Selected Topics in Economics

(Topics in Industrial Organization)

Course Number: HUL 320

Credit: 3.0

Course Objectives: To understand the exercise of market power in industries, the two-way relationships between market structure, strategic behaviour of firms, and social welfare, and the role of regulation in an economy.

We will focus mostly on the theory of industrial organization, with examples; the main tool here is Game Theory. We may also try and give a bit of a flavour of what modern empirical industrial organization, which maps back from industry data to parameters of a game theory model, looks like.

To start with, before getting to know the students, I am assuming that your exposure to economics could be quite heterogeneous (including very little formal exposure); whereas your skill at Math would be considerable. So I'll spend some time introducing basic stuff, but will freely use mathematical models.

Textbook:

Luis Cabral (2016): **Introduction to Industrial Organization**, 2nd edition. MIT Press.

This is the only textbook that is required reading. Since it's written with a big undergraduate audience in mind, it goes easy on the Math; it's a nice, breezy read.

The classic IO theory textbook, which uses Math at a level you all will easily follow, is:

Jean Tirole (1988): The Theory of Industrial Organization. MIT Press.

While this is a great book, and you should feel free to dip into it as much as you like, some of the content is obviously a little bit old; so it's not our required textbook. It still manages to touch all the high points of the theory, though.

Apart from Cabral, required reading will include a couple of chapters from

Paul Belleflamme and Martin Peitz (2021): The Economics of Platforms. Cambridge University Press.

I've skimmed this book; it's a bit verbose for my taste, and I could recommend a chapter on Platform Economics from the recently-published Handbook of IO, volume 4 (2021).

IO uses lots of game theory. The IO books by Tirole and Cabral have chapters or appendices devoted to game theory.

If you want to look at a systematic treatment outside of lecture notes, there are several great game theory textbooks, at undergraduate and post-graduate levels. A nice undergraduate book is apparently

Steve Tadelis (2013): Game Theory: An Introduction.

An old textbook, still very popular, is:

D. Fudenberg and J. Tirole (1991): Game Theory.

There are other classics by Roger Myerson (1991), and M. Osborne and A. Rubinstein (1993); and newer books such as the one by M. Maaschler, E. Solan, and S. Zamir (2013). We can talk about the game theory stuff and how to navigate it.

Specifically for repeated games, Mailath and Samuelson (2006) is a nice, detailed treatment.

My sense is, we will only have time to filter game theory through the lecture notes, but if anyone is interested in further study, they can talk to me.

Course Content:

I. Foundations

I.1 Consumers, Firms, Perfect Competition and Efficiency

Readings: Lectures/lecture notes; Cabral – Chapters 1-4.

I.2 Monopoly; Price Discrimination

Readings: Lectures/notes; Cabral – Chapters 5,6.

II. Basic Models of Oligopoly

II.1 Strategic Games, Nash Equilibrium, Bertrand and Cournot models.

Readings: Lectures/Notes; Fudenberg and Tirole – Chapter 1; Cabral – Chapters 7, 8.

II.2 Extensive Games; Repeated Games; Collusion and Price Wars

Readings: Lectures/Notes; Cabral – Chapters 7, 9; (Fudenberg and Tirole – Chapters 2-5 (optional); Mailath and Samuelson – Chapter 2 (optional)). This stuff uses subgame perfect equilibrium and related notions.

II.3 Dynamic Oligopoly

Readings: Lectures/Notes; Maskin and Tirole (Econometrica 1988). This stuff uses Markov Perfect Equilibrium.

III. Entry, Market Structure, Horizontal Mergers, Market Foreclosure

Readings: Lectures/Notes; Cabral – Chapters 10-12.

IV. Assorted topics from Product Differentiation, Branding, Bundling, Vertical Relations, Innovation

Readings: Corresponding to which of these get chosen.

V. Search, Platforms, Networks.

Readings: Possibly, a mix from Cabral, Belleflamme, and the Handbook of IO volume 4.

Evaluation: Minor (25 percent), Assignment (25 percent), Major (50 percent). The minor and major exams can be open book exams, to reduce the need to memorize.

Attendance requirement: 70 percent attendance needs to be recorded (through the Timble app); lower attendance than this will lead to a 1 grade drop (A to A neg, A neg to B,…).