Industrial Organization

Module 2, 2020-2021

Professor: Mikhail Drugov
New Economic School
https://sites.google.com/site/mdrugov/
mdrugov@nes.ru

Course information

Course Website: my.nes.ru

Instructor's Office Hours: TBA

Class Time: TBA

Room Number: TBA

TA: TBA

Course description

Industrial organization is the study of how firms compete in markets. It is the study of imperfectly competitive markets, involving the use of game theory to understand strategic interactions between competing businesses. In the first part of the course we will learn the basic economic models that provide insight into the behavior of consumers and firms.

In the second part of the course we will focus on the topics that are most important for antitrust (competition) policy. In particular, we will analyze collusion, horizontal mergers and vertical relations. In each part we will consider a basic model and its variations, look at few notable cases and talk about relevant antitrust policy. In the end of the course we will have student presentations of important antitrust cases from EU, US and possibly Russia.

We will finish the course with a glimpse into Behavioral Industrial Organization – a hot research topic nowadays.

Course requirements, grading, and attendance policies

The grade will be a combination of the Final Exam (50%), two homeworks (10% each) and student presentations of antitrust cases (possibly in groups depending on the number of students) (30%).

Course contents

Part I
   Introduction. Course plan. History of IO.

Monopoly. Price discrimination. Durable good monopoly. Coase conjecture.

Static competition. Oligopolistic competition with homogeneous and differentiated products.

Entry, accommodation and exit.

Information, Advertising and Disclosure.

Part II

Horizontal mergers. Efficiency increasing mergers. Successive mergers. Mergers and entry. Coordinated effects.

Vertical relations. Double marginalization. Downstream moral hazard. Chicago critique and its critique. Exclusive dealing and foreclosure. Multiple retailers. Contracts as barriers to entry.

Collusion. Factors facilitating corruption. Collusion at lower than monopoly level. "Carrot-and-stick" strategies. Imperfect information. Leniency. Screening.

The glimpse

Behavioral Industrial Organization.

Course materials

Textbooks:

Paul Belleflamme and Martin Peitz (2010 or 2015) Industrial Organization: Markets and Strategies, Cambridge University Press.

Oz Shy (1995) Industrial Organization: Theory and Applications, The MIT Press.

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

Behavioral IO:

Ran Spiegler (2011): Bounded Rationality and Industrial Organization, Oxford University Press.

Competition Policy cases:

John Kwoka and Lawrence White, eds. (2018) The Antitrust Revolution: Economics, Competition, and Policy (7th edition), Oxford University Press (and other editions)

Chiara Fumagalli, Massimo Motta and Claudio Calcagno (2018) Exclusionary Practices: The Economics of Monopolisation and Abuse of Dominance, Cambridge University Press.

Academic integrity policy

Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.

1 HHI and Cournot

a. Consider a general model of Cournot competition (n firms, general and different cost functions and general demand). Take the weighted Lerner index, $L = \sum_{i=1}^{n} s_i L_i = \sum_{i=1}^{n} s_i \frac{p - MC_i(q_i)}{p}$, where $s_i = q_i / \sum_{i=1}^{n} q_i$ is the market share of firm i. Show that $L = \sum_{i=1}^{n} s_i^2 / \varepsilon$, where ε is the demand elasticity.

b. Assume now that the firms have constant marginal costs. Express the ratio of the total profits to total revenues as a function of the Herfindahl-Hirschman Index and the elasticity of demand.

2 Salop circle with quadratic costs

Consider the circular city model of Salop. Consumers of total mass 1 are uniformly distributed around the circle. The firms are located equidistant from one another and have the same constant marginal cost c. Firms compete setting prices. The consumers' transportation are t times the square of travelled distance. Consumers' valuation of the good is high enough so that the market is covered.

a. Find the symmetric equilibrium when there are n firms.

b. Find the free-entry equilibrium when the entry cost is F.

c. Find the socially optimal number of firms. Is it different from the one in (b) and why?

3 Incomplete unravelling with certification costs

There is one firm in the market. Its quality can be any integer between 1 and 5. The firm knows its quality while the buyers (normalized to have a measure of 1) only know that each quality is equally likely. The firm can either disclose its quality truthfully or not disclose anything. The buyers have a valuation for the good which is equal to the expected quality of the good.

a. Find the equilibrium.

b. Suppose that in order to disclose, the firm has to certify its quality which costs $K = 2.5$. Find the equilibrium.

c. Find the equilibrium when $K = 1.2$.

d. Find the equilibrium when $K = 0.2$.