1 Overview

This is a course in the Graduate Industrial Organization sequence. We will aim to give a solid grounding in understanding the structure of markets, and the strategic behaviour of firms and their consumers. Beyond academic careers, there are clear policy issues (on anti-trust and regulation) and commercial implications (reflected by the growing economics consulting sector, which is based primarily around IO issues including pricing and competitive analysis).

This course is closely integrated with the course that we will be teaching next semester. It aims to familiarize students with theoretical and empirical topics in industrial organization and help students start their own research agendas. In particular, it aims to provide both a broadsweep of some fundamental topics and techniques which any researcher working in IO should be familiar with and to look at some particular topics in greater depth.

The Fall semester course will focus primarily on static topics and unitary firms in single industries. Next semester we will turn to more dynamic topics and consider aspects of the theory of the firm and vertical relations.

2 Course Requirements

1. Participation: where the syllabus lists a paper with a star next to it, this indicates reading is required before class. This paper will be discussed in class and an inability to discuss the paper will reflect badly on you and, more importantly, you won’t get much from the class.
2. Problem Sets: a few problem sets will be given. To really understand a topic, you need to be able to replicate some of the work. Students can work on problem sets in groups with at most 3 members.

3. Research Proposal: In 6 months you will be starting dissertation research, now is the right time to start mulling over ideas. To encourage you to do this we will require a research proposal of around 5 pages. Use this to look for topics that excite you for your dissertation.

4. Referee report: An important aspect of doing research (and for that matter of a successful academic career) is the ability to evaluate work - most importantly your own, but also others’. As practice towards the end of the semester, we will select a few papers and ask you to comment on one of them.

3 On Learning and Doing IO

Like everything else, the secret to a successful research or professional career in IO is practice, practice, practice. However, like everything else in life this is a constrained problem (even if you don’t sleep at night). We suggest, read papers ahead of time, read them after and make sure you understand them (for theory, this might involve writing down the structure model, making sure you can identify and understand key steps in proofs etc). Discuss them with your friends, what questions does this work lead you to ask. What is good/convincing/insightful? Where does it leave you unsatisfied? Think about these questions first (and think might mean mulling over a period of days and weeks) before chasing through the literature. You are more likely to come up with something original if you haven’t already read 57 loosely related papers around the subject and if there is a gap then thinking about the issues beforehand, should help you find that rather than staring at the literature and trying to figure out where it is.

Outside of classwork, we strongly recommend that you attend the IO seminar which runs on Tuesday afternoons, this will give you a sense of where the frontier is, and will give you an insight into how the process of research actually works (rather than seeing the culmination of that process).
4 Background Reading

You are expected to remember the micro-theory, game theory, and econometrics that you took last year. If you don’t then refresh your memory!

For many of the (theory) classes, we will start by covering material in Tirole’s *Theory of Industrial Organization*. If you are serious about pursuing IO, this is probably a book that you will want to have on your bookshelf.

For more background reading, if you want things to flick through at bedtime, some nice undergraduate texts include Carlton and Perloff *Modern Industrial Organization*, Oz Shy *Industrial Organization* and Luis Cabral *Introduction to Industrial Organization*. *******ALSO STIGLER****

5 Outline and Selected Readings

This outline is a guide, some topics may stretch or be somewhat contracted, and we may provide further related readings. Starred (*) readings are required readings prior to class.

Many of the articles are available online through the NYU library, for working paper we can provide links to the papers.

September 8

1. Background

   • Ariel

   - A framework for applied analysis and an outline of the course.
   - Simple models of industries, empirical regularities and some notes on data availability.
   - A digression on Gibrat’s Law and the need for theory.
   - Simple static equilibrium models

September 8

2. Simple Static Equilibrium Models

   • Ariel

   - Bertrand, Cournot: Issues and First Resolutions

Some readings:

Tirole Ch.5;

Shapiro (Ch. 6 of Handbook of IO, Secn 2);

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<tr>
<th>Date</th>
<th>Topic</th>
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<tr>
<td>September 22</td>
<td>3. Horizontal and Vertical Differentiation, and Monopolistic Competition</td>
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<tr>
<td>Heski</td>
<td>*Tirole Ch. 7.1,2 and 5</td>
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<td>Eaton and Lipsey, HIO Ch. 12</td>
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<td>September 29</td>
<td>4. Demand Systems</td>
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<td>October 6</td>
<td>Review: Overview on the uses of demand functions. Product vs. characteristic space.</td>
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<td>New goods, hedonics, and problems with price indices</td>
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<td>Problem set: Estimating (extensions of) the vertical model.</td>
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<td>Empirical applications; Own and cross price elasticities and their uses (some automobile examples). New goods (regulatory lag and mobile phones, the story of the minivan). Geographical demand patterns (movie theaters and hospitals).</td>
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5. Advertising and Consumer Learning


6. Production and Cost Functions: Uses, Data, and Estimation Problems

- Primitives in I.O.: Technology and Preferences.
- Endogeneity.
- Selection Bias.
- Measurement Error.
- Review: Overview on the uses of cost functions. The primal and dual problems, multi-product functions and fixed costs.
- Extensions: Learning by doing, characteristic based cost functions.
• Stata problem set on these issues.


Problem Set

November 3
Heski

7. Price Discrimination and Information *Tirole, Chapter 3

Wilson Non-linear pricing
Rochet and Chone (1998) “Ironing, Sweeping and Multidimensional Screening”, EMA 66(4) 783-826

8. Merger Simulation Perhaps the most important application in Industrial Organization is the evaluating mergers for potential adverse effects on consumer welfare. In particular, regulators look at the predicted changes of price after the merger.


Problem Set: The simple logit model of demand with ownership changes.


Secns 2, 4, 5, 6.3 (leave 6 on signalling etc)
Uwe Dulleck and Rudolf Kerschbamer “On Doctors, Mechanics, and Computer Specialists: The Economics of Credence Goods,” JEL, 2006, 44.1, pp. 5-42


December 1

Heski

2. Two Period Models and Market Structure * Tirole, Chapter 8


Fudenberg and Tirole “The Fat Cat Effect, the Puppy Dog Ploy and the Lean and Hungry Look”, AER Papers and Proceedings 74 361-368

Bernheim, D. (1984), ”Strategic Deterrence of Sequential Entry into an Industry,” Rand, 15, pp. 1-11


Shapiro, HIO Ch. 6 Secn 4.

Sutton, Sunk Costs and Market Structure and Technology and Market Structure

December 8

Allan

• Entry Models to organize cross-market data;
• Single location models; Bresnahan and Reiss and Berry (isolated markets, city-pair routes for airlines).
• Multiple location entry models. Theory and empirical work. (Mazzeo on Motels, Seim on Video Stores, Augereau, Greenstein and Rysman on Modems.)


4. Empirical Two Period Models of “Rest Points” to a System.
   - Inequality estimators and their use.
   - Networks and non-convex Adjustment Costs (Ishii on ATMs).
   - Two-sided Markets and contracts (Ho on Hospitals and HMOs).
   - Multiplicity of Equilibria and Partial Inference: Ciliberto and Tamer on Airlines

Problem Set