Course Introduction: Empirical IO

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Fall 2025

Grad IO

Course Requirements

This course will consist of:

- Weekly readings/Participation
- 4-5 Problem Sets (15% each)
- A research proposal (20%).

Preparation

Most students are in the 2nd year of their PhD. For the course to make sense I assume you are familiar with:

- Maximum Likelihood and GMM estimation
- First-year micro consumer theory (taking first-order conditions, deriving comparative statics)
- Some basic game theory (what is Nash Eq? What is subgame perfection?)
- Undergraduate IO at the level of [Cabral's book]
- Some familiarity with Tirole-style IO modeling [Tirole's book]

Books

You are not required to go out and buy textbooks (We don't specifically follow any one). But here are some books most IO economists own and find useful:

- Train (2009): Discrete Choice Methods with Simulation
  https://eml.berkeley.edu/books/choice2.html
- "Discrete Choice Theory of Product Differentiation" by Anderson, De Palma, Thisse (now out of print)
- Vives (2001): Oligpoly Pricing: Old Ideas and New Tools [Vives]
- Deaton and Muellbauer (1980): Economics and Consumer Behavior [Deaton Muellbauer]

Questions

- Can you audit the course? Yes, but I would prefer you take the course for credit.
- Should I take this course in my first year? No, I teach this course every year.
- If I want to do IO as my primary field, what else do I need to do?
  - Take Prof Jovanovic's IO Theory course
  - Take Prof Waldinger's Empirical IO Course in the Spring
  - Attend the Friday IO Seminar at 11am
  - Attend the Friday Stern Workshop at 4pm
  - Eventually find three people to serve on your committee

IO at NYU

This is is now one of the largest IO groups in the world

- Luis Cabral (Stern): Applied IO Theory, Innovation, Platforms, Signalling, Reputation, Creative Industries
- Michael Dickstein (Stern): IO of Healthcare Markets (Hospitals, Physicians, Insurers, Pharma) and IO/International Trade
- Giulia Brancaccio (Stern): IO of Transportation Markets, IO and International Trade, Markets with Search and Matching Frictions, IO/Finance
- Daniel Waldinger (FAS): Empirical Market Design, IO and Urban Economics (Rent Control, Public Housing, etc.)
- Audrey Tiew (FAS): Antitrust, Dynamic Games, Semiconductors, Environmental IO
- Thi Mai Anh Nguyen (FAS): Search and Matching (Trucking), IO and Transportation
- Anna Vitali (FAS): Development/IO (Entry, Firm Location, Consumer Search)

IO as a set of Tools

- Tools for estimating demand in multi-product settings
- Tools for analyzing strategic interactions (prices, quantities, investment, quality) among firms
- How do changes (subsidies, taxes, tariffs, entry barriers) change market outcomes
- Modeling search and matching frictions
- Modeling contractual incentives (moral hazard, adverse selection, vertical contracts)

IO as a set of Tools

Lots of recent students have done “IO-Plus”

- Chiara Gardenghi (Rochester Simon): Bundled Discounts in Vaccines
- Angela Crema (Rochester): Race-preferences and School Quality after School Choice
- Pierre Bodere (Yale SOM): Entry and Quality Competition in Pre-Schools
- Jonathan Elliott (Johns Hopkins): Electricity Generation and Green Subsidy Design in Western Australia
- German Guittierez (Washington Foster): Platform Design and Competition on Amazon
- Yinan Wang (Amazon): Algorithmic Pricing on Airbnb
- Chitra Marti (Cornerstone): Economics of Cybersecurity
- Nano Ochoa: Housing Subsidy Design in Chile
- Helena Pedrotti: Social Housing Construction in France

IO as a set of questions

- What is market power and where does it come from?
- Who competes with whom?
- What features of markets tell us about competition, innovation, product quality, etc?
- How can we tell if firms are competing (or colluding) from data?
- How can we design mechanisms using data (auctions, kidneys, etc.)