
 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, L., chapters 1, 2 and 3. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - De Loecker, J., J. Eeckhout and G. Unger (2020). The Rise of Market Power and the Macroeconomic Implications, <i>The Quarterly Journal of Economics</i>, 135(2): 561-644. - Karabarbounis, L. and B. Neiman (2019). Accounting for Factorless Income, <i>NBER Macroeconomics Annual 2018</i>, 33, 167-228. - Scherer, F.M., and D. Ross, chapters I and III. - Shapiro, C. (2018). Antitrust in a time of populism, <i>International Journal of Industrial Organization</i>, 61, 714-748. - Tirole, J., Introduction and Theory of the Firm. - Traina, J. (2018). Is aggregate market power increasing? Production trends using
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	<p>financial statements, working paper.</p> <ul style="list-style-type: none"> - Vives, X., chapters I and III.
2	<p>Modeling strategic behavior. Game theory tools basics.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., introduction, section 4.1 (chapter 4) and section 7.1 (chapter 7). - Gibbons, R., chapter 1, in <i>A Primer in Game Theory</i>, Prentice Hall, 1992. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Tirole, J., chapter 11, in <i>The Theory of Industrial Organization</i>. - Varian, H., chapter 28, in <i>Intermediate Microeconomics: A Modern Approach</i>, 5th ed. (or 28-29 6th ed., Norton, 2003). - Vives, X., chapter II, in <i>Oligopoly Pricing: Old Ideas and New Tools</i>. - Vives, X. (2005). Complementarities and Games: New Developments, <i>Journal of Economic Literature</i>, 43, 437-479. - Vives, X. (2005). Games with Strategic Complementarities: New Applications to Industrial Organization, <i>International Journal of Industrial Organization</i>, 23, 625-637.
3	<p>Oligopoly pricing in homogenous product markets.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapter 8. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Tirole, J., chapter 5. - Varian, H., chapter 27, in <i>Intermediate Microeconomics: A Modern Approach</i>, 6th ed. (Norton, 2003). - Vives, X., chapters IV, V, VII.1, VII.2.
4	<p>Pricing in differentiated product markets. Monopolistic competition.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., section 4.3 (chapter 4) and chapter 14. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Scherer, F.M., and D. Ross, pp. 97-140. - Thisse, J. and X. Vives (1988). "On the strategic choice of spatial price policy", <i>American Economic Review</i>, 78(1): 122-137. - Tirole, J., section 2.1 (pp. 96-100); sections 7.1.1, 7.1.2, 7.2, 7.5 (pp. 279-88, 296-300). - Vives, X., chapter VI, section VII.2.
5	<p>Entry and market structure.</p> <p><i>Required readings:</i></p>

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	<ul style="list-style-type: none"> - Cabral, L., chapter 10. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Gutiérrez, G., C. Jones and T. Philippon (2021). “Entry costs and aggregate dynamics”, <i>Journal of Monetary Economics</i>, 124, S77-S91. - Rinz, K. (2020). Labor Market Concentration, Earnings Inequality, and Earnings Mobility, <i>The Journal of Human Resources</i>, online. - Rossi-Hansberg, E. and P.D. Sarte (2018). Diverging Trends in National and Local Concentration, working paper. - Scherer and Ross, pp. 97-140. - Tirole, J. Section 8.1. - Vives, X., section IV.3, VI.6.
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., section 7.2 (chapter 7) and chapter 15. <p><i>Cases:</i></p> <ul style="list-style-type: none"> - 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. - Esty, B. and P. Ghemawat (2002). Airbus vs. Boeing in Superjumbos: A case of Failed Preemption, HBS working paper. <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Autor, D., D. Dorn, L. Katz, C. Patterson and J. Van Reenen (2017). The Fall of the Labor Share and the Rise of Superstar Firms, NBER working paper. - 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. - Watzinger, M., T. A. Fackler, M. Nagler and M. Schnitzer (2020). “How Antitrust Enforcement Can Spur Innovation: Bell Labs and the 1956 Consent Decree”, <i>American Economic Journal: Economic Policy</i>, 12, 328-359.
7	<p>Repeated interaction and collusion.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., section 7.3 (chapter 7) and chapter 9. <p><i>Case:</i></p> <ul style="list-style-type: none"> - Connor, J.M., (1996). Global Cartels Redux: The Lysine Antitrust Litigation, case

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	<p>11 in Kwoka and White (2004).</p> <p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Calvano, E., G. Calzolari, V. Denicolò and S. Pastorello, (2019). Artificial Intelligence, Algorithmic Pricing and Collusion, working paper. - 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.
8	<p>Mergers.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapter 11. - Vives, X., section VII.2. <p><i>Cases:</i></p> <ul style="list-style-type: none"> - DeGraba, P. and G. Rosston (2011). The Proposed Merger of AT&T and T-Mobile: Rethinking Possible, in Kwoka, J. and L. White (2013). - McAfee, P., 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"> - Backus, M., C. Conlon and M. Sinkinson (2021). Common Ownership in America: 1980-2017, <i>American Economic Journal: Microeconomics</i>, 13(3): 273-308. - 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. - Federico, G., F. Scott Morton and C. Shapiro (2020). Antitrust and Innovation: Welcoming and Protecting Disruption, NBER Innovation Policy and the Economy, 20, 125-190. - 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. - Jullien, B. and Y. Lefouili (2018). Horizontal Mergers and Innovation, <i>Journal of Competition Law & Economics</i>, 14(3): 364-392. - López, A. and X. Vives (2019). Overlapping Ownership, R&D Spillovers, and Antitrust Policy, <i>Journal of Political Economy</i>, 127(5): 2394-2437. - Motta, M. and E. Tarantino (2021). The effect of horizontal mergers, when firms compete in prices and investments, <i>International Journal of Industrial Organization</i>, 78, 102774. - Salop, S.C., and D.P. O'Brien (2000). Competitive Effects of Partial Ownership:

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	<p>Financial Interest and Corporate Control, <i>Antitrust Law Journal</i>, 67, 559-614.</p> <ul style="list-style-type: none"> - 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.
9	<p>Network effects, platforms, search and standards.</p> <p><i>Required readings:</i></p> <ul style="list-style-type: none"> - Cabral, L., chapter 16. - Belleflamme, P. and M. Peitz, chapters 20, 21, 22 and 23. <p><i>Cases:</i></p> <p>Search/Advertising</p> <ul style="list-style-type: none"> - Baker, J. B. (2013). Cartel Ringmaster or Competition Creator? The Ebooks Case against Apple, in Kwoka, J. and L. White (2018). - Cave, M. and H. Williams (2011). The Perils of Dominance: Exploring the Economics of Search in the Information Society, ICOMP white paper. - Coles, P. and B. Edelman (2010). Microsoft adCenter, HBS case no. 9-908-049. - Davis, J. and A. Yang (2018). Alibaba in Blockchain: Integrating Blockchain-based Remittances Into Cloud Services, INSEAD case no. 1547. - Gilbert, R. J. (2013). The U.S. Federal Trade Commission Investigation of Google Search, in Kwoka, J. and L. White (2018). - Phillips Sawyer, L. (2017). Google in Europe: Competition Policy in the Digital Era, HBS case no. 9-717-004. - Reddy, S., Z. Wang Zheng and H. Dong (2016). China's Digital Landscape: Imitating or Innovating?, Singapore Management University case no. 253. - Rivkin, J. and E. Van Den Steen (2009). Microsoft's Search, HBS case no. 9-709-461. - Wells, J., B. Weinstock, G. Danskin and G. Ellsworth (2019). Amazon.com, 2019. HBR case no. 9-716-402. - Wells, J., C. Winkler and B. Weinstock (2019). Facebook Fake News in the Post-Truth World, HBR case no. 9-720-373. <p>Platform competition</p> <ul style="list-style-type: none"> - Armstrong, M. (2006). Competition in Two-Sided Markets, <i>RAND Journal of Economics</i>, 37(3): 668-691. - Belleflamme, P. and M. Peitz (2018). Inside the Engine Room of Digital Platforms: Reviews, Ratings, and Recommendations. In Ganuza, J. J. and G. Llobet, <i>Economic Analysis of the Digital Revolution</i> (pp. 75-114). Madrid: FUNCAS. - 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. - Eisenmann, T., G. Parker and M. Van Alstyne (2011). Platform envelopment,

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	<p><i>Strategic Management Journal</i>, 32, 1270-1285.</p> <ul style="list-style-type: none"> - Hagiu, A. (2011). Wii encore?, HBS case no. 9-712-416. - Hagiu, A. and J. Wright (2015). Marketplace or Reseller?, <i>Management Science</i>, 61(1): 184-203. - Hagiu, A. and J. Wright (2015). Multi-sided platforms, <i>International Journal of Industrial Organization</i>, 43, 162-174. - Rochet, J-C. and J. Tirole (2003). Platform Competition in Two-Sided Markets, <i>Journal of the European Economic Association</i>, 1(4): 990-1029. - Yoffie, D. and E. Baldwin (2015). Apple Inc. In 2015, HBS case no. 9-715-456. <p>Online markets and pricing</p> <ul style="list-style-type: none"> - Bajari, P. and A. Hortacsu (2004). Economic Insights from Internet Auctions, <i>Journal of Economic Literature</i>, XLII, 457-486. - Cabral, L. and A. Hortacsu (2010). The Dynamics of Seller Reputation: Evidence from eBay, <i>Journal of Industrial Economics</i>, 58, 1, 54-78. - Decarolis, F., M. Goldmanis and A. Penta (2018). Recent Developments in Online Ad Auctions. In Ganuza, J. J. and G. Llobet, <i>Economic Analysis of the Digital Revolution</i> (pp. 143-180). Madrid: FUNCAS. - Edelman, B. and J. Wright (2015). Price Coherence and Excessive Intermediation, <i>Quarterly Journal of Economics</i>, 130, 3, 1283-1328. - Ganuza, J. J. and G. Llobet (2018). Personalized Prices in the Digital Economy. In Ganuza, J. J. and G. Llobet, <i>Economic Analysis of the Digital Revolution</i> (pp. 117-141). Madrid: FUNCAS. - 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. - Tadelis, S. (2016). Reputation and Feedback Systems in Online Platform Markets, <i>Annual Review of Economics</i>, 8, 321-340. - Thisse, J-F. and X. Vives (1988). On the Strategic Choice of Spatial Price Policy, <i>American Economic Review</i>, 78, 1, 122-137. - Varian, H. (1997). Versioning information goods, working paper. <p>Examples (in Ganuza, J. J. and G. Llobet, FUNCAS):</p> <ul style="list-style-type: none"> - Aguiar, L. and J. Waldfogel (2018). Digitization and the Content Industries. - Claici, A. (2018). Big data and Competition Policy. - Haeringer, G. and H. Halaburda (2018). Bitcoin: A Revolution? - Jeon, D-S. (2018). Economics of News Aggregators. - Silos-Ribas, M. (2018). The Economics of the Gig Economy - with an Application to the Spanish Taxi Industry. <p>Data and information:</p> <ul style="list-style-type: none"> - Bergemann, D. and A. Bonatti (2019). Markets for Information: An Introduction, <i>Annual Review of Economics</i>, 11(1): 85-107. - Delgado, J. (2021). Data Regulation: Understanding The Present To Regulate The
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	<p>Future, <i>Competition Policy International</i>, December.</p> <ul style="list-style-type: none"> - Hansen, S. (2018). Machine Learning for Economics and Policy, in Ganuza, J. J. and G. Llobet, FUNCAS. - Mihet, R. and T. Philippon (2019). “The economics of big data and artificial intelligence”, Choi, J. and B. Ozkan (Ed.) <i>Disruptive innovation in business and finance in the digital world</i> (International Finance Review, Vol. 20), Emerald Publishing Limited, pp. 29-43. - Milgrom, P. and S. Tadelis (2018). How artificial intelligence and machine learning can impact market design, NBER WP 24282. - Varian, H. (2018). Artificial intelligence, economics, and industrial organization, NBER WP 24839. <p><i>More optional readings:</i></p> <ul style="list-style-type: none"> - 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.
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 13. <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. - Rogerson, W. P. (2015). Economic Theories of Harm Raised by the Proposed Comcast/TWC Transaction, in Kwoka, J. and L. White (2018). <p>Microsoft Europe</p> <ul style="list-style-type: none"> - 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). - Kühn, K.U. and J. Van Reenen, Interoperability and Market Foreclosure in the European Microsoft Case, in Lyons, B. (2009). <p>General Electric-Honeywell</p> <ul style="list-style-type: none"> - Nalebuff, B., Bundling: GE-Honeywell (2001), in Kwoka, J. and L. White (2004). - Vives, X. and G. Staffiero, Horizontal, Vertical and Conglomerate Effects: The GE-Honeywell Merger in the EU, in Lyons, B. (2009).

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	<p><i>Optional readings:</i></p> <ul style="list-style-type: none"> - Rey, P., P. Seabright, and J. Tirole (2001). The Activities of a Monopoly Firm in Adjacent Competitive Markets: Economic Consequences and Implication for Competition Policy, IDEI Working Paper 132, revised 2002. - Rey, P., and J. Tirole (2007). A Primer on Foreclosure, <i>Handbook of Industrial Organization</i>, vol. 3, North-Holland. <p>Whinston, M.D., chapter 4.</p>
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Bibliography

The basic text for the course is:

- Cabral, L., “Introduction to Industrial Organization” (MIT Press, 2017).

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:

- Belleflamme, P. and M. Peitz, “Industrial Organization: Markets and Strategies” (Cambridge University Press 2nd edition, 2015). (Complete up to date IO textbook).
- 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), 2013 (sixth edition), and 2018 (seventh edition). (Very good exposition of competition and regulation cases).
- 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.