



Faculty of Economics and Business

Market Power and Strategy

2019/2020

3rd Year

Degree in Economics

Compulsory
Subject

Professor: Iñaki Aguirre

Office Hours: Monday from 8:30 to 10:30,
Tuesday from 11:00 to 13:00, and from 15:00 to 16:00
and Friday from 9:00 to 10:00.

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**Department of
Foundations of Economic Analysis I**

Course Objectives:

Market Power and Strategy is the fourth in a sequence of 5 courses in Microeconomics for a Degree in Economics. Previous courses have been dedicated to the analysis of the behavior of consumers and firms in *perfectly competitive markets*. In contrast, *Market Power and Strategy* is focused on the study of market structures characterized by the presence of market power. Firstly, we introduce the Non-Cooperative Game Theory that is extremely useful to analyze various economic phenomena characterized by strategic interdependence. We next study several models of imperfect competition and the stability of collusive agreements following a Game Theory approach. The last part of the course addresses the issue of monopolistic behavior, devoting special attention to the different types of price discrimination.

Syllabus:

Introduction

Chapter 1. Game Theory and Competitive Strategy

Introduction

1.1. Basic Notions

- 1.1.1. Extensive form games.

- 1.1.2. Strategic form games

1.2. Solution Concepts for non-cooperative game theory.

- 1.2.1. Dominance criterion.

- 1.2.2. Backward induction criterion.

- 1.2.3. Nash equilibrium.

- 1.2.4. Problems and refinements of Nash equilibrium.

1.3. Repeated games.

- 1.3.1. Finite time horizon.

- 1.3.2. Infinite time horizon.

Chapter 2. Oligopoly

Introduction.

2.1. The Cournot model.

- 2.1.1. Duopoly.

- 2.1.1.1. Equilibrium.

- 2.1.1.2. Collusion:

- 2.1.1.2.1. Short-term collusion.

- 2.1.1.2.2. Stability of agreements and repeated games

- 2.1.2. Oligopoly (n firms).

- 2.1.2.1. Equilibrium.

2.1.2.2. Collusion:

2.1.2.2.1. Short-term collusion.

2.1.2.2.2. Stability of agreements and repeated games

2.1.3. Welfare analysis.

2.2. The Bertrand model.

2.2.1. Homogeneous product.

2.2.1.1. Equilibrium.

2.2.1.2. Collusion:

2.2.1.2.1. Short-term collusion.

2.2.1.2.2. Stability of agreements and repeated games

2.2.2. Heterogeneous product.

2.3. Leadership in the choice of output. The Stackelberg model.

Chapter 3. **Monopoly**

Introduction.

3.1. Profit maximization by a monopolistic firm.

3.2. Linear demand and constant marginal cost.

3.3. Comparative statics.

3.4. Welfare and output.

3.5. Price discrimination.

3.6. First-degree price discrimination.

3.7. Second-degree price discrimination.

3.8. Third-degree price discrimination.

Subject specific competences:

As part of a sequence of courses in Microeconomics, *Market Power and Strategy* aims to give a sense of what it is to be a micro-economist: the sorts of questions with which we are concerned ourselves, the approaches we use to address these questions and the social role the answers play. Even more, the goal of *Market Power and Strategy* is to enable students to:

1. Identify, model and analyze economic phenomena related to market structures characterized by the existence of market power.
2. Analyze multi-person choice problems characterized by strategic interdependence using Game Theory, purpose solutions to these problems and apply Game Theory notions to oligopolistic markets.

Methodology of the course:

33 Lectures: The primary emphasis of these classes is on transmitting a body of knowledge of *Market Power and Strategy*, explaining ideas and principles, and/or modelling skills. Students are expected to participate actively in classroom activities.

8 Problem classes and seminars: These classes will be devoted to solving problems and students are expected (individually or in groups) to have solved the problems previously.

3 After each chapter exam: These exams in group (one, two, three or four people) allow the students to evaluate their progress in the subject.

Course Requirements and Evaluation:

Attendance at all classes is required and students who miss three or more classes or come to class late on a regular basis will jeopardize their successful completion of the course.

Evaluation

We follow a mixed evaluation system for this subject (at least at the first sitting). 70% of the course grade will be based on the final exam (which time and date will be determined by the authorities) in which the student must solve both theoretical and practical problems. 30% will be based on the three after each chapter exams in groups. This second part will account for 30% of the final grade, whenever the mark of the final exam is at least 4 over 10. Those students that for legitimate reason have missed the mixed evaluation system will have the right to be evaluated with a single final exam representing a 100% of the grade.

Office Hours

I strongly encourage students to come to office hours for help with the material or just to explore their ideas about Microeconomics and thereby get the most out of the course. My office hours are: Monday from 8:30 to 10:30, Tuesday from 11:00 to 13:00 and from 15:00 to 16:00, and Friday from 9:00 to 10:00. However, if you cannot make office hours, or need additional time, let me know (for instance, by sending me an email) and I will be able to find a time to meet.

Basic Bibliographic References:

- Iñaki Aguirre (2019-2020): "Notes on Market Power and Strategy". Available at Egela and at www.ehu.es/iaguirre.
- "Problem Collection of Market Power and Strategy", 2019-2020.
- Hal Varian (2011): "Intermediate Microeconomics: a Modern Approach", Norton, New York.