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## STRATEGIC INTERACTION AND FIRM BEHAVIOR

Period: a.y. 2023/24 – I sem.

Instructor:

Class times: Room 101. Thursday:

8:30-11:45 (Exception: Dec 5

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Prof. Andrea Fosfuri

Dept. of Mgmt. & Tech. - Room 4-E1-14

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### Course description

This course acquaints the student with the most important models for understanding strategies chosen by firms with market power and shows how such firms adapt to different market environments. The key theme is strategic interactions in the market. Thus, we will rely heavily on concepts drawn from game theory to understand and predict the behavior of companies. Models are presented in detail with an emphasis on understanding the economic intuition and the empirical implications. However, this is a theory course only.

After taking this course, students should be able to understand papers that use formal models and are published in top journals in management, and structure better their thinking about different types of questions regarding firm strategies, innovation and market interactions.

### Course Material

1. Industrial Organization: Markets and Strategies. Cambridge University Press. 2010. Paul Belleflamme and Martin Peitz. Chapter 2 must be studied by students before starting the course. Chapters 3, 4, 5, 6, 14, 16 and 18 will be covered almost entirely. Other chapters might be covered depending of the pace of the class. Chapters will be made available by the instructor.
2. Slides will be made available at the end of each class.
3. Other papers will be distributed directly by the instructor during the course.
4. Problem Sets are a crucial component of the learning process. See below for further details.

## List of topics

1. Static imperfect competition
  - a. Price competition
  - b. Quantity competition
  - c. Price versus quantity competition
  - d. Strategic substitutes and strategic complements
2. Dynamic aspect of imperfect competition
  - a. Sequential choice: Stackelberg
  - b. Free entry: Endogenous number of firms
    - i. Symmetric Cournot
    - ii. Salop – only the intuition
  - c. Exogenous vs. Endogenous Sunk Cost
3. Product differentiation
  - a. Horizontal product differentiation
    - i. Hotelling with linear and quadratic costs
    - ii. Hotelling: Applications to advertising
  - b. Vertical product differentiation
  - c. Discussion of Arora and Fosfuri (2003) – if time allows
4. Basic elements of collusion
5. Strategic incumbents and entry
  - a. Taxonomy of entry-related strategies
  - b. Strategies affecting cost variables
    - i. Investment in capacity: Top Dog Strategy
    - ii. Investment in innovation: Lean&Hungry Look
  - c. Strategies affecting demand variables
    - i. Brand proliferation
  - d. Limit pricing under incomplete information
6. Innovation and R&D
  - a. R&D cooperation and spillovers (more on strategic effects)
  - b. Market structure and incentives to innovate
  - c. When innovation affects market structure
7. Recent papers in management using formal models of strategic interactions

## Assessment Methods.

Your final grade will be the result of a team assignment (20%) and a final exam (80%). The team assignment will only count if the grade is higher than that of the final exam. The final exam is based on problems/exercises similar to those assigned weekly as problem sets. It is thus highly recommended to work on each problem set. Solutions will be available from the instructor. Some specific exercises will be solved in class or in ad-hoc extra classes.

Team assignment: a) form teams of 2-3 students; b) identify two papers published in management/marketing journals based on a formal model, covering at least one of the topics of the syllabus; c) submit your selection to



the instructor by the end of the second week of the course; d) after approval by the instructor, prepare 10 slides summarizing the main features of the model, key results, empirical implications and limitations; e) slides must be turned in the last day of class when teams will deliver a 10-15m presentation.

Journals to consider: Strategic Management Journal, Management Science, Organization Science\*, Academy of Management Review\*, Journal of Economics and Management Strategy, Journal of Economic Behavior and Organization, Journal of Marketing Research, Marketing Science (\*just a few papers with a model).

### **Faculty Bio.**

Andrea Fosfuri is Professor of Management and Technology at Bocconi University, which he joined in September 2012. Andrea taught previously at University Carlos III (Madrid), Boston University and Carnegie Mellon University. He received his PhD in economics from Pompeu Fabra University (Barcelona). Andrea is currently an Associate Editor at Management Science (Strategy) and editorial board member at Strategic Management Journal, and has published in journals like Management Science, Strategic Management Journal, Organization Science, Journal of International Economics, Journal of Industrial Economics, Research Policy, among others. Since 2019, he is the Dean of the PhD School.