

Central European University
Department of Economics
Academic Year 2016/2017

Lecturer: **Andrzej Baniak**
Nador 11 Building, room 410
E-mail: baniaka@ceu.edu

Industrial Organization

General Information

Course level: This is an optional course for PhD students and second year MA in Economics students.

Credits: 2 credits (4 ECTS credits)

Time: Winter Semester.

Prerequisites: Students should be familiar with basic concepts of microeconomics on the level of Microeconomic Theory I and II courses. In particular, students should know main concepts of the non-cooperative game theory and contract theory.

Brief Description

This course provides an introduction into the theory of industrial organization. The students will get familiar with basic concepts of industrial economics and their relationship to other fields of economics. The course is based on microeconomic theory and applies it to the study of price and competition in imperfect markets. It therefore builds on what you have learned during your previous courses in microeconomics. During the course we will discuss different forms of oligopolistic competition starting from classical models of Cournot and Bertrand and then we will examine more advanced theories advocated by Hotelling, Salop and others, that may be used in this context. The main emphasis will be put on the study of firm strategies that are characteristic of market interaction: price competition, product positioning, advertising, and so on. We will also discuss policy implications of different industry structures. In particular, we will discuss the implications of theoretical models for competition policy.

Goals of the course

The course gives an up to date coverage of the most important issues and problems in the theory industrial organization. In particular: (1) The course aims to deepen student's knowledge of competition in oligopolistic markets. (2) The course analyzes the welfare consequences of different industrial structures and different forms of competition.

Learning Outcomes

Successful completion of the course enables students to

- Summarize and critically evaluate ideas on the topic covered in the course.

- Possess a thorough understanding of selected analytical models employed in industrial organization.
- Be able to evaluate social effects of different industry structures and different forms of competition.
- Possess a critical understanding of the interaction between theory and practice of Competition Policy (Antitrust)

Course Requirements and Assessment

During the course students will be send the problem sets and asked to solve the problems. They can handle the solution in written or electronic form. The credit for problem solving will count at most 50% of the grade. There will be final exam which counts for at least 50% of the grade.

Textbooks

The basic text for this course is Tirole (1988). For a broader coverage of empirical and public policy issues, students should also read: Cabral (2000), Motta (2004), Schmalensee and Willig, eds (1989a) and Buccirossi, ed (2008) and Schmalensee and Willig, eds (1989b). Excellent review of recent theory can be found in Armstrong and Porter, eds (2007). During the course also journal articles will be discussed. Below I also list optional readings, marked by (*), for those who are interested in conducting further studies in the field.

Detailed outline of the course and reading list

The course will be divided into twelve 100-minute classes spread over four weeks (3 classes per week).

1. Monopoly, Natural Monopoly:
Tirole (1988), ch. 1; (*) Armstrong (2008); (*)Armstrong and Sappington (2007)
2. Price discrimination:
Tirole (1988), ch. 3; (*)Stole (2007); (*)
3. Short-run Price and Quantity Competition
Tirole (1988), ch. 5; Bulow et al. (1985); (*)Carlton and Perloff (2000), ch. 6; (*)Kreps and Scheinkman (1983)
4. Product Differentiation
Tirole (1988), ch. 7; Hotelling (1929); d'Aspremont et al. (1979); (*)Shaked and Sutton (1982); (*)Shaked and Sutton (1983); (*)Mussa and Rosen (1978); (*) Carlton and Perloff (2000), ch. 7

5. Dynamic Price Competition, Collusion
Tirole (1988), ch. 6; Ivaldi et al. (2003); (*)Rotemberg and Saloner (1986); (*)Green and Porter (1984);
6. Fighting with collusion: leniency programs
Motta and Polo (2003); Motta (2004) ch. 4; (*)Rey (2003); (*)Spagnolo (2008)
7. Entry, Accommodation and Exit
Tirole (1988), ch. 8; Martin (2002), ch. 11; (*)Armstrong et al. (1994), ch. 4; (*)Baumol et al. (1982); (*)Dixit (1980)
8. Vertical Relations:
Tirole (1988), ch. 4; Cabral (2000), ch. 11; (*)Motta (2004) ch. 6; (*)Rey and Verge (2008); (*)Rey and Tirole (2007)

References

- Armstrong, Mark**, “Price Discrimination,” in Paolo Buccirossi, ed., *Handbook of Antitrust Economics*, Cambridge, MA: MIT Press, 2008, pp. 433–469.
- **and David Sappington**, “Recent Developments in the Theory of Regulation,” in Mark Armstrong and Richard Porter, eds., *Handbook of Industrial Organization*, Vol. 3, Amsterdam: North-Holland, 2007.
- **and Richard H. Porter, eds**, *Handbook of Industrial Organization*, Vol. 3, Amsterdam: North-Holland, 2007.
- , **Simon Cowan, and John Vickers**, *Regulatory Reform: Economic Analysis and British Experience*, Cambridge, Mass.: MIT Press, 1994.
- Baumol, Wilian J., John C. Panzar, and Robert D. Willig**, *Contestable markets and the theory of industry structure*, San Diego: Harcourt Brace Jovanovich, 1982.
- Buccirossi, Paolo, ed.**, *Handbook of Antitrust Economics*, Cambridge, MA: MIT Press, 2008.
- Bulow, Jeremy I., John D. Geanakoplos, and Paul Klemperer**, “Multimarket Oligopoly: Strategic Substitutes and Complements,” *Journal of Political Economy*, 1985, 93 (3), 488–511.
- Cabral, Luís M. B.**, *Introduction to Industrial Organization*, Cambridge, Mass.: MIT Press, 2000.
- Carlton, Dennis W. and Jeffrey M. Perloff**, *Modern Industrial Organization, 3rd Edition*, Reading, Mass.: Addison-Wesley, 2000.
- d’Aspremont, C., J. Jaskold Gabszewicz, and J.F. Thisse**, “On Hotelling’s “Stability in Competition”,” *Econometrica*, 1979, 47 (5), 1145–1150.
- Dixit, Avinash K.**, “The role of investment in entry deterrence,” *Economic Journal*, 1980, 90, 95–106.
- Green, Edward J. and Robert H. Porter**, “Noncooperative Collusion under Imperfect Price Information,” *Econometrica*, 1984, 52, 87–100.

- Hotelling, Harold**, “Stability in Competition,” *The Economic Journal*, 1929, 39 (153), 41–57.
- Ivaldi, Marc, Bruno Jullien, Patrick Rey, Paul Seabright, and Jean Tirole**, “The Economics of Tacit Collusion,” March 2003. Final Report for DG Competition, European Commission.
- Kreps, David M. and Jose A. Scheinkman**, “Quantity Precommitment and Bertrand Competition Yield Cournot Outcomes,” *Bell Journal of Economics*, 1983, 14 (2), 326–337.
- Martin, Stephen**, *Advanced Industrial Economics, Second Edition*, Oxford: Blackwell, 2002.
- Motta, Massimo**, *Competition Policy. Theory and Practice*, Cambridge: Cambridge Univ. Press, 2004.
- **and Michele Polo**, “Leniency Program and Cartel Prosecution,” *International Journal of Industrial Organization*, 2003, 21, 347–379.
- Mussa, Michael and Sherwin Rosen**, “Monopoly and Product Quality,” *Journal of Economic Theory*, 1978, 18, 301–317.
- Rey, Patrick**, “Towards a Theory of Competition Policy,” in L.P. Hansen M. Devatripoint and S.J. Turnovsky, eds., *Advances in Economics and Econometrics*, Cambridge, UK: Cambridge Univ. Press, 2003.
- **and Jean Tirole**, “A Primer on Foreclosure,” in Mark Armstrong and Richard H. Porter, eds., *Handbook of Industrial Organization*, Vol. 3, Amsterdam: North-Holland, 2007, pp. 2145–2221.
- **and Thibaud Verge**, “Economics of Vertical Restraints,” in Paolo Buccirossi, ed., *Handbook of Antitrust Economics*, Cambridge, MA: MIT Press, 2008, pp. 353–391.
- Rotemberg, Julio J. and Garth Saloner**, “A Supergame-Theoretic model of Price Wars during booms,” *American Economic Review*, 1986, 76 (3), 390–407.
- Schmalensee, Richard and Robert D. Willig, eds**, *Handbook of Industrial Organization*, Vol. 2, Amsterdam: North-Holland, 1989.
- **and —**, eds, *Handbook of Industrial Organization*, Vol. 1, Amsterdam: North-Holland, 1989.
- Shaked, Avner and John Sutton**, “Relaxing Price Competition Through Product Differentiation,” *Review of Economic Studies*, 1982, 69, 3–13.
- **and —**, “Natural Oligopolies,” *Econometrica*, 1983, 51 (5), 1469–83.
- Spagnolo, Giancarlo**, “Leniency and Whistleblowers in Antitrust,” in Paolo Buccirossi, ed., *Handbook of Antitrust Economics*, Cambridge, MA: MIT Press, 2008, pp. 259–305.
- Stole, Lars A.**, “Price Discrimination and Competition,” in Mark Armstrong and Richard H. Porter, eds., *Handbook of Industrial Organization*, Vol. 3, Amsterdam: North-Holland, 2007, pp. 2221–2300.
- Tirole, Jean**, *The Theory of Industrial Organization*, Cambridge, Mass.: MIT Press, 1988.