

RES EC 732
Industrial Organization I

Spring 2021

Professor: Christian Rojas
Class meetings: T/Th, 10:00-11:15 am
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Office hours: Send me an e-mail for an appointment.

Course Objectives:

The primary objective of this course is to study some of the important analytical tools of industrial organization and analyze its application to a variety of industries. Another important objective is to familiarize students with research methodology and articles in industrial organization and encourage the formation of researchable questions. The course will cover traditional topics such as monopoly (price discrimination and other pricing strategies), oligopoly, product differentiation, and vertical control.

The course will have an important empirical component: we will cover several empirical papers that will illustrate the importance of market imperfections in public policy as well as in business strategies. Students will be introduced to datasets and will be asked to work on projects reproducing results and coming up with new research ideas.

Reference Books:

There most relevant textbook reference for this course is:

Quantitative Techniques for Competition and Antitrust Analysis by Peter Davis & Eliana Garcés (2009) [DG]

- I will rely on power point presentations and the presented material will draw some of the material from this book. I will also draw material from other sources, which are listed below for your reference. If some of the chapters in the books below are highly relevant (or are considered to be a good reference for a particular topic), I will make them available through scanned pdf files (posted on the class website):

Modern Industrial Organization, 4th Edition. Pearson-Addison Wesley: Reading, MA.
By Dennis Carlton and Jeffrey Perloff. [CP]

- It provides a comprehensive overview of most IO topics (empirical and theoretical). You are not really required to buy it, but if you are in need of a comprehensive reference that will be useful for you to consult now and in the future, this will be a good one.

The Theory of Industrial Organization. MIT Press: Cambridge and London. By Jean Tirole. [T]

- Classic, rigorous theoretical treatment. To-go reference for in-depth theory treatments.

Introduction to Industrial Organization. MIT. By Luis Cabral. 2002. [C]

- Useful undergrad level introduction to IO and main IO questions and topics.

Estimating Market Power and Strategies. Cambridge. By Jeffrey Perloff, Larry Karp and Amos Golan. [PKG]

- Short, empirically driven approach. Focused on market power measurement.

Grading:

Problem sets, projects and other assignments:	35%
Oral Presentation of two Journal Articles:	15%
Class participation (IO in the news, attendance, engagement, readings):	10%
Midterm exam/project:	20%
Term project:	20%

IO in the news (part of your class participation grade):

Part of your participation has to do with bringing to class, every week (on Thursdays), a brief 2-3 minute summary of an interesting article related to IO in an important newspaper/business magazine (e.g. WSJ, NYT, The Economist, Financial Times, etc.) and share it verbally with the rest of the class. I encourage you to subscribe to one or several of these media outlets for daily news e-mails – it is important to be up to date with current events and be able to relate them to our class material. Also, the library has electronic access to the full content of all of these sources. I will also bring my IO in the news article to share and we will start on February 4.

On-Line Material

I will be using Moodle to post class material. The syllabus is subject to change.

Term Project

The objective of the term project is to get to practice how a research project is carried out. You will need to submit a research report (not quite a full paper) that contains:

1. Identification of the research question/problem: it needs to be narrow and you need to articulate why it is important and extends our current knowledge.
2. Review of Relevant literature. Rather than a laundry list of papers, you need to select on the most relevant that allow you to articulate the current state of knowledge, identify gaps and justify why your research question fills one or more gaps.

3. Propose a methodology. You can go as ambitious as you'd like here. At the very minimum, I would like to see a discussion of what method you would use to evaluate the question (reduced form v. structural; the type of estimable equation you would propose) and the data (if applicable) that would allow you to answer the question. If the dataset is available cite the source and describe it, if not, articulate what the ideal dataset would contain so as to be able to answer your question. If you want to pursue a more ambitious path, you can present some descriptive statistics of the data that provide evidence (for example some suggestive OLS results); if you get this far, you will have already likely cleared the bar for an MS essay, so this will be time well spent.
4. Any limitations you foresee.

I expect that this report will contain anywhere from 2,500 to 5,000 words. I will grade based on quality rather than quantity. I will have milestones throughout the semester that you will have to accomplish this task. I detail them below (they need to be submitted by email to me by the end of the day)

- March 4: Which industry will you study and why? I expect this to be at most a couple of paragraphs, but you can go longer if it justifies making your point.
- March 25: What aspect of the industry will you study and why? Be sure to be as specific as possible here: e.g. price discrimination in online retailing is too general, but the use of third-degree price discrimination by online booking platforms (e.g. Airbnb) would be what we are looking for. 2-3 paragraphs will be plenty.
- April 8: a collection of 3-6 papers that are most relevant to the industry and area that you will be investigating. This collection should contain a brief 1 paragraph description of what the article does and why you have included in the list. This submission can be a couple of pages.
- April 22: Formulate what the research question is, precisely. If you can do this in a couple of sentences, it means it is narrow enough, otherwise you need to focus more.
- Final submission: whenever the final exam is scheduled. If you have accomplished all milestones successfully, this last step should be relatively straightforward. Between April 22 and the final submission you will need to think about the empirical strategy, data and limitations and the final write up of the entire document.

I will be providing feedback on all of these submissions and, if necessary, meeting with you separately throughout the semester so as to provide support in making sure that you are on the right track. Be sure to rely on me for mentoring support in this task. Also, I will be providing some resources during the semester that you can use to get started. In short: I will not leave you alone to wonder how you can more effectively do this.

Presentation of Journal Article

These presentations will occur throughout the semester – I will give each student at least a week's notice for presenting. Each student will present two articles. These will start in March

Objectives of this exercise:

1. To read and understand an article from a peer-reviewed journal related to topics we've been covering in this course.
2. To distill the important elements of the article. Being able to find the important elements of an article requires a good understanding of it. I recommend at least two or three readings of the paper.
3. To use and develop good presentation and speaking skills. It is important that you develop confidence and become comfortable at giving presentations because no matter what you do in your career, you will eventually have to give presentations. Being comfortable in front of a crowd only comes with practice!

Grading:

Presentation: 90 points (own presentation)

Participation: 10 points (participation when other classmates present)

Presentation:

1. Presentations should be about 30-40 minutes.
2. You will present using PowerPoint.
3. In using PowerPoint, keep it simple. Fancy slides distract the audience.
4. Do not engage in font abuse (i.e., cramming the slide with text using fonts below 20). Larger fonts are recommended.
5. Have a title slide with the title of your presentation (the title of the article if you want), your name, your affiliation (Department of Resource Economics), the context for the presentation (RESEC 732) and the date of your presentation.
6. Have an outline slide to allow the audience to know what you will be presenting (very basic, point form). It would be a good idea to have the full reference of the paper on that slide (author(s)'s name, year it was published, title of the article, name of the journal, journal volume, and page numbers).
7. Your introduction should tell us the objective of the paper and its motivation/hook. Provide a brief background about your topic for the audience to learn more about the topic.
8. If your paper has both conceptual and empirical aspects, say something about both. However, if the paper presents results of four models, for example, pick the one you consider most important/relevant/convincing. In other words, it is not necessary that you talk about every thing that is in the paper.
9. Do not make your slides crowded. If you have to say, "I know this is difficult to read, but..." then you should not have that slide as part of your presentation!
 - a. If you want to show data from an article, you can adapt the data needed (either table or figure), and be sure to cite that reference at the bottom of the slide.
 - b. Be sure you **do** include data (if appropriate to your article) and not just give results verbally. You can also make supply and demand graphs or diagrams from what you read in the articles, even if the authors do not have graphs or diagrams. If they helped you understand the article, most likely it will help the audience understand and will demonstrate your understanding.

10. Be sure to give a summary at the end with the most important points you want your audience to remember.
11. Be critical of the paper: comment on the things you like and dislike and provide alternative (improved) ways in which the paper could be modified. Also, think about how this paper could be extended so an interesting research question can be developed.
12. Always be sure to have good eye contact with the audience during your talk and try not to read directly from the slides (paraphrase so that it does not sound scripted).

Participation:

Non-presenters should read the paper to be presented and come prepared to ask questions. Pay attention to the style and content of the presentation and provide constructive feedback.

Course Outline

Overview of Topics

1. Introduction to IO

- What is IO
- Empirical v. Theoretical IO
- Brief History
- Reference material: CP (Ch. 1), C (Ch. 1)

2. Pricing strategies with Market Power

1. Price discrimination
 - a. First-degree price discrimination
 - b. Third-degree price discrimination
 - c. Second-degree price discrimination
2. Bundling

3. Homogeneous-Product Oligopoly

1. Single-Period Oligopoly Models
 - a. Cournot Model
 - b. Bertrand Model
 - c. General conjectural variation models & criticisms of conjectural variation models
2. Sequential Moves – Stackelberg Leader

References: DG (Ch.1)

3. Market Power

- Approaches to Market power
 - SCP approach
 - Structural approach
 - Empirical examples
 - References: DG (Ch. 6), PKG (Ch. 2 and 3); CP (Ch. 8)
- Collusion and Dynamic games
 - Factors affecting collusion
 - Folk theorem
 - Collusion Imperfect information and imperfect monitoring
 - Antitrust laws: Per se rule v. rule of reason
 - Examples from US and Europe
 - References: PKG (Ch. 5); CP (Ch. 5)

4. Differentiated products

- Horizontal differentiation
- Vertical differentiation
- Approaches to estimation
- Examples of market power estimation
- References: DG(Ch. 1, 9), PKG (Ch. 4); CP (Ch. 7)

- Mergers
 - Antitrust laws
 - Market definition and the price effect of mergers
 - Applications
 - References: DG (Ch. 8)

- Vertical Issues
 - Vertical Integration and vertical mergers
 - Double marginalization
 - Vertical restraints
 - Antitrust laws
 - References: DG (Ch. 10), CP (Ch. 12)

Time Permitting:

4. Advertising: References: CP (Ch. 13, 14)