
COURSE OUTLINE

Introduction

This course is an introduction to the field of industrial organization. Industrial organization deals with the structure and performance of (imperfectly competitive) markets and the interaction between different players intervening in these markets such as firms, consumers and regulators or competition policy authorities. Among the particular subjects we will study are the determinants of market structure, the pricing decisions of firms, the strategic interactions among firms, and the effects of structure and conduct on price and non-price dimensions of market performance.

Objectives

Industrial organization provides a foundation for the study of many other fields that rely on an understanding of interactions among firms in the economy, including business strategy, corporate finance, marketing, international trade, banking, and the economics of organizations. These other fields make use of the analytical framework of industrial organization, but differ in the types of problems that they address. A main focus of industrial organization is the effect of market structures on (consumer) welfare (for example, do oligopolistic market structures necessarily hurt consumers? or, what is the effect on mergers and acquisitions on welfare?). Business strategy concentrates with decisions to achieve competitive advantage, i.e. the effects on profitability; corporate finance with the capital structure of the firm and its effect on competitive interactions; marketing with issues of pricing, product differentiation and new product introduction; and, organization theory with optimal organizational structures. We will cover examples in some of these areas where industrial organization offers insights.

Learning Outcomes

To master the concepts developed in the course material in such a way that independent research can be carried out.

COURSE OUTLINE

Competences*General Competences*

- *Conduct a critical analysis, evaluation and synthesis of new and complex ideas with the objective to produce general principles applicable to business situations.*
- *Use appropriate tools and techniques for problem solving, correction contrasting and decision validation.*
- *Demonstrate knowledge and understanding that provide a basis or opportunity for originality in developing and / or application of ideas, often related to a research context.*
- *Students should be able to communicate clearly and concisely their conclusions, underlying knowledge and reasons to a specialized and non-specialized audience.*
- *Students should possess the learning outcomes that enable them to continue studying in a way that will be largely self-directed or autonomous.*

Specific Competences

- *Knowledge of and ability to use the tools of economic analysis and the classical theory of markets in the analysis of organizations.*
- *Publicly present ideas, procedures or research reports to advise people and organizations.*
- *Advanced knowledge of market structuring and functioning, comprehension of the interaction between different actors (companies, consumers and regulators) involved in them.*
- *Capability to understand the concepts developed by the economists regarding transaction costs, ability to analyze these costs within organizations and to compare them with those that have an alternative market.*
- *Capability to apply game theories to the analysis of conflict situations of organizations and market related.*

Methodology

There will be 3 problem sets, one case presentation, and an in-class final exam.

Evaluation

The measuring of the learning outcomes and the grading of the course for the students will be according to the class presentations.

<i>Problem sets</i>	<i>20%</i>
<i>Case presentation/project</i>	<i>35%</i>
<i>Final exam</i>	<i>35%</i>
<i>Classroom participation</i>	<i>10%</i>

 COURSE OUTLINE

Course Outline & Bibliography

- I. *Introduction. The structure-conduct-performance paradigm. Partial equilibrium and consumer surplus. Theory of the firm.*
- II. *Modeling strategic behavior. Game theory tools basics.*
- III. *Oligopoly pricing in homogenous product markets.*
- IV. *Pricing in differentiated product markets. Monopolistic competition.*
- V. *Entry and market structure.*
- VI. *Strategic investment and commitment. Product positioning, innovation and advertising.*
- VII. *Repeated interaction and collusion.*
- VIII. *Mergers.*
- IX. *Network effects, search and standards.*
- X. *(Time allowing) Vertical relations and mergers, tying, bundling and foreclosure.*

TITLE OF SESSION & MATERIALS

1	<p>Introduction. The structure-conduct-performance paradigm. Partial equilibrium and consumer surplus. Theory of the firm.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, chapters 1, 2 and 3. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - De Loecker, J. & J. Eeckhout, "The Rise of Market Power and the Macroeconomic Implications", 2017, working paper. - Tirole, J., Introduction and Theory of the Firm. - Scherer, F.M., and D. Ross, chapters I and III. - Vives, X., chapters I and III.
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COURSE OUTLINE

2	<p>Modeling strategic behavior. Game theory tools basics.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Gibbons, R., chapter 1, in <i>A Primer in Game Theory</i>, Prentice Hall, 1992. - Cabral, introduction and section 4.1, chapter 4. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Varian, H., chapter 28, in <i>Intermediate Microeconomics: A Modern Approach</i>, 5th ed. (or 28-29 6th ed., Norton, 2003). - Tirole, J., chapter 11, in <i>The Theory of Industrial Organization</i>. - Vives, X., chapter II, in <i>Oligopoly Pricing: Old Ideas and New Tools</i>. - Vives, X., "Games with Strategic Complementarities: New Applications to Industrial Organization", <i>International Journal of Industrial Organization</i>, 2005, 23, 625-637. - Vives, X., "Complementarities and Games: New Developments", <i>Journal of Economic Literature</i>, 2005, 43, 437-479.
3	<p>Oligopoly pricing in homogenous product markets.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, chapter 7. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Tirole, J., chapter 5. - Vives, X., chapters IV, V, VII.1, VII.2. - Varian, H., chapter 27, in <i>Intermediate Microeconomics: A Modern Approach</i>, 6th ed. (Norton, 2003).
4	<p>Pricing in differentiated product markets. Monopolistic competition.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, chapter 12. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Tirole, J., section 2.1 (pp. 96-100); sections 7.1.1, 7.1.2, 7.2, 7.5 (pp. 279-88, 296-300). - Scherer, F.M., and D. Ross, pp. 97-140. - Vives, X., chapter VI, section VII.2.
5	<p>Entry and market structure.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, chapter 14. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Tirole, J. Section 8.1. - Vives, X., section IV.3, VI.6. - Scherer and Ross, pp. 97-140.

COURSE OUTLINE

6	<p>Strategic investment and commitment. Product positioning, innovation and advertising.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapters 4.2, 15, 16. <p><i>Cases:</i></p> <ul style="list-style-type: none"> - Esty, B. and P. Ghemawat, 2002, Airbus vs. Boeing in Superjumbos: A case of Failed Preemption, HBS working paper. - Beneito, P., P. Coscollá-Girona, M.E. Rochina-Barrachina and A. Sanchis (2015), "Competitive Pressure and Innovation at the Firm Level", <i>Journal of Industrial Economics</i>, 63, 3, 422-457. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Gibbons, R. section 2.1, 2.2. - Tirole, J., sections. 2.2.1 (pp. 100-3), 2.3, 2.4, 2.6.1 (116-121), 7.3 (289-295), 8.2, 8.3 (pp. 323-328), 8.6.2, chapter 10. - Vives, X., chapter VI, section VII.4. - Vives, X., 2008, "Innovation and Competitive Pressure", <i>Journal of Industrial Economics</i>, 56, 3, 419-469.
7	<p>Repeated interaction and collusion.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapters 4.3, 8. <p><i>Case:</i></p> <ul style="list-style-type: none"> - Connor, J.M., 1996, Global Cartels Redux: The Lysine Antitrust Litigation, case 10 in Kwoka and White (2004). <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Gibbons, R. section 2.3. - Tirole, J., chapter 6 (except 6.4 and 6.7.2). - Vives, X., chapter VIII, section VIII.3, VIII.4, and chapter IX, section IX.1. - Whinston, M.D., chapter 2.

COURSE OUTLINE

8	<p>Mergers.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapter 15.3. - Vives, X., section VII.2. <p>Mergers and innovation:</p> <ul style="list-style-type: none"> - Ahuja, G. and R. Katila (2001), "Technological Acquisitions and the Innovation Performance of Acquiring Firms: A Longitudinal Study"; <i>Strategic Management Journal</i>, 22, 197-220. - Bertrand, O. and P. Zuniga (2006), "R&D and M&A: Are Cross-border M&A Different? An Investigation on OECD Countries", <i>International Journal of Industrial Organization</i>, 24, 401-423. - Schultz, N. (2007), "Review on the Literature of Mergers on Innovation", ZEW discussion paper 07-061. - Sevilir, M. and X. Tian (2012), "Acquiring Innovation", working paper. (+) - Entezarkheir, M. and S. Moshiri (2016), "Mergers and Innovation: Evidence from a Panel of U.S. Firms", working paper. (+) - Stahl, J. (2012), "Mergers and Sequential Innovation: Evidence from Patent Citations", working paper. (-) - Szucs, F. (2014), "M&A and R&D: Asymmetric Effects on Acquirers and Targets?", <i>Research Policy</i>, 43, 1264-1273. (-) <p><i>Cases:</i></p> <ul style="list-style-type: none"> - DeGraba, P. and Rosston, G. (2011), "The Proposed Merger of AT&T and T-Mobile: Rethinking Possible", in Kwoka, J. and L. White (2013). - P. McAfee, D. Sibley and M. Williams (2004), "Oracle's Acquisition of PeopleSoft: U.S. v. Oracle", in Kwoka, J. and L. White (2008). - Subramanian, G. and N. Sharma (2011), "Citigroup-Wachovia-Wells Fargo", HBS case no. 9-910-006. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Compte, O., F. Jenny and P. Rey (2002), "Capacity Constraints, Mergers and Collusion", <i>European Economic Review</i>, 46, 1-29. - Farrell, J., and C. Shapiro (1990), "Horizontal Mergers: An Equilibrium Analysis", <i>American Economic Review</i>, 80, 1, 107-126. - Gutierrez, G. and T. Philippon (2017), "Investment less Growth: An Empirical Investigation", working paper. - Gutierrez, G. and T. Philippon (2017), "Declining Competition and Investment in the US"; working paper. - Lopez, A. and X. Vives (2017), "Overlapping Ownership, R&D Spillovers, and Antitrust Policy", IESE working paper 1140. - Salop, S.C., and D.P. O'Brien (2000), "Competitive Effects of Partial Ownership: Financial Interest and Corporate Control", <i>Antitrust Law Journal</i>, 67, 559-614. - Waehrer, K. and M. Perry (2003), "The Effects of Mergers in Open-Auction Markets", <i>RAND Journal of Economics</i>, 34, 2, 287-304. - Whinston, M.D., chapter 3.
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COURSE OUTLINE

9	<p>Network effects, platforms, search and standards.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapter 17. <p><i>Cases:</i></p> <p>Search</p> <ul style="list-style-type: none"> - Rivkin, J. and E. Van Den Steen (2009), "Microsoft's Search", HBS case no. 9-709-461. - Cave, M. and H. Williams (2011), "The Perils of Dominance: Exploring the Economics of Search in the Information Society", ICOMP white paper. <p>Advertising</p> <ul style="list-style-type: none"> - Coles, P. and B. Edelman (2010), "Microsoft adCenter", HBS case no. 9-908-049. - Cave, M. and H. Williams (2011), "The Perils of Dominance: Exploring the Economics of Search in the Information Society", ICOMP white paper. <p>Platform competition</p> <ul style="list-style-type: none"> - Casadesús-Masanell, R., A. Hervás and J. Mitchell (2010) "Peer-to-Peer File Sharing and the Market for Digital Information Goods", HBS case no. 9-706-479. - Cave, M. (2013), "Imposing Separation to Deal with a Monopolist with a Propensity for Downstream Discrimination", ICOMP white paper. - Hagiu, A. (2011), "Wii encore?", HBS case no. 9-712-416. - Yoffie, D. and E. Baldwin (2015), "Apple Inc. In 2015", HBS case no. 9-715-456. <p>Online markets</p> <ul style="list-style-type: none"> - Cabral, L. and A. Hortacsu (2010), "The Dynamics of Seller Reputation: Evidence from eBay", <i>Journal of Industrial Economics</i>, 58, 1, 54-78. - Edelman, B. and J. Wright (2015), "Price Coherence and Excessive Intermediation", <i>Quarterly Journal of Economics</i>, 130, 3, 1283-1328. - Gorodnichenko, Y. and O. Talavera (2017), "Price Setting in Online Markets: Basic Facts, International Comparisons, and Cross-Border Integration", <i>American Economic Review</i>, 107, 1, 249-282. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Belleflamme, P. and M. Peitz (2010), <i>Industrial Organization. Markets and Strategies</i>, parts VIII and IX, 2nd edition. - Besen, S. and J. Farrell (1994), "Choosing How to Compete: Strategies and Tactics in Standardization", <i>Journal of Economic Perspectives</i>, 8, 2, 117-131. - Katz, M., and C. Shapiro (1985), "Network Externalities, Competition and Compatibility", <i>American Economic Review</i>, 75, 424-440. - Katz, M., and C. Shapiro (1994), "Systems Competition and Network Effects", <i>Journal of Economic Perspectives</i>, 8, 93-115. - Tirole, J., chapter 6, sections 6.4 and 6.7.2, and chapter 8, section 8.6.2. - Vives, X., chapter IX, section IX.2.
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COURSE OUTLINE

10	<p>Vertical relations and mergers, tying, bundling and foreclosure (time allowing).</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapter 11. <p><i>Cases:</i></p> <ul style="list-style-type: none"> - Besen, S., E. J. Murdoch, D. O'Brien, S. Salop and J. Woodbury (1996). "Vertical and Horizontal Ownership In Cable TV: Time Warner-Turner", in Kwoka, J. and L. White (1999), 452-475. <p>Microsoft Europe</p> <ul style="list-style-type: none"> - Kühn, K.U. and J. Van Reenen, "Interoperability and Market Foreclosure in the European Microsoft Case", in Lyons, B. (2009). - European Commission Decision of 24.03.2004 relating to a proceeding under Article 82 of the EC Treaty (Case COMP/C-3/37.792 Microsoft). <p>General Electric-Honeywell</p> <ul style="list-style-type: none"> - Vives, X. and G. Staffiero, "Horizontal, Vertical and Conglomerate Effects: The GE-Honeywell Merger in the EU", in Lyons, B. (2009). - Nalebuff, B., "Bundling: GE-Honeywell (2001)", in Kwoka, J. and L. White (2004). <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Rey, P., P. Seabright, and J. Tirole: "The Activities of a Monopoly Firm in Adjacent Competitive Markets: Economic Consequences and Implication for Competition Policy", IDEI Working Paper 132, 2001, revised 2002. - Rey, P., and J. Tirole, "A Primer on Foreclosure", <i>Handbook of Industrial Organization</i>, vol. 3, North-Holland, 2007. - Whinston, M.D., chapter 4.
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Bibliography

The basic text for the course is:

- Cabral, L., "Introduction to Industrial Organization" (MIT Press, 2000).

More advanced texts are:

- Tirole, J., "The Theory of Industrial Organization" (MIT Press, 2000).
- Vives, X., "Oligopoly Pricing: Old Ideas and New Tools" (MIT Press, 1999).

Good complements are:

- Kwoka, J.E., Jr. and White, L.J., "The Antitrust Revolution: Economics, Competition, and Policy", Oxford University Press, 1999 (third edition), 2004 (fourth edition), 2008 (fifth edition) and 2013 (sixth edition). (Very good exposition of competition and regulation cases).

COURSE OUTLINE

- Lyons, B., *"Cases in European Competition Policy: the Economic Analysis"*, Cambridge University Press, 2009. (The equivalent of Kwoka, and White for Europe).
- Scherer, F.M., and D. Ross, *"Industrial Market Structure and Economic Performance"*, . Boston: Houghton Mifflin, 1990 (third edition). (Good particularly for a survey of empirical material and institutional detail).
- Whinston, M.D. *"Lectures on Antitrust Economics"*, Cairol Lecture Series at Univ. MIT Press, 2006. (Advanced analytical treatment of the main antitrust topics).

The chapters assigned in Cabral are required reading. The material in Tirole and Vives is more advanced (the natural progression is Cabral-Tirole-Vives) and is optional. The readings, some quite technical, include also a number of papers for each topic. I will expect you to be familiar with the basics of microeconomics, game theory and applied methods. The program outline is subject to change as interesting opportunities present themselves along the way.

Professor's Biography

Xavier Vives is professor of Economics and Finance at IESE Business School. He holds a Ph.D. in Economics from UC Berkeley.

Fellow of the Econometric Society since 1992; of the European Economic Association since 2004; and of the Academia Europaea since 2012. President of the European Association for Research in Industrial Economics. Research Fellow of CESifo and of the Center for Economic Policy Research, where he served as Director of the Industrial Organization Program in 1991-1997. He has taught at INSEAD, Harvard University, Universitat Autònoma de Barcelona, Universitat Pompeu Fabra, the University of California at Berkeley, the University of Pennsylvania, and New York University.

*His fields of interest are industrial organization and regulation, the economics of information, and banking and financial economics. He has published in the main international journals and is the author of several books, among them the recently published *Competition and Stability in Banking* (PUP). He is currently co-editor of the *Journal of Economics and Management Strategy* and editor of the *Journal of Economic Theory*.*

Dr. Vives has been an advisor and consultant on competition and regulation issues for the World Bank, the Inter-American Development Bank, the European Commission, the Federal Reserve Bank of New York, as well as for major international corporations. In 2011-2014 he was Special Advisor to the EU Commissioner for Competition, Mr Joaquín Almunia.