GEORGETOWN UNIVERSITY

Masters Degree Program in Applied Economics

ECON 562 – INDUSTRIAL ORGANIZATION

Dr. Arons
Robert.Arons@usdoj.gov include "IO 562" in subject
Spring 202020

DESCRIPTION

PREREQUISITE: ECON 551 – MICROECONOMICS. This course is a survey of modern economic analysis of industrial organization. Emphasis will be on theory but with some coverage of empirical topics. Topics to be covered include theory of the firm, transaction cost economics, contract theory, static analysis of imperfect competition, collusion and dynamic competition, antitrust, product differentiation, price discrimination, incomplete information, bargaining and auctions. This is a hands-on course; students will critically review the economics literature for in-class presentation and active discussion.

GRADING

Homework, Class Participation, Paper Write-Ups and Presentations, and a Final Exam will each count toward 20% of your final course grade.

If you have to miss a class, please let me know.

COURSE STRUCTURE

Each class will consist of two 70 minute sessions separated by a 10 minute break. The previous week's homework will be due at the beginning of class. In the first of the two sessions, we will go over the answers to the homework questions from the previous week and discuss related issues in the topic area.

Each week, some students will choose (or be assigned) a published paper to read and present in the second session of class the following week. Every student in the class will present at least one paper sometime during the course, and likely two or more. When presenting, you should read your assigned paper carefully and be prepared to explain in a 10 minute presentation the paper's main points. *All* students, however, are required to read each week's papers, and may be called upon to answer questions in class.

After the paper presentations and discussion, a new topic area will be introduced. The homework assignment and designation of presenters for the following week will be given at the very end of each class.
No electronic devices (such as laptops, smart phones) allowed during class time. Please stow these away.

ACADEMIC INTEGRITY

The Graduate School's rules and regulations regarding academic integrity are strictly observed

Students are encouraged to form study groups and to collaborate, both on the weekly homework assignments and on analyzing the readings. The emphasis is on *collaboration*, an *active* exchange of ideas and questions that aid in understanding the course material.

TEXTBOOK

Jean Tirole, *The Theory of Industrial Organization*, MIT Press, 1988.

COURSE OUTLINE

Readings are listed on the date due for presentation / discussion, having been assigned at the previous class meeting. Homework (HW) is also assigned at the meeting before it is due.

Week 1 ***Introduction & Overview***

Tirole, "Introduction," pp. 1-14.

Week 2 ***Theories of the Firm*** **(HW#1 due)**

Tirole, "The Theory of the Firm," pp. 15-60.

Ronald H. Coase, "The Nature of the Firm," *Economica*, New Series, Vol. 4, No. 16 (Nov. 1937), pp. 386-405.

Armen A. Alchian and Harold Demsetz, "Production, Information Costs, and Economic Organization," *American Economic Review*, Vol. 65, No. 5 (Dec. 1972), pp. 777-795.

Bengt Holmstrom, "Moral Hazard in Teams," *Bell Journal of Economics*, Vol. 13, No. 2 (Autumn 1982), pp. 324-340.

Steven N.S. Cheung, “The Contractual Nature of the Firm,” *Journal of Law & Economics*, Vol. 26, No. 1 (April 1983), pp. 1-21.

Eugene F. Fama and Michael C. Jensen, “Separation of Ownership and Control,” *Journal of Law & Economics*, Vol. 26, No. 2, (June 1983), pp. 301-325.

Harold Demsetz and Kenneth Lehn, “The Structure of Corporate Ownership: Causes and Consequences,” *Journal of Political Economy*, Vol. 93, No. 6 (Dec. 1985), pp. 1155-1177.

Milton Harris and Artur Raviv, “The Theory of Capital Structure,” *Journal of Finance*, Vol. 46, No. 1 (March 1991), pp. 297-355.

Week 3 *Transaction Cost Economics* (HW#2 due)

Tirole, “Vertical Control,” Chapter 4 through 4.1.1, pp. 169-172.

Benjamin Klein, Robert G. Crawford and Armen A. Alchian, “Vertical Integration, Appropriable Rents, and the Competitive Contracting Process,” *Journal of Law & Economics*, Vol. 21, No. 2 (Oct., 1978), pp. 297-326.

Paul L. Joskow, “Contract duration and Relationship-Specific Investment: Empirical Evidence from Coal Markets,” *American Economic Review*, Vol. 77, No. 1 (March 1987), pp. 168-185.

Armen A. Alchian and Susan Woodward, “The Firm is Dead; Long Live the Firm: A Review of

Oliver E. Williamson’s *The Economic Institutions of Capitalism*,” *Journal of Economic Literature*, Vol. 26, No. 1 (March 1988), pp 65-79.

Benjamin Klein and Kevin M. Murphy, “Vertical Restraints as Contract Enforcement Mechanisms,” *Journal of Law & Economics*, Vol. 31, No. 2 (Oct., 1988), pp. 265-297.

Keith J. Crocker and Scott E. Masten, “Pretia Ex Machina? Prices and Process In Long-Term Contracts,” *Journal of Law & Economics*, Vol. 34, No. 1 (Apr., 1991), pp. 69-99.

Francine Lafontaine, “Agency Theory and Franchising: Some Empirical Results, “ *RAND Journal of Economics*, Vol. 23, No. 2 (Summer 1992), pp. 263-283.

F. Andrew Hanssen, “Vertical Integration during the Hollywood Studio Era,” *Journal of Law & Economics* Vol. 53, No. 3 (Aug. 2010), pp. 519-543.

Week 4 *Property Rights Theory* (HW#3 due)

Ronald H. Coase, “The Problem of Social Cost,” *Journal of Law & Economics*, Vol. 3, No. 1 (Oct. 1960), pp. 1-44.

Harold Demsetz, “Toward a Theory of Property Rights,” *American Economic Review*, Vol. 57, No. 2, Papers and Proceedings of the Seventy-ninth Annual Meeting of the American Economic Association (May, 1967), pp. 347-359.

Sanford J. Grossman and Oliver D. Hart, “The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration,” *Journal of Political Economy*, Vol. 94, No. 4 (Aug. 1986), pp. 691-719.

Oliver Hart and John Moore, “Property Rights and the Nature of the Firm,” *Journal of Political Economy*, Vol. 98, No. 6 (Dec. 1990), pp. 1119-1158.

Christopher Woodruff, “Non-Contractible Investments and Vertical Integration in the Mexican Footwear Industry,” *International Journal of Industrial Organization*, Vol. 20, No. 8 (Oct. 2002), pp. 1197-1224.

George P. Baker and Thomas N. Hubbard, “Contractibility and Asset Ownership: On-board Computers and Governance in U.S. Trucking,” *Quarterly Journal of Economics*, Vol. 119, No. 4 (Nov. 2004), pp. 1443-1479.

Robert C. Feenstra and Gordon H. Hanson, “Ownership and Control in Outsourcing to China: Estimating the Property-Rights Theory of the Firm,” *Quarterly Journal of Economics*, Vol. 120, No. 2 (month 2005), pp. 729-761.

C. Kirabo Jackson and Henry S. Schneider, “Do Social Connections Reduce Moral Hazard? Evidence from the New York City Taxi Industry,” *American Economic Journal: Applied Economics*, Vol. 3, No. 3 (July 2011), pp. 244-267.

Ricardo Alonzo, Wouter Dessein and Nikko Matouschek, “Organizing to Adapt and Compete,” *American Economic Journal: Microeconomics*, Vol. 7, No. 2 (2015), pp. 158-188.

Week 5 *Contract Theory* (HW#4 due)

Georg Noldeke and Klaus M. Schmidt, “Option Contracts and Renegotiation: A Solution to the Hold-up Problem,” *RAND Journal of Economics*, Vol. 26, No. 2 (Summer 1995), pp. 163-179.

Patrick W. Schmitz, “The Hold-up Problem and Incomplete Contracts: A Survey of Recent Topics in Contract Theory,” *MPRA Paper No. 12562*, posted January 2009, available at: mpra.ub.uni-muenchen.de/12562/2/MPRA_paper_12562.pdf

F. Andrew Hanssen, “Revenue Sharing in Movie Exhibition and the Arrival of Sound,” *Economic Inquiry*, Vol. 40, No. 3 (July 2002), pp. 380-402.

Josh Lerner and Jean Tirole, “Standard-Essential Patents,” *Journal of Political Economy*, Vol. 123, No. 3 (June 2015), pp. 547-586.

Nobel Prize Committee, “Oliver Hart and Bengt Holmstrom: Contract Theory,” *Scientific Background* on the 2016 Nobel Prize in Economics (October 10, 2016), available at: www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2016/advanced-economicsciences2016.pdf.

Week 6 Bargaining & Auctions (HW#5 due)
Thomas C. Schelling, “An Essay on Bargaining,” *American Economic Review*, Vol. 46, No. 3 (June 1956), pp. 281-306.
Ariel Rubinstein, “Perfect Equilibrium in a Bargaining Model,” *Econometrica*, Vol. 50, No. 1 (Jan. 1982), pp. 97-109.

Ken Binmore, Ariel Rubinstein and Asher Wolinsky, “The Nash Bargaining Solution in Economic Modeling,” *RAND Journal of Economics*, Vo. 17, No. 2 (Summer 1986), pp. 176-188.

Paul Klemperer, “Auction Theory: A Guide to the Literature,” *Journal of Economic Surveys*, Vol. 13, No. 3 (1999), pp. 227-286.

Alexander Raskovich, “Pivotal Buyers and Bargaining Position,” *Journal of Industrial Economics*, Vol. 51, No. 4 (Dec. 2003), pp. 405-511.

Alexander Raskovich, “Competition or Collusion? Negotiating Discounts Off Posted Prices,” *International Journal of Industrial Organization*, Vol. 25, No. 2 (April 2007), pp. 341-354.

Jason Allen, Robert Clark and Jean-Francois Houde, “The Effect of Mergers in Search Markets: Evidence from the Canadian Mortgage Industry,” *American Economic Review*, Vol. 104, No. 10 (2013), pp. 3365-3396.

Nicola Lacetera, Bradley J. Larsen, Devin G. Pope and Justin R. Sydnor, “Bid Takers or Market Makers? The Effect of Auctioneers on Auction Outcome,” *American Economic Journal: Microeconomics*, Vol. 8, No. 4 (Nov. 2016), pp. 195-229.

Week 7

J. Bradford De Long and Kevin Lang, "Are all Economic Hypotheses False?" *Journal of Political Economy*, Vol. 100, No. 6 (Dec. 1992), pp. 1257-1272.

Abel Brodeur, Mathias Le, Marc Sangnier and Yanos Zylberberg, "Star Wars: The Empirics Strike Back," *American Economic Journal: Applied Economics*, Vol. 8, No. 1 (Jan. 2016), pp. 1-32.

David Colquhon, "The Problem with p-values," *Aeon Magazine*, (2016), available at: https://aeon.co/essays/it-s-time-for-science-to-abandon-the-term-statistically-significant

Week 8 Information, Adverse Selection & Signaling (HW#6 due)

Tirole, "Quality and Information," Chapter 2.3, pp. 106-114.

George A. Akerlof, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics*, Vol. 84, No. 3 (Aug. 1970), pp. 488-500.

Benjamin Klein and Keith B. Leffler, "The Role of Market Forces in Assuring Contractual Performance," *Journal of Political Economy*, Vol. 89, No. 4 (Aug. 1981), pp. 615-641.

David M. Cutler and Sarah J. Reber, "Paying for Health Insurance: The Trade-Off between Competition and Adverse Selection," *Quarterly Journal of Economics*, Vol. 113, No. 2 (May 1998), pp. 433-466.

Michael Spence, "Signaling in Retrospect and the Informational Structure of Markets," *American Economic Review*, Vol. 92, No. 3 (June 2002), pp. 434-459.

Amy Finkelstein and Kathleen McGarry, "Multiple Dimensions of Private Information: Evidence from the Long-Term Care Insurance Market," *American Economic Review*, Vol. 96, No. 4 (Sep. 2006), pp. 938-958.

Week 9 Price Discrimination (HW#7 due)

Tirole, "Price Discrimination," Chapter 3, pp. 133-168.

K. Sridhar Moorthy, "Market Segmentation, Self-Selection, and Product Line Design," *Marketing Science*, Vol. 3, No. 4 (Autumn 1984), pp. 288-307.

Week 10 Market Interactions: Non-Cooperative (HW#8 due)

Tirole, "Monopoly," Chapter 1.

Tirole, "Short-Run Price Competition," Chapter 5.

Tirole, "Product Differentiation…," Chapter 7 through 7.1, pp. 277-287.

Week 11 Market Interactions: Collusive (HW#9 due)

Tirole, "Dynamic Price Competition and Tacit Collusion," Chapter 6.

George J. Stigler, "A Theory of Oligopoly," *Journal of Political Economy*, Vol. 72, No. 1 (Feb. 1964), pp. 44-61.

Week 12 Competition Policy: Mergers (HW#10 due)

Khan, Lisa "Amazon's Antitrust Paradox," The *Yale Law Journal*, Vol. 126 Issue 3 (January 2017) https://www.yalelawjournal.org/note/amazons-antitrust-paradox

Oliver E. Williamson, "Economies as an Antitrust Defense: The Welfare Tradeoffs," *American Economic Review*, Vol. 58, No. 1 (March 1968), pp. 18-36.

Lawrence J. White, "Antitrust and Merger Policy: A Review and Critique," *Journal of Economic Perspectives*, Vol. 1, No. 2 (Autumn 1987), pp. 13-22.

Orley Ashenfelter, David Ashmore, Jonathan B. Baker, Suzanne Gleason and Daniel S. Hosken, "Empirical Methods in Merger Analysis: Econometric Analysis of Pricing in *FTC v. Staples*," *International Journal of the Economics of Business*, Vol. 13, No. 2 (July 2006), pp. 265-279.

Week 13 Competition Policy: Single-Firm Conduct (HW#11 due)

Tirole, "Nonlinear Pricing," Chapter 3.5 through 3.5.2, pp. 153-160.

Dennis W. Carlton and Ken Heyer, "Extraction vs. Extension: The Basis for Formulating Antitrust Policy Towards Single-Firm Conduct," *Competition Policy International*, Vol. 4, No. 2 (Autumn 2008), pp. 285-305. A working paper version is available at: https://core.ac.uk/download/pdf/6565052.pdf

Ronald L. Goettler and Brett R. Gordon, "Does AMD Spur Intel to Innovate More?" *Journal of Political Economy*, Vol. 119, No. 6 (Dec. 2011), pp. 1141-1200.

Patrick DeGraba and John Simpson, "Loyalty Discounts and Theories of Harm in the Intel Investigations," *Journal of Antitrust Enforcement*, Vol. 2, No. 1, (2014), pp. 170-202.

** FINAL EXAM **