used in Industrial Organization (IO), and how to read, and ultimately write, papers in empirical IO. Topics covered include demand estimation, auctions, price discrimination, bundling, asymmetric information and adverse selection, vertical control and contractual arrangements, and others as time allows. Each topic will be organized around recent empirical work. Throughout, we will consider the importance of identification in empirical studies. There will almost certainly be some important topics (e.g., estimating dynamic models) that we will not have time to cover in detail. I will introduce these topics through the course readings, and will provide lectures notes to students who are interested in pushing further on these topics. There is no required text. However, you should obtain a copy of The Theory of Industrial Organization by Jean Tirole as a reference for any models that are not familiar to you.

Course Requirements

1. A large portion of the class is discussion-based. You must read the papers announced before each class meeting and participate in the discussion of these papers.

2. One referee report will be assigned. You will need to complete the referee report along with a cover letter to the editor summarizing your analysis. One goal of the course is to teach you how to read papers for the purpose of providing constructive criticism. Thus, this assignment is usually completed after you have had a chance to read and discuss several papers. I will provide the paper and announce a due date for the report later in the course.

3. There will be one or two problem sets assigned.

4. Survey of literature report. A 6 - 8 page survey of one of the covered areas of research is required by the end of the class. You may choose one area (such as vertical control, bundling, etc.) to survey. Ideally, you should choose an area that you are interested in studying through your dissertation research.

A complete reading list follows the course outline. Papers for which you are expected to prepare discussion questions are listed separately in the course outline. The current list is my best expectation of the papers we will cover from the more extensive reading list that follows, but they may change as we go along.
Course Outline

Sept 7: Introduction to Graduate IO
Lecture Notes

Sept 12: Demand Estimation I
Lecture Notes

Sept 14: Demand Estimation II
Lecture Notes

Sept 19: Demand Estimation III
Lecture Notes

Sept 21: New Computational Methods in Demand Estimation
Guest Visitor: Che-lin Su

Sept 26: Advertising and Demand Analysis
Lecture Notes

Sept 28: Cost and Production Functions
Lecture Notes

Oct 3: Merger and Antitrust Analysis
Lecture Notes

Oct 5: Two-period Entry Models
Lecture Notes

Oct 10: Columbus Day

Oct 12: Two-period Models and Profit Inequalities Approach
Lecture Notes
Oct 17: Introduction to Auctions
Hendricks and Paarsch (1995), plus lecture notes

Oct 19: Common Value Auctions
Hendricks and Porter (1988)

Oct 24: Private Value Auctions I
Haile and Tamer (2003)

Oct 26: Private Value Auctions II (Collusion)
Asker (2008)

Oct 31: Auctions of Divisible Goods
Hortaçsu and McAdams (2010)

Nov 2: Retailing and Inventories I
Aguirregabiria (1999)

Nov 7: Retailing and Inventories II
Hendel and Nevo (2006b) (Ecta, not Rand)

Nov 9: Retailing and Inventories III
Conlon and Mortimer (2011)

Nov 14: Network Effects
Rysman (2004)

Nov 16: Network Externalities
Ackerberg and Gowrisankaran (2006)

Nov 21: Price Discrimination
Mortimer (2007)

Nov 23: Thanksgiving Break
Nov 28: Vertical Contracts I
Lecture Notes

Nov 30: Vertical Contracts II
Mortimer (2008)

Dec 5: Direct-to-Consumer Bundling
Crawford and Yurukoglu (2010) and Chu, Leslie and Sorensen (2008)

Dec 7: Vertical Bundling
Ho, Ho and Mortimer (2011)

Additional Topics:

Asymmetric Information
Cohen and Einav (2007) (Also, review Chiappori and Salanie (2000)).

Experimental Methods in IO
Conlon and Mortimer (2011)

Information in Product Markets: Search Costs, Disclosure
Jin and Leslie (2001) and Sorensen (2000)

Boundaries of the Firm
Baker and Hubbard (2003)
Reference List

Auctions


P. Bajari, ”Econometrics of the First Price Auction with Asymmetric Bidders,” mimeo.


Cantillon, E. and M. Pesendorfer (2006). “Combination Bidding in Multi-Unit Auctions,” working paper, ECARES and LSE.


Krasnokutskaya, Elena. (2003),”Identification and Estimation in Highway Procurement Auctions under Unobserved Auction Heterogeneity” working paper, U. Penn


nomics, 29, 703-725.

**Bundling**


**Price Discrimination**


Clerides, Sofronis (hard- and soft-cover books).


Networks and Network Externalities


Moral Hazard, Asymmetric Information in Insurance Markets

on Dynamic Insurance Data,” mimeo, Chicago University.


Boundaries of the Firm


Vertical Control and Contractual Arrangements


**Retailing and Inventories**


**Advertising, Information Disclosure, Provision and Search**


Genesove D., “Adverse Selection in the Wholesale Used Car Market,” *Journal of*


Discussion Questions for All Papers

1. What is the research question?

2. What are the goals of the paper? (Does the paper aim to develop methods, answer a policy question, test models, or measure an effect?)

3. Why is the paper important according to the author? Is the author right?

4. If the objective is a methodological advance, what is the problem that the author addresses? Why are existing techniques inadequate? How successful is the author’s approach? Could we use the approach elsewhere?

5. What is the theoretical foundation for the empirical work? How appropriate is the model for the applications? How tight is the relationship between the theoretical and empirical models?

6. For papers using structural empirical models:
   • Why does the author use a structural empirical model? Could any of the questions the author asks be addressed with other approaches? What is the source of identification? Could the model be generalized in any obvious ways?
   • Does the structural model seem to capture the key features of the market? What elements are missing from the model that might be important? Is it clear what the implications of ignoring these elements are for the estimate the author obtains?
   • Are there overidentifying restrictions of the model that could be tested? Can you think of alternative models of behavior for the market?

7. For papers not using structural empirical models:
   • Why does the author choose this particular model?
   • Does the author evaluate the model specification?
   • Are the interpretations of the estimates and/or hypothesis tests clear?
   • Are there parameters or distributions of interest that one could identify and estimate by imposing more structure from economic theory?

8. What are the data?

9. What are the key variables in the empirical model?
10. What is assumed to be exogenous and endogenous? How is the endogeneity addressed? Do you believe the solutions?

11. What variation in the data does the author rely on for identification of each element of the empirical model? What assumptions must be true about this variation for the author’s interpretation of the results to be correct? Are you worried about any of the assumptions?

12. Does the author make distributional assumptions? If so, are they important for identification? Does the author evaluate the robustness of the results to the assumption?

13. What are the conclusions of the author?

14. What alternative interpretations are plausible? Does the author test against any plausible alternatives, or provide any practical reason why they are less likely?