Markets and Strategies in Industrial Organization

Lecturer: Jérôme MATHIS
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Department: LSO
Semester: 2

Course level: L3 Undergraduate / Graduate
Domain: Economics
Teaching language: English
Number of in-class hours: 36
Number of course sessions: 12
ECTS: 6

Course description and objectives

The aim of the course is to provide a presentation of modern industrial organization that blends formal models with real-world applications and derives implications for firm strategy and competition policy.

The main objective of this course is to provide a comprehensive exposition of strategies chosen by firms with market power, how such firms adapt to different market environments, and how antitrust authorities can change these environments to induce specific firms behaviors.

Prerequisites

Microeconomics 1; Game Theory

Learning outcomes

Students will develop several learning outcomes, which, according to the subject covered in class, may include:

- Understanding Industry Structure: Student will be able to analyze and describe the different types of market structures, such as perfect competition, monopoly, monopolistic competition, and oligopoly. They will also understand how market structure affects firm behavior and outcomes.
- Market Power and Pricing: Student will be able to explain the concept of market power, and its implications for pricing and output decisions. They will also be able to analyze pricing strategies of firms in different market structures.
- Entry and Exit: Student will understand the barriers to entry and exit in various industries and how they affect market competition. They will be able to analyze the dynamics of firms entering or leaving markets.
- Product Differentiation: Student will learn about product differentiation, its role in market competition, and the strategies firms use to differentiate their products.
- Collusion and Cartels: Student will be familiar with the concept of collusion, its challenges, and the formation and behavior of cartels. They will also understand the economic and legal implications of antitrust laws.
- Price Discrimination: Student will be able to explain different forms of price discrimination and their effects on consumer welfare, profits, and market efficiency.
- Game Theory and Oligopoly: Student will understand basic concepts of game theory and its application to strategic decision-making in oligopolistic markets.
- Horizontal and Vertical Integration: Student will be able to discuss horizontal and vertical integration strategies, their motivations, benefits, and potential drawbacks for firms.
- Regulation and Deregulation: Student will be familiar with regulatory policies in industries with natural monopolies and the economic effects of regulation and deregulation.

- Innovation and R&D: Student will learn how innovation and research and development (R&D) activities are influenced by market structure and competition. They will understand the incentives for firms to innovate in different market environments.
- Consumer Welfare and Market Efficiency: Student will be able to evaluate how different market structures affect consumer welfare, producer surplus, and overall market efficiency.
- Asymmetric Information: Student will comprehend the significance of asymmetric information in markets and its effects on firm behavior and outcomes. They will explore how adverse selection and moral hazard can distort market efficiency and impact strategic decision-making by firms.

Assignments and grading

Final Exam 100%
The numerical grade distribution will dictate the final grade. The passing grade for a course is 10/20.

Attendance
Attendance is mandatory. Students are expected to attend all classes, arrive on time, and stay for the entire session. Repeated absences or lateness may affect the final grade.

Class Participation
Active participation is encouraged, as it contributes to making classes more engaging and instructive. Students are expected to come prepared and contribute thoughtfully to discussions. When participation is part of the course assessment, it is evaluated based on the quality of contributions rather than their quantity.

Exam Policy
Students are not allowed to bring any materials into exams, except those explicitly authorized by the instructor. Unexcused absences from exams or failure to submit assigned cases will result in a grade of zero when calculating final averages. All exams must be submitted at the end of the examination period.

Communication and Grading
All questions or concerns regarding grading or course policies must follow the official procedures. No direct negotiation with instructors about grades or assessments is permitted.

Course structure

Session	Topic
1	Static Models of Oligopoly: Cournot vs Bertrand
2	Static Models of Oligopoly: Temporal dimension
3	Horizontal Differentiation
4	Vertical Differentiation
5	Tacit Collusion and Cartels
6	Asymmetric Information (Static competition, Communication, Limit pricing)
7	Competition and Investment
8	Welfare Standards in Competition Policy
9	Abuse of Dominant Position
10	Consumer Protection
11	Mergers and Acquisitions
12	**Final Exam**

Bibliography

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

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

Jérôme Mathis and Wilfried Sand-Zantman (2014): “Competition and Investment: What do we know from the literature?”, IDEI Research Report, Toulouse School of Economics, pp.31.

Jérôme Mathis and Wilfried Sand-Zantman (2015): “Welfare Standards in Competition Policy” , IDEI Research Report, Toulouse School of Economics, pp.25.

Lecturer’s biography

Jérôme MATHIS is professor of Economics and Finance at University Paris Dauphine-PSL. He holds a Master of Mathematics from the Ecole Polytechnique and the University of Pierre and Marie Curie (Paris VI), a Master of Economics from Panthéon-Sorbonne University (Paris I), a Ph.D. in Economics at University of Cergy-Pontoise, and passed the agrégation de l’enseignement supérieur en sciences économiques which conferred upon him the title of university professor. His first academic position was assistant professor at Toulouse School of Economics.

Jérôme MATHIS received the prize “Young researcher in economics of the year” from the Fondation Banque de France (awarded by the governor of the French Central Bank). In 2022, his book “Combien vaut une vie?” (“How much is a human life worth?”) was awarded the Turgot Jury Prize of the year, hand delivered by Jean-Claude TRICHET (ex-governor of the European Central Bank) at the French Ministry of Economy and Finance.

His research focuses on the analysis of strategic behaviors in the context of incomplete information with applications to finance (regulation of financial markets), economics (theory) and political science (deliberation in committees). He frequently contributes economic analyses of current policy to French newspapers (Le Monde, Les Echos, L’Expansion, Libération, Le Figaro, La Tribune, Capital …). He is the author of the book, “La finance au coeur de nos vies” and eponymous blog which popularizes and demystifies finance to the public at large.

Moodle

This course is on Moodle: **No**

Academic integrity

Be aware of the rules in Université Paris Dauphine about plagiarism and cheating during exams. All work turned in for this course must be your own work, or that of your own group. Working as part of a group implies that you are an active participant and fully contributed to the output produced by that group.