

Topics in Competition & Regulation: Econ 4429

Description. This course applies microeconomic theory to analyze government policy on market power.

Regulation controls firms' pricing or other actions (e.g. entry / exit) in industries where competition is viewed as not feasible or not desirable, notably 'natural monopolies.' *Antitrust* or 'competition policy' forbids transactions and practices that threaten competition. Currently, the course focuses on antitrust.

We study *horizontal mergers* (of competing firms), and *vertical mergers* (of firms at different industry stages or, more generally, firms whose products are complements rather than substitutes). We also study potentially anti-competitive practices — that may facilitate *collusion* with rivals (e.g., certain information exchange) or cause unreasonable *exclusion* of rivals (e.g., exclusive dealing requirements).

Throughout, we address how the mergers or practices can cause anti-competitive effects or efficiencies, and illustrate the theories with case studies. The theories, and lessons from U.S. regulatory experience, help evaluate recent proposals for antitrust reform and regulation of Big Tech 'platforms.'

[My syllabi from 2007, 2011, 2014 & 2020 have additional references on antitrust; 2003 has more on regulation.

Note: from p.3 onwards, "+S11" means further references on a topic are in the Spring 2011 syllabus, etc.]

Prerequisites & Grading. I will stress issues over formal techniques, but intermediate micro theory is a prerequisite. Your grade will be based on: 4 take-home exercises 20%; Mid-Term exam 20%; mock trial 25%; and Final exam 35%. Both exams will rely heavily on material covered in class, so regular attendance is vital. In special cases, I may lower or raise a student's score based on poor attendance or exceptionally good class participation. So please attend regularly, and chime in!

- **Mock trials.** The mock trials will be on famous antitrust cases that involved issues covered in this course. For each trial, a team of 3 or 4 students will represent each side. To encourage team collaboration, half the grade on the trial will be based on your team's reports and half on your individual oral performance. I will post more details on what's expected, logistics, etc.
- If there are too many students to fit into the trials, then shortly after the Mid-Term I will request volunteers to skip the trial and shift their points (25%) to the Final or write a report on a trial. If there are not enough volunteers, or too many, I will use a lottery.

Key dates. Mid-term: *Tues.*, Feb 20 (~ 100 minutes, in 3:30 – 6 pm slot). Final: *Sat*, May 11, 4-6 pm.

Readings. There is no required text, but I will reference some pages from: J. Church and R. Ware, *Industrial Organization: A Strategic Approach*, Irwin/McGraw-Hill 2000 ("CW"). The book is out of print but the authors allow you to download and print a personal copy. I posted a copy on Canvas.

- You are certainly *not* expected to read most items on this syllabus — it is mainly a resource should you want to pursue various topics. *I will post the relevant items before each class.*
- All readings (including past syllabi) will be posted on Canvas, under Home icon.

Honor Code. A student found to have violated the Georgetown Honor Code will receive a grade of F, in addition to any penalties imposed by the Honor Council: <http://gervaseprograms.georgetown.edu/honor/> Mobile devices and/or any external materials are *not allowed* during exams.

Some useful sources of information (some of these sources are referenced later):

BOOKS

W.D. Collins ed., *Issues in Competition Law and Policy*, American Bar Association, 2008 (“Collins ed. 2008”)

J. Kwoka and L. White eds. *The Antitrust Revolution*, Oxford U Press. Several editions have been published since 1989, each offering useful overviews of the economics & law, and chapters on specific antitrust cases. I’ll reference them by the edition # and year, e.g., “K&W 4th, 2004.”

JOURNALS (focusing on antitrust and regulation)

Antitrust Bulletin (AB, contains occasional symposia on ‘hot topics’)

Antitrust Law Journal (ALJ, contains occasional symposia on “hot topics”)

Competition Policy International (CPI, < <https://www.competitionpolicyinternational.com/>>)

Economic Report of the President (annual; typically has a chapter on competition or regulation)

Information Economics and Policy (IEP)

Journal of Economic Perspectives (JEP, relatively non-mathematical; occasional relevant symposia)

Journal of Industrial Economics (JIndE, relatively technical)

Journal of Law and Economics (JLE)

Journal of Regulatory Economics (JRE relatively technical)

Public Utilities Fortnightly (covers telecom and energy; relatively non-technical)

Review of Industrial Organization (<<http://ideas.repec.org/s/kap/revind.html>> Includes an annual review by chief economists at DOJ, FTC, FCC and DG IV of their agencies’ main actions)

Telecommunications Policy

The Electricity Journal (relatively non-technical)

The Energy Journal (relatively technical)

INTERNET

W. D. Collins, Applied Antitrust, NYU Law School: www.appliedantitrust.com/index.htm
(antitrust cases & filings, often with web links)

American Antitrust Institute www.antitrustinstitute.org

European Commission, DG IV (Competition) http://ec.europa.eu/dgs/competition/index_en.htm

Federal Communications Commission www.fcc.gov

Federal Energy Regulatory Commission www.ferc.gov

Federal Trade Commission www.ftc.gov

National Association of Regulatory Utility Commissioners (NARUC) www.naruc.org

OECD Competition Directorate www.oecd.org/competition/

U.K. Competition & Markets Authority (CMA)
www.gov.uk/government/organisations/competition-and-markets-authority

U.S. Department of Justice, Antitrust Division www.usdoj.gov/atr

Estimated # of classes per topic is shown at right, e.g., Topic 1 is 0.75 class. Each class is ~ 135 minutes. Strongly recommended readings are denoted by *; d indicates more difficult.

1 WELFARE BACKGROUND, MONOPOLY PRICING AND DEADWEIGHT LOSS (0.75)

- * CW, ch. 2—only these pages: competitive model: pp. 19-25; consumer surplus, producer surplus, total surplus: 25-29; monopoly price and deadweight loss: 31-34; monopolist's inverse-elasticity rule: 36-37; monopoly with linear demand & constant cost: 34-36

2 MONOPSONY (0.5)

- * M. Schwartz, "Buyer Power Concerns and the *Aetna-Prudential* Merger," Address at the 5th Annual Health Care Antitrust Forum, Northwestern University School of Law, October 20, 1999: <<http://www.usdoj.gov/atr/public/speeches/3924.htm>>
- M. Schwartz, "Should Antitrust Assess Buyer Market Power Differently than Seller Market Power?" presentation at DOJ/FTC Workshop on Merger Enforcement, February, 2004

3 OTHER COSTS OR BENEFITS OF MONOPOLY, AND OVERVIEW OF ANTITRUST (0.75)

- * M. Schwartz, "Other Welfare Losses or Gains from Monopoly," class notes — read just pp. 2-3
- * M. Schwartz, "Antitrust Overview," class notes, 4pp
- W. Kovacic and C. Shapiro, "Antitrust Policy: A Century of Economic and Legal Thinking," *JEP*, 14, Winter 2000, 43-60
- J. Tirole, "Market Failures and Public Policy," *AER*, 105, June 2015, 1665-82 (for now, see just p. 1669 last ¶ — p.1670; many of the topics in this article will be covered later in the course)

4 HORIZONTAL MERGERS (3)

4.1 Anti-Competitive "Unilateral Effects" of Horizontal Mergers [+S11]

- CW, ch. 8—Classic Models of Oligopoly: Cournot: 231-8, 243-4; Bertrand: 256-63
- * M. Schwartz, "Cournot Competition and Mergers," class notes (& slides on same topic)
- * M. Schwartz, "Unilateral Effects from Merger: Bertrand Competition with Differentiated Products," slides
- Y. Chen and M. Schwartz, "Churn vs. Diversion in Antitrust: An Illustrative Model," *Economica*, vol. 83, issue 332, 2016, 564-583 (pitfalls in estimating diversion from switching data)

4.2 Merger Guidelines, Market Definition and Concentration, "Coordinated Effects" [+S11]

- U.S. Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines*, August 19, 2010 ("HMG"): <<http://www.justice.gov/atr/public/guidelines/hmg-2010.html>>
- * M. Schwartz, "Horizontal Mergers: Market Definition & Concentration," slides on HMG § 1-4
- * M. Schwartz, "Coordinated Effects from Merger," slides (on HMGs § 7 and USAir/AA merger 2013)
- L. Kaplow, "Why (Ever) Define Markets?" *Harv. L. Rev.*, vol. 124, no. 2, Dec. 2010, 437-516
- J. Harrington, "Evaluating Mergers for Coordinated Effects and the Role of 'Parallel' Accommodating Conduct," *ALJ* vol. 38, no. 3 (2013), 651-668
- DOJ and FTC, *Merger Guidelines*, December 18, 2023. (These Guidelines, which cover both horizontal and vertical mergers, have been heavily criticized as overly reliant on controversial legal concepts and taking a step backward in the economic analysis. See, e.g., Baker et al.,

<http://dx.doi.org/10.2139/ssrn.4574947> or Shapiro <https://www.regulations.gov/comment/FTC-2023-0043-1393>. It remains to be seen if courts will follow the new guidelines.)

4.3 Efficiencies from Horizontal Mergers [+S11]

- J. Farrell and C. Shapiro, "Scale Economies and Synergies in Horizontal Merger Analysis," *ALJ*, 68, 2001, 685-710
- M. Schwartz, "Entry and Merger Efficiencies," slides (pp. 5-15 address efficiencies)
- U.S. v. Anthem/Cigna*, District Court Memorandum Opinion, Feb. 2017 (skeptical that lower payments to healthcare providers due to merged firm's greater scale are true efficiencies)

4.4 Remedies in Horizontal & Vertical Mergers

- M. Schwartz, "Merger Remedies," slides
- M. Motta, *Competition Policy: Theory and Practice*, Cambridge U. Press, 2004, 265-270
- J. Kwoka and D. Moss, "Behavioral Merger Remedies: Evaluation and Implications for Antitrust Enforcement," American Antitrust Institute, 2011

4.5 Challenged Mergers: Case Studies [+S11]

- * *Labelstock* (2003) (market definition & coordinated effects)
M. Schwartz, "Labelstock Merger (2003), slides
Verified complaint of U.S. Department of Justice vs. UPM and Bemis, 2003
<www.usdoj.gov/atr/cases/upm-kymmene.htm>
- AT&T-Mobile* (2011) (unilateral effects)
E. Kwerel, P. Lafontaine and M. Schwartz, "Economics at the FCC 2011-201," *RIO*, vol. 41, no. 4 (2012), 271-302, see section 3.1 <<http://mariusschwartz.com/Home/Research.html>>
S. Besen et al., "An Economic Analysis of the AT&T-T-Mobile USA Wireless Merger," *Journal of Competition Law & Economics*, 2013, 1-25
- * *US Airways/American Airlines* (2013) (coordinated effects)
U.S. v. US Airways and AMR, Amended Complaint, Sep. 2013:
<<http://www.justice.gov/atr/cases/f300400/300479.pdf>>

5 COLLUSION [+S20]

(1)

- * M Schwartz, "Collusion: Exogenous Factors and Facilitating Practices," class notes, 5pp
CW, ch. 10—Dynamic Models of Oligopoly:
- * 305-8: famous case study: Great Electric Equipment Conspiracies
328-34: Punishing cheaters (335-40 are more technical you can skip or just skim them)
308-28: Reaching an Agreement. Some nice case studies:
- * 314-8: Airline Tariff Publishing Company (airlines signaling proposed fares electronically)
318-21: Socony-Vacuum Oil Company (side payments to support cartel)
340-48: Exogenous factors that help or hinder collusion
- * 348-58: Business practices that may facilitate collusion, and antitrust approach
J. Harrington, "How Do Cartels Operate?" 2006: www.econ2.jhu.edu/people/Harrington/fnt06.pdf
J. Connor, "Global Cartels Redux: The Amino Acid Lysine Antitrust Litigation (1996)," March 2007, <http://ssrn.com/abstract=1408070> (you can skip the damages sections)
J. Asker and S. Hemphill, "A Study of Exclusionary Coalitions: The Canadian Sugar Combination, 1887-1889," *ALJ* vol. 83, 2020, 99-126 (some of the points relate to the later topics 6 & 8)

6 VERTICAL CONTROL BY SECURE & UNREGULATED MONOPOLIST (2)

[Study vertical-control reasons that are good or ambiguous for welfare; 8 & 9 will study exclusion.]

6.1 Vertical / Horizontal Distinction, Methods & Motives of Vertical Control

- * M. Schwartz, "Vertical Restraints," slides, 1-3
CW, ch. 21—Vertical Integration and Vertical Restraints, pp. 688-90

6.2 Fixed-Proportions Benchmark and "One-Monopoly-Rent" Argument

- * M. Schwartz, "Vertical Restraints," 4-5

6.3 Tackle Pricing Distortions by Complementary Monopolists ("Double Marginalization")

- * M. Schwartz, "Vertical Restraints," 5-6
- * M. Schwartz, "Complements Pricing & Mergers," slides (2-4 on "Cournot complements" problem; 13-15 on *AT&T/DirecTV merger* 2015; 16-19 on *ABI-Modelo acquisition*, 2013)

6.4 Tackle Contracting Problems [+S14]

- * M. Schwartz, "Vertical Restraints," 7-11
L. Telser, "Why Should Manufacturers Want Fair Trade?" *JLE*, 3, 1960, 86–105
H. Marvel, "Exclusive Dealing," *JLE*, 25, 1982, 1–25
M. Schwartz and G. Werden, "A Quality-Signaling Rationale for Aftermarket Tying," *ALJ*, 64, 1996, 387-404
- * CW, ch. 3, 69-79 (on holdups, and contracts vs. integration); 81-4 (Limits to Firm Size); 101-2
- * J. Tirole, "Market Failures and Public Policy," *AER*, 2015, only pp. 1676-80 (Intellectual Property)
M. Lemley and C. Shapiro, "Patent Holdup and Royalty Stacking," *Texas Law Review*, 85 (2007), 1991-2049
D. Geradin, A. Layne-Farrar, and J. Padilla, "The Complements Problem Within Standard Setting: Assessing the Evidence on Royalty Stacking," *B.U. J. Sci. & Tech. L.*, vol. 14 (2008), 144-176
F. Lafontaine and M. Slade, "Vertical Integration and Firm Boundaries: The Evidence," *Journal of Economic Literature*, 45, 2007, 629-685

6.5 Promote Price Discrimination

- * M. Schwartz, "Vertical Restraints," 12-13 (integration to foil arbitrage)
- * M. Schwartz, "Balloon Principle for Pricing Complements" (class note, 1 p.)

7 EXCLUSION 1: PREDATION [+S11] (0.5)

- * CW, ch. 21—Exclusionary Strategies II: Predatory Pricing, 643-5 (AA case), 654-62 (Empirical Evidence on Predation; Predation in Antitrust)

U.S. v. American Airlines (1999-2002)

DOJ's filings: <www.usdoj.gov/atr/cases/indx199.htm> see especially DOJ's Complaint (5/13/1999), Brief for Appellant (1/11/2002), and Reply Brief (3/19/2002)

A. Edlin and J. Farrell, "The American Airlines Case: A Chance to Clarify Predation Policy (2001)," *K&W* 4th, 2004, 502-27

- 8 EXCLUSION 2: CONTRACTS WITH CUSTOMERS OR SUPPLIERS** [+S11] **(1)**
- M. Schwartz and D. Vincent, “Quantity ‘Forcing’ and Exclusion: Bundled Discounts and Nonlinear Pricing,” in Collins ed. 2008, only sections 1, 5, 7
- d E. Rasmusen, M. Ramseyer, and J. Wiley, “Naked Exclusion,” *AER*, 81, 1991, 1137–45 (more advanced, but Introduction is accessible)
- LePage’s v. 3M* (2003) Some of the briefs by both sides are well worth reading
- AMD v. Intel* (2005-10) [originally a private suit, but NY AG and FTC also sued Intel in US; European Commission also intervened]
- 9 EXCLUSION 3: ACCESS TO INPUTS, COMPLEMENTS, OR NETWORK EFFECTS** **(1.5)**
- 9.1 Access to Inputs or Complements from Integrated Firm (“Vertical Foreclosure”) [+S11]**
- * M. Schwartz, “Vertical Mergers and Foreclosure,” slides (4-14 are on *Comcast-NBCU* 2011) *United States v. Enova Corporation* (1998) (vertical integration – gas pipeline & electric utility) DOJ’s CIS <<http://www.usdoj.gov/atr/cases/f1700/1789.htm>> [Read through Section III.A]
- W. Rogerson, “A Further Economic Analysis of the Proposed Comcast-NBCU Transaction,” Aug. 19, 2010, read pp. 1-18
- AT&T/Time Warner merger: Department of Justice, Complaint, Nov. 20, 2017; and District Court Memorandum Opinion, June 2018 (rejecting government’s challenge)
- S. Moresi and M. Schwartz, “Vertical Mergers with Input Substitution: Double Marginalization, Foreclosure and Welfare,” *Economics Letters*, 22, May 2021
- H. Zenger, “Analyzing Vertical Mergers,” *Competition Policy International*, October 2020
- 9.2 Network Effects: Installed Base Advantage and Compatibility / Interconnection**
- * CW, 637-8; and 698-703 (*U.S. v. Microsoft*) [MOCK TRIAL – more readings will be assigned]
- * M. Schwartz, “Competitor Cooperation and Exclusion in Communications Industries,” in H. Davis and R. Dick, Eds., *E-Commerce Antitrust & Trade Practices*, Practising Law Institute, 2001
- * D. Malueg and M. Schwartz, “Compatibility Incentives of a Large Network Facing Multiple Rivals,” *JIndE*, 54, 2006, 527-567 (read only the Introduction: pp. 527-531)
- J. Crémer et al., *Competition Policy for the Digital Era*, Final Report, European Commission, 2019
- 10 COOPERATION BY COMPETITORS ON INPUTS OR STANDARDS** [+S20, S14, S11]
- 11 U.S. ANTITRUST REFORM?** **(0.25)**
- C. Shapiro, “Antitrust: What Went Wrong and How to Fix It,” *Antitrust*, vol. 35, Summer 2021, 33-45
- C. Shapiro, “Protecting Competition in the American Economy: Merger Control, Tech Titans, Labor Markets,” *JEP*, vol. 33, Summer 2019, 69-93
- A. Reynolds, “The Return of Antitrust?” *Regulation*, Spring 2018, 24-30
- C. Winston, “Back to the Good—or Were They the Bad—Old Days of Antitrust? A Review Essay of Jonathan B. Baker’s *The Antitrust Paradigm: Restoring a Competitive Economy*,” *JEL* vol. 59, March 2021, 265-84
- J. Schlesinger, “The Return of the Trustbusters,” *WSJ* Aug. 30, 2021
- G. Werden and L. Froeb, “Don’t Panic: A Guide to Claims of Increased Concentration,” *SSRN* 2018

12 REGULATE BIG TECH ‘PLATFORMS’? (0.75)

12.1 Proposed Restrictions: Acquisitions, Organic Growth, Compatibility, Nondiscriminatory Access

- * S. Sussman, “The Roots of Congress’ Pathbreaking Report on Big Tech,” *ProMarket*, Oct. 2020
- * R. Picker, “The House’s Recent Spate of Antitrust Bills Would Transform Big Tech,” *ProMarket* June 2021
- * D. Melamed, “A Missed Opportunity,” (critiquing U.S. House Report on Digital Markets), *CPI* Jan. 2021, 6-11
- T. Hazlett, “A Lesson for Today’s Tech Trustbusters,” *WSJ*, January 9, 2020

12.2 Economic Perspectives on Proposed Interventions

- * J. Tirole, Interview on regulating large tech firms, *Quartz*, June 2018
- * R. Picker, “Investigation into the State of Competition in the Digital Market Place”, Statement to House Committee, May 2020
- * R. Picker, “Forcing Interoperability on Tech Platforms Would Be Difficult to Do,” *ProMarket*, March 2021
- R. Gilbert, “Separation: A Cure for Abuse of Platform Dominance?” *IEP* vol. 54, 2021 (15 pp)
- M. Katz, “Big Tech Mergers: Innovation, Competition and the Acquisition of Emerging Competitors,” *IEP* vol. 54, 2021 (17 pp)
- H. Varian, “Seven Deadly Sins of Tech?” *IEP* vol. 54, 2021 (11 pp)
- F. Scott Morton et al., “Equitable Interoperability: the ‘Super Tool’ of Digital Platform Governance,” *SSRN* July 2021 (but see M. Cave 2021 below, fn.6—interoperability for platforms is complex)
- Kretschmer & Werner, “Regulating Platforms as Public Utilities,” March 2021
- J. Vickers, “Competition Policy and Property Rights,” *Economic Journal*, vol. 120, 2010, 375-392: <<http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0297.2010.02360.x/pdf>>
- J. Vickers, “Abuse of Market Power,” *Economic Journal*, vol. 115, June 2005, pp. F244-F261

12.3 Regulation of Access: U.S. Experience with Traditional Industries. [+ S11, S07, S03]

- * M. Schwartz, “Vertical Restraints,” 16-17
- CW, ch. 26.3—Regulatory Reform in Network Industries, 861-70
- T. Brennan, “Why Regulated Firms Should Be Kept Out of Unregulated Markets: Understanding the Divestiture in United States v. AT&T,” *AB* 32 (1987), 741–93
- * M. Schwartz, “Reforming Telecom Regulation: An Essay Review of Nuechterlein and Weiser’s *Digital Crossroads*,” *RNE* 7 (2008), read only sections 3.1 and 4: pp. 419-420 and 421-431
- * M. Cave, “What Lessons Can Be Drawn for Digital Platforms from the Regulation of Traditional Networks?” *CPI TechReg*, Dec. 2021, 21-27 (fn. 6 cautions on interoperability for platforms)
- G. Faulhaber, “Policy-Induced Competition: The Telecommunications Experiments,” *IEP*, 15, 1, March 2003, 73-97
- J. Farrell and P. Weiser, “Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age,” *Harvard Jr. of Law and Technology*, 17, Fall 2003, 85-134
- P. Areeda, “Essential Facilities: An Epithet in Need of Limiting Principles,” *ALJ*, 58, no. 3, 1990, 841-53

13 MOCK TRIALS: ANTITRUST CASES [additional readings will be posted] **(3)**

13.1 U.S. v. Apple, Inc. et al. (E-Books) (2013, collusion)

G. Gaudin and A. White, "On the Antitrust Economics of the Electronic Books Industry,"
September 2014 <<http://ssrn.com/abstract=2352495>>

13.2 XM-Sirius (2008, horizontal merger)

S. Moresi and S. Salop, "Sirius/XM Satellite Radio Merger (2008)," in K&W 6th, 2014, 92-116

13.3 U.S. v. Microsoft (2000, exclusionary conduct)

* CW, ch. 22, 698-703 (U.S. v. Microsoft)

"The Microsoft Case," Symposium in *JEP* 15, Spring 2001, 25-80 (three papers – by Gilbert and Katz, by Klein, and by Whinston)