

*Economics 220B*  
**REGULATION & ANTITRUST**

**Description.** This is the second of two graduate courses in industrial organization. It will cover regulation and antitrust policy, concentrating on control of natural monopoly in theory and in practice. Treatment of the material will mainly be theoretical with particular emphasis on strategic behavior. Nevertheless, the telephone, cable TV and electric power industries will be the subject of careful case study. We will also draw illustrations from the railroad, airline and natural gas industries. The coverage of antitrust will be selective as it is tailored to these same industries and the competition issues they raise. Note that this course will not cover “social regulation” including environmental, health and safety regulation. And we will delve only superficially into the political economy of regulation. If you are interested in this area, it is strongly recommended that you take one of the excellent courses on positive political theory of regulation offered by the Haas Business School.

**Instructor.** Glenn Woroch, 623 Evans, 642-4308, glenn@econ.berkeley.edu.

**Office hours.** Wednesday, 2:15-3:45 PM, 623 Evans.

**Web Page.** Wherever possible, class materials will be put up on the course web page located at:  
<http://elsa.berkeley.edu/~woroeh/econ220b.html>

Notices posted to this page will also be a means of communication for the class.

**Textbooks.** No textbook is assigned for this course, but several books cover large portions of the material and have been put on reserve:

William Baumol, John Panzar, and Robert Willig, Contestable Markets and the Theory of Industry Structure, Harcourt Brace Jovanovich, 1982.

Sandy Berg and John Tschirhart, Natural Monopoly Regulation, Cambridge University Press.

Stephen Brown and David Sibley, The Theory of Public Utility Pricing, Cambridge Univ. Press, 1986

Alfred Kahn, The Economics of Regulation, volumes I and II, John Wiley, 1971.

Jean-Jacques Laffont and Jean Tirole, A Theory of Incentives in Procurement and Regulation, 1993.

William Sharkey, The Theory of Natural Monopoly, Cambridge University Press, 1982.

Richard Schmalensee, The Control of Natural Monopoly, Lexington Books, 1979.

Daniel Spulber, Regulation and Markets, MIT Press, 1991.

Kenneth Train, Optimal Regulation, MIT Press, 1991.

**Presentations.** Students will select a paper, either one of the optional readings or a paper that we agree upon, and present it to the class. Presentations should last about 15-20 minutes. In the past, most students usually use overhead transparencies and hand out short summaries, but this is not necessary.

**Term Papers.** Each student will write a paper of moderate length on a topic related in some manner to the course material. You must also submit a 1-2 page precis about 8 weeks into the course describing your topic, reporting on progress to date, and proposing a workplan.

**Exams.** Lastly, there will be a midterm exam sometime around the seventh or eighth week.

## ***READING LIST***

Two categories of readings are listed below. Those with a “\*” are required reading and will be available in the course reader. Additional readings ensure the coverage is more complete and offer possibilities for paper presentations. Approximate dates are given for lectures on the various topics.

### **I. NATURAL MONOPOLY AND ITS REGULATION**

#### **1. History, Rationale and Methodologies [January 22]**

- \* P. Joskow and R. Noll, “Regulation in Theory and Practice: An Overview,” in Studies in Public Regulation, G. Fromm (ed.), MIT Press, 1980.
- \* R. Braeutigam, “Optimal Policies for Natural Monopolies” Chapter 23 in Handbook of Industrial Organization, (Vol. 2) North-Holland, 1989.

#### **2. Multiproduct Natural Monopoly & Sustainability [January 29]**

- \* W. Baumol, et. al., “Multiproduct cost concepts,” in Contestable Markets, 1982.
- \* J. Panzar and R. Willig, “Economies of Scope,” American Economic Review, May 1981.
- \* G. Faulhaber, “Cross-subsidization: Pricing in Public Enterprises,” American Econ. Review, 1975.
- \* W. Baumol, “On the Proper Cost Tests for Natural Monopoly in a Multiproduct Industry,” American Economic Review, December 1977.

#### **3. Efficient, Equitable and Equilibrium Prices [February 5]**

- \* S. Brown and D. Sibley, “Welfare and Efficiency in Pricing,” Chapter 3 and Mathematical Appendix in The Theory of Public Utility Pricing.
- \* W. Baumol, E. Bailey and R. Willig, “Weak Invisible Hand Theorems on the Sustainability of Prices in a Multiproduct Monopoly,” American Economic Review, 1977.

#### **4. Regulated Ratemaking in Theory and Practice [February 12]**

- \* O. Williamson, “Peakloads and Optimal Capacity under Indivisibility Constraints,” American Economic Review, September 1966.
- \* R. Willig, “Pareto-superior Nonlinear Outlay Schedules,” Bell Journal of Economics, 1979.
- \* R. Braeutigam, “An Analysis of Fully Distributed Cost Pricing in Regulated Industries,” Bell Journal of Economics, Spring 1980.

### **II. MONOPOLY REGULATION IN PRACTICE**

#### **5. Rate of Return Regulation [February 19]**

- \* K. Train, “The Averch-Johnson Model,” Chapter 1 in Optimal Regulation.
- \* A. M. Spence, “Monopoly, Quality and Regulation,” Bell Journal of Economics, Autumn 1975.
- \* E. Bailey, “Regulation and Innovation,” Journal of Public Economics, December 1974.

#### **6. Franchise Bidding [February 26]**

- \* H. Demsetz, “Why Regulate Utilities?” Journal of Law & Economics, 1968.
- \* M. Loeb and W. Magat, “A Decentralized Method for Utility Regulation,” Journal of Law & Economics, 1979.
- \* P. Crampton, “Selling Spectrum Rights,” Journal of Economic Perspectives, Summer 1994.

### **7. Price Cap and Benchmark Regulation [March 5]**

- \* M. Beesley and S. Littlechild, "The Regulation of Privatized Monopolies in the U.K.," Rand Journal of Economics, 20:3, Autumn 1989.
- \* T. Brennan, "Regulation by Capping Prices," Journal of Regulatory Economics, 1989.
- \* A. Shleiffer, "A theory of yardstick competition," Rand Journal of Economics, 1985.
- I. Vogelsang, "Price cap regulation of telecommunications services: a long-run approach," in Competition and Regulation of Public Utilities, M. Crew (ed.) 1991.

### **8. Survey of the Telephone and Cable TV Industries [March 12]**

- \* R. Crandall and L. Waverman, "The Telephone Industry in the U.S. and Canada" and "Regulating the Telephone Industries," Chapters 1 and 2 in Talk Is Cheap: The Promise of Regulatory Reform in Northamerican Telecommunications, Brookings, 1996.
- \* R. Crandall and H. Furchtgott-Roth, "The Evolution of Cable Television" and "Cable Rate Regulation," Chapters 1 and 2 in Cable TV: Regulation or Competition?, Brookings, 1996.
- W. Baumol, and J. G. Sidak, Toward Competition in Local Telephony, MIT Press, 1994.

## **III. REALITY CHECKS**

### **9. Effects of Regulation in the Electric Power Industry [March 19]**

- \* G. Stigler and C. Friedlander, "What Can Regulators Regulate? The Case of Electricity," Journal of Law and Economics, October 1962.
- \* P. Joskow, "Pricing Decision of Regulated Firms: a Behavioral Approach," Bell Journal of Economics, Spring 1973.
- \* C. Petersen, "An Empirical Test of Regulatory Effects," Bell Journal of Economics, Spring 1975.

### **10. Political Theories of Regulation and Deregulation [March 26]**

- \* S. Peltzman, "Towards a More General Theory of Regulation," Journal of Law & Economics.
- \* S. Peltzman, "The Economic Theory of Regulation after a Decade of Deregulation," Brookings Papers: Microeconomics, 1989.
- G. Stigler, "The Theory of Economic Regulation," The Bell Journal of Economics, 1971.
- R. Posner, "Taxation by regulation," Bell Journal of Economics, 1971.
- G. Becker, "A theory of competition among pressure groups for political influence," Quarterly Journal of Economics, August 1983.

### **11. Contracting vs. Administration [March 26]**

- \* V. Goldberg, "Regulation and Administered Contracts," Bell Journal of Economics, 1976.
- \* O. Williamson, "Franchise Bidding for Natural Monopoly: in General and with Respect to CATV," Bell Journal of Economics, 1976."

## **IV. DESIGN OF OPTIMAL REGULATORY MECHANISMS**

### **12. Overview of the New Economics of Regulation**

- P. Joskow and R. Schmalensee, "Incentive Regulation for Electric Utilities," Yale Journal on Regulation, 4:1, Fall 1986.
- D. Baron, "Design of Regulatory Mechanisms and Institutions," in Handbook of I.O., 1989.
- J.-J. Laffont, "The New Economics of Regulation Ten Years After," Econometrica, 1994.

### **13. Iterative and Dynamic Mechanisms [April 2 and 9]**

- \* I. Vogelsang and J. Finsinger, "A Regulatory Adjustment Process for Optimal Pricing by Multiproduct Monopoly Firms," Bell Journal of Economics, 1979.
- \* D. Sappington, "Strategic Firm Behavior under a Dynamic Regulatory Adjustment Process," Bell Journal of Economics, Spring, 1980.
- D. Salant, and G. Woroch, "Trigger Price Regulation," Rand Journal of Economics, Spring 1992.
- R. Gilbert and D. Newbery, "The Dynamic Efficiency of Regulatory Constitutions," Rand Journal of Economics, Winter 1994.

### **14. Agency Approach [April 9 and 16]**

- \* D. Baron and R. Myerson, "Regulating a Monopolist with Unknown Costs," Econometrica, July 1982.
- \* J.-J. Laffont and J. Tirole, "Using Cost Observation to Regulate Firms," Journal of Political Economy, 1986.
- T. Lewis and D. Sappington, "Regulating a Monopolist with Unknown Demand," American Economic Review, December 1988.

## **V. DEREGULATION WITH SPECIAL REFERENCE TO NETWORK INDUSTRIES**

### **15. Entry Control, with and without Incumbent Regulation [April 23]**

- \* R. Braeutigam, "Optimal Pricing with Intermodal Competition," American Economic Review, 1979.
- \* M. Perry, "Scale Economies, Imperfect Competition and Public Policy," Journal of Industrial Economics, v. 32, 1984.
- J.-J. Laffont and J. Tirole, "Optimal Bypass and Cream Skimming," American Economic Review, December 1990.

### **16. Efficient Pricing of Bottleneck Services [April 30]**

- \* W. Baumol, "Some Subtle Pricing Issues in Railroad Regulation," International Journal of Transport Economics, August 1983.
- \* W. Baumol and J. G. Sidak, "The Pricing of Inputs Sold to Competitors," Yale Journal of Regulation, 1994.
- D. Spulber and J.G. Sidak, "Access Pricing and Deregulation," Northwestern University working paper, February 1996.

### **17. Foreclosure and Essential Facilities [May 7]**

- \* J. Panzar, "Sustainability, efficiency and vertical integration," in Regulated Industries and Public Enterprise, edited by P. Kleindorfer and B. Mitchell, 1979.
- \* J. Ordover, A. O. Sykes and R. Willig, "Nonprice Anticompetitive Behavior by Dominant Firms toward the Producers of Complementary Products," in Antitrust Regulation: Essays in Memory of John J. McGowan, F. Fisher (ed.), 1985.
- \* D. Reiffen and A. N. Kleit, "Terminal Railroad Revisited: Foreclosure of an Essential Facility or Simply Horizontal Monopoly?," Journal of Law and Economics, vol. 33, pp. 419- 438, 1990.
- N. Economides and G. Woroch, "Interconnection and Foreclosure of Network Competition," draft, 1995.