Synopsis

This is an overview course in Industrial Organization. We will aim to give a solid grounding in understanding the structure of markets, and the strategic behavior 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 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.

Background

We expect all of you to have micro background on the order of what is covered in 701 and econometrics background on the order of what is covered in 703. In addition, this class will require you to be able to program. You are expected to have a working knowledge of MATLAB and STATA, or equivalent software (such as R, Julia, Java, Python, C++, whatever). However, it will be advantageous for you to settle on software that is part of the current equilibrium in economics.

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.

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Office Hour

Allan Collard-Wexler: Sign up for office hours on website.
Daniel Xu: Sign up for office hours on website.

Assessments

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. Presentation: You will be asked to present a paper during the class. The presenter will be chosen randomly.

3. Problem Sets: three 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.

1 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-Public 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). Finally, reading a newspaper with good business coverage is an important habit. Duke has a free subscription to the Wall Street Journal for instance.

2 Provisional Schedule

The schedule is tentative and subject to change. Readings that have a * are required, while the others are not, but if you do IO as a field, you will likely end up reading these sooner or later.

Allan

• 27 August. IO Overview: themes and history, theory and empirics. Issues from looking at correlations between market power and outcomes. Simple theory of imperfect competition: Bertrand, Cournot, Stackelberg.

Readings:
Allan  
• 29 August: Bresnahan Oligopoly Solution. Horizontal Mergers. Tacit Collusion.

Readings:

- Tirole on Tacit Collusion

Allan  

Readings:


- Rasmussen Notes on BLP (http://www.rasmusen.org/published/blp-rasmusen.pdf)


Allan  ●  5 September:

Allan  ●  10 September:

Daniel  ●  12 September:

Gains from New Variety Applications of AIDS. Applications of BLP.

Readings:

**Daniel**

- 17 September: Price discrimination

**Problem Set 1: BLP Estimation**

**Readings:**


**Allan**


**Readings:**


**Allan**

- 24 September: Bargaining Theory

**Readings:**


Allan

• 26 September: CANCELLED

Problem Set 2: IO Theory: Vertical Issues.

Allan

• October 1.

Readings:


4. Dynamic demand

Daniel

• October 3. Review of single agent dynamics. Storable goods

Readings:


Daniel

• October 10.

Durable goods, Coase Conjecture

Readings:

**Daniel**  
- October 13. Consumer learning
  
  **Readings:**
  

**Daniel**  
- October 17. Dynamic oligopoly models
  
  **Readings:**
  

**Daniel**  
- October 22.
  
  **Readings:**
  

**Daniel**

- October 24.

**Readings:**


**Allan**


**Estimation: CCP Estimation.**

**Readings:**


Allan
- October 31.
  Problem Set 3: Productivity and Dynamics

Allan
- November 5

Daniel
- November 7
  Readings:

Daniel
- November 12
  Readings:
  - Ackerberg, D., Caves, K. and Frazer, G., "Structural Identification of Production Functions", Econometrica, 83.6 (2015), 2411-2451

Allan
- November 14
  Readings:

Daniel
- November 19
  Readings:
- Syverson, Chad "What Determines Productivity?" Journal of Economic Literature, 49.2 (2011): 326-365

Daniel  
- November 21 OPEN

Daniel  
- November 26 OPEN