

Syllabus

ECN G771
Framework of Industrial Organization
Spring 2008

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Course Description

This is the first of two courses in the two-course sequence in the economics of industrial organization and antitrust in the Northeastern economics PhD program.

This course will cover both the theoretical foundations of industrial organization and related empirical research. The second course in the sequence will focus on industry and antitrust policy. However, there is considerable overlap between the two courses. The emphasis in both courses is on learning tools and techniques for original research and policy analysis as well as to guide students towards interesting research topics.

This course will focus on the consequences and the determinants of market structure. The early topics will be on the behavior of monopolists, including price discrimination, product quality, and durable goods. The main part of the course will focus on oligopoly, entry and exit, horizontal and vertical product differentiation, price discrimination, and switching costs.

The next section of the course looks at information. The focus is on experience goods and reputations as a mechanism for product quality. The next section is organizational issues including the theory of the firm, the strategic impacts of vertical integration/vertical restraints, strategic delegation, and strategic impacts of horizontal integration, and other topics in organizational decision-making. Finally, some additional topics such as research and development, network externalities and standardization, and demand uncertainty, will be covered if time permits.

Prerequisites:

The prerequisites are ECN G710 (Micro Theory) and ECN G740 (Applied Econometrics)

Grading:

Grading will be based on 1) a 10-20 page research paper (or paper proposal), 2) a referee report (2 to 3 page description and evaluation) of a current research paper, 3) an in-class presentation of a research paper, 4) problem sets, 5) class preparedness and participation, and 6) a final exam. The presentation can be on the same paper as the referee report.

Class participation:

Please do the assigned reading before class. You will get far more out of the class. To encourage you to do the reading, I will ask questions in class about the readings, particularly when teaching a research paper. You can use the following questions to help you prepare readings:

- What is the research question? Why is it interesting?
- How does the paper fit in the literature?
- What are the conclusions?
- What are the strengths and weaknesses? What prevented the authors from addressing the weaknesses?
- What did you learn from the paper?

And for empirical papers:

- What is the data and where did it come from?
- What is the estimation method and identification strategy?
- What is the relationship to theory and policy?

And for theoretical papers:

- What are the key assumptions? Why these assumptions?
- What is the relationship to empirical work? Are there testable implications?

Required Textbook:

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

For a broader coverage of empirical and public policy issues, you should also read:

Carlton, Dennis W. and Jeffrey M. Perloff. *Modern Industrial Organization*. New York, New York: Addison-Wesley.

F.M. Scherer and D. Ross. 1990. *Industrial Market Structure and Economic Performance*, 3rd ed., Houghton Mifflin.

K. Viscusi, J. Vernon and J. Harrington, *Economics of Regulation and Antitrust*, 3rd ed., MIT, 2000.

Church, Jeffrey and Roger Ware. 2000. *Industrial Organization: A Strategic Approach*. Irwin McGraw-Hill.

You may also want to read the surveys in:

Schmalensee, R. and R. Willig, eds. *The Handbook of Industrial Organization*, Volumes 1, 2, & 3 North-Holland.

Other Noteworthy Books:

Besanko, Dranove, and Shanley, *Economics of Strategy*, John Wiley & Sons.

Sutton, John, *Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution of Concentration*, MIT Press, 1991.

Sutton, John, *Technology and Market Structure*, MIT Press, 1998.

Topics List

Part I Market Power

- 1) Monopoly
- 2) Product Quality and Durable Goods
- 3) Price Discrimination

Part II Imperfect Competition

- 4) Static Oligopoly
- 5) Dynamic Oligopoly I – Repeated Games and Tacit Collusion
- 6) Dynamic Oligopoly I – Tacit Collusion and Multi-market Contact
- 7) Cartels and Collusion
- 8) Product Differentiation
- 9) Dynamic Oligopoly II – Two Stage Games and Strategic Behavior
- 10) Entry and Exit
- 11) Price Discrimination and Competition

Part III Product Quality and Information

- 12) Price Discrimination and Mechanism Design
- 13) Monopoly and Product Quality
- 14) Monopoly and Experience Goods
- 15) Competition and Experience Goods
- 16) Advertising and Disclosure

Part IV Theory of the Firm/Strategic Role of Organizational Decisions

- 17) Theory of the Firm
- 18) Strategic Delegation
- 19) Strategic Role of Contracts, Contracts as a Barrier to Entry
- 20) Vertical Mergers and Foreclosure
- 21) Common Agency and Exclusive Dealing

Part IV Technology and Industry Dynamics

- 22) R&D
- 23) Network Externalities
- 24) Switching Costs
- 25) Learning Curves and Competition

Part V Pricing with Demand Uncertainty

Papers marked with “•” are required reading.

Papers marked with “□” are suggestions for papers for students to present in class.

Papers marked (PDF) are papers available on JSTOR or that I will make available online.

I. Market Power

A. Monopoly, Product Quality, and Durable Goods

- Tirole, Chapter 1: pp 65-87 and Chapter 2: pp. 100-106.
- Chevalier, J. and A. Goolsbee, “Are Durable Goods Consumers Forward Looking? Evidence from College Textbooks,” Working paper.
- Coase, Ronald, “Durability and Monopoly,” *Journal of Law and Economics*, April 1972, 143-149.
- Schmalensee, R., “Market Structure, Durability, and Quality: A Selective Survey,” *Economic Inquiry*, 17, 1979, 177-196.
- von der Fehr, Nils-Henrik Morch, and Kai-Uwe Kuhn, “Coase versus Pacman: Who Eats Whom in the Durable Goods Monopoly,” *Journal of Political Economy*, August 1995, 785-812.
- Kuhn, Kai-Uwe; Padilla, A.-Jorge, Product Line Decisions and The Coase Conjecture, *RAND Journal of Economics*; 27(2), Summer 1996, pages 391-414.
- Butz, D., “Durable-Good Monopoly and Best-Price Provisions,” *American Economic Review*; 80(5), December 1990, pages 1062-7.
- van Ackere and Reyniers, “Trade-Ins and Introductory Offers in a Monopoly,” *RAND Journal of Economics*, Spring 1995.
- Carlton, Dennis and Robert Gertner, “Market Power and Mergers in Durable-Goods Industries,” *Journal of Law and Economics*, Vol. 32, No. 2, Part 2, pp. S203-S226.
- Hendel, Igal, and Alessandro Lizzeri, “Adverse Selection in Durable Goods Market,” *American Economic Review*, December 1999. (PDF)
- Hendel, Igal, and Alessandro Lizzeri, “Interfering with Secondary Markets,” *RAND Journal of Economics*, Spring 1999, vol. 30, no. 1. (PDF)

B. Price Discrimination

- Tirole, Chapter 3: pp. 133-142.
- Anderson, Eric and James Dana, “When is Price Discrimination Profitable?” (PDF).

- Shepard, Andrea, “Price Discrimination and Retail Configuration,” *Journal of Political Economy*;99(1), February 1991, pages 30-53. (PDF)
- Stokey, N. (1979): “Intertemporal Price Discrimination,” *Quarterly Journal of Economics*, 93, 355–371.
- Deneckere, R. J., and R. P. McAfee (1996): “Damaged Goods,” *Journal of Economics and Management Strategy*, 5(2), 149–174.
- Rosen, Sherwin, and Andrew Rosenfeld, “Ticket Pricing,” *Journal of Law and Economics*; 40(2), October 1997, pages 351-76.

II. Imperfect Competition

A. Static Models of Oligopoly

- Tirole, Chapter 5.
- Shapiro, C., “Theories of Oligopoly Behavior,” *Handbook of Industrial Organization*, Vol. I, chap. 6.
- Mas-Colell, A., M. Whinston, and J. Green, *Microeconomic Theory* (Oxford University Press, 1995), Section 12.C.
- Vives, X., *Oligopoly Pricing: Old Ideas and New Tools*, Cambridge: MIT Press, 1999.
- Kreps, D. and J. Scheinkman, “Quantity Precommitment and Bertrand Competition Yield Cournot Outcomes,” *Bell Journal of Economics*, Autumn 1983, 326–37.
- Klemperer, P. and M. Meyer, “Supply Function Equilibria in Oligopoly Under Uncertainty,” *Econometrica*, November 1989, 1243-78.

Empirical Studies

- Bresnahan, T., “The Oligopoly Solution is Identified,” *Economics Letters*, 1980, 10, 87-92.
- Bresnahan, T., “Empirical Studies of Industries with Market Power,” *Handbook of Industrial Organization*, Vol. 2, Chapter 17.
- Corts, K. “Conduct Parameters and the Measurement of Market Power,” *JE*, November 1998, 227-50.
- Genesove, D. and W. Mullin, “Testing Static Oligopoly Models: Conduct and Cost in the Sugar Industry, 1890-1914,” *RAND Journal of Economics*, Summer 1998, 355-77.
- Panzar, J. and J. Rosse, “Testing for 'Monopoly' Equilibrium,” *Journal of Industrial Economics*, June 1987, 443-56.

Salinger, M., "The Concentration-Margin Relationship Reconsidered," *Brookings Papers on Economic Activity: Microeconomics*, 1990, 287-335.

Schmalensee, R. "Inter-industry Studies of Structure and Performance," *Handbook of Industrial Organization*, Vol. 2, Chapter 16.

Wolfram, C., "Measuring Duopoly Power in the British Electricity Spot Market," *American Economic Review*, September 1999, 805-26.

B. The Dynamics of Price Competition and Tacit Collusion

- Tirole, Chapter 6.

Dana, James D., and Yuk-Fail Fong, (2006) "Long-lived Consumers, Intertemporal Bundling, and Tacit Collusion," working paper.

Green, E. and Robert Porter, "Non-cooperative Collusion Under Imperfect Price Information," *Econometrica*, 52:87-100, 1984.

Rotemberg, J. and G. Saloner, "A Supergame-Theoretic Model of Price Wars During Booms," *American Economic Review*, June 1986, 390-407.

Staiger, Robert W., and Wolak, Frank A., "Collusive Pricing with Capacity Constraints in the Presence of Demand Uncertainty," *RAND Journal of Economics*; 23(2), Summer 1992, pages 203-20.

Bagwell, K., and R. Staiger, "Collusion over the Business Cycle," *RAND Journal of Economics*, Spring 1997, vol. 28, no. 1, pp. 82-106.

Borenstein, S., and A. Shepard, "Dynamic Pricing in Retail Gasoline Markets" *RAND Journal of Economics*, Autumn 1996.

Haltiwanger, John and Joseph Harrington, "The Impact of Cyclical Demand Movements on Collusive Behavior," *RAND Journal of Economics*, Vol. 22 (1), pp. 89-106.

Empirical Studies

Porter, Robert, 1983, "A Study of Cartel Stability," *Bell Journal of Economics*, 14: 301-314.

McGahan, A. M. "Cooperation in Prices and Capacities: Trade Associations in Brewing after Repeal." *Journal of Law and Economics* (October 1995).

C. Multimarket Contact

- Tirole, Chapter 6, p. 251.

- Bernheim and Whinston, “Multimarket Contact and Collusive Behavior.” *RAND Journal of Economics*, 1990.

Winter, R., “Colluding on Relative Prices,” *RAND Journal of Economics*, Summer ‘97.

Empirical Studies

- E. Han Kim; Vijay Singal, “Mergers and Market Power: Evidence from the Airline Industry,” *The American Economic Review*, Vol. 83, No. 3. (Jun., 1993), pp. 549-569.
- William N. Evans; Ioannis N. Kessides, Living by the "Golden Rule": Multimarket Contact in the U.S. Airline Industry, *The Quarterly Journal of Economics*, Vol. 109, No. 2. (May, 1994), pp. 341-366.

D. Product Differentiation, Market Structure, and Long Run Competitive Analysis

- Tirole, Chapter 2, sections 2.1.
- Tirole, Chapter 7, except 7.3

Sutton, John, *Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution of Concentration*, MIT Press, 1991, Chapters 2 and 3.

Schmalensee, "Sunk Cost and Market Structure: A Review Article." *Journal of Industrial Economics*, 40 (June 1992): 125-134.

Bresnahan, Timothy, “Sutton’s Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution of Concentration,” *RAND Journal of Economics*, Vol. 23, No. 1, Spring 1992, pp. 137-152.

E. Strategic Behavior and Commitment

- Tirole, Chapter 8.
- Bagwell and Wolinsky, “The Role of Commitment,” in “Game Theory and Industrial Organization,” *Handbook of Game Theory*, volume 3.
- Maggi, Giovanni, “The Value of Commitment with Imperfect Observability and Private Information,” *Rand Journal of Economics*, Vol. 30, no.4, Winter 1999.
- Maggi, Giovanni, “Endogenous Leadership in a New Market,” *Rand Journal of Economics*, Vol. 27, no.4, 1996.

Ghemawat, P., *Commitment: The Dynamic Theory of Strategy*, The Free Press, 1991.

Salop and Sheffman, “Raising Rival’s Cost,” *American Economic Review*, 1983, 267-271.

Gelman and Salop, “Judo Economics,” *Bell Journal of Economics*, 1983, 315-325.

Donnenfeld, S. and S. Weber, "Limit Qualities and Entry Deterrence," *RAND Journal of Economics* Spring 1995.

Gilbert and Vives, X. "Entry Deterrence and the Free Rider Effect," *REStud*, vol. 53 1986, pp. 71-83.

Bagwell And Ramey, "Capacity, Entry, and Forward Induction," *RAND Journal of Economics*, Winter '96.

□ Scott Morton, F.M., "Entry Decisions in the Generic Pharmaceutical Industry," *RAND Journal of Economics*, vol. 30, 1999, no. 3. (PDF).

□ Dafney, Leemore "Games Hospitals Play: Entry Deterrence in Hospital Procedure Markets," *Journal of Economics and Management Strategy*, Fall 2005, 14(3): 513-542.

F. Entry and Exit

Ghemawat and Nalebuff, "Exit", *RAND Journal of Economics*, 1985, 185-194.

Fishman, -Arthur, "Entry Deterrence in a Finitely-Lived Industry," *RAND Journal of Economics*; 21(1), Spring 1990, pages 63-71.

Schary, Martha, "The Probability of Exit," *RAND Journal of Economics*; 22(3), Autumn 1991, pp. 339-53.

Dunne, -Timothy; Roberts, -Mark-J.; Samuelson, -Larry, "Patterns of Firm Entry and Exit in U.S. Manufacturing Industries", *RAND Journal of Economics*, 19(4), Winter 1988, pages 495-515.

Ghemawat and Nalebuff, "The Devolution of Declining Industries", *Quarterly Journal of Economics*, Vol. 105, 1990, pp. 167-186.

Reynolds, S.S., "Plant Closings and Exit Behavior in Declining Industries," *Economica*, Vol. 55, 1988, pp. 493-503.

Whinston, M., "Exit with Multiplant Firms", *RAND Journal of Economics*, vol. 19, No. 4, Winter 1988.

Lieberman, M. B., "Exit from Declining Industries: Shakeout or Stakeout?" *RAND Journal of Economics*, vol. 2, no. 4, Winter 1990. Empirical. Small plants and Multiplant firms' plants exit first.

Londregon, J. "Entry and Exit Over the Industry Life Cycle", *RAND Journal of Economics*, Vol. 21, 1990, pp. 446-458.

G. Price Discrimination and Competiton

Corts, K. "Third-Degree Price Discrimination in Oligopoly: All-Out Competition and Strategic Commitment," *RAND Journal of Economics*; 29(2), Summer 1998, pages 306-23. (PDF)

Stole, Lars, "Price Discrimination in Competitive Markets," *Handbook of Industrial Organization*, Vol. 3, in progress. (PDF).

Dana, James, "Advanced Purchase Discounts and Price Discrimination in Competitive Markets," *Journal of Political Economy*, April 1998. (PDF)

Holmes,-Thomas-J., "The Effects of Third-Degree Price Discrimination in Oligopoly," *American Economic Review*; 79(1), March 1989, pages 244-50. (PDF)

Borenstein,-Severin, "Price Discrimination in Free-Entry Markets," *RAND Journal of Economics*;16(3), Autumn 1985, pages 380-97. (PDF)

Borenstein,-Severin; Rose,-Nancy-L., "Competition and Price Dispersion in the U.S. Airline Industry," *Journal of Political Economy*;102(4), August 1994, pages 653-83.

Locay,-Luis; Rodriguez,-Alvaro, Locay and Rodriguez, "Price Discrimination in Competitive Markets," *Journal of Political Economy*;100(5), October 1992, pages 954-65.

□ Shaffer, Greg and Z. John Zhang "Pay to Switch or Pay to Stay: Preference-Based Price Discrimination in Markets with Switching Costs," *Journal of Economics and Management Strategy*, 395-416, Fall 1995. (PDF).

Thisse, and Vives, "On the Strategic Choice of Spatial Policy," *American Economic Review*, Vol. 78 (1988), pp. 122-137.

□ Nevo, A. and C. Wolfram (2002) "Why do Manufacturers Issue Coupons? An Empirical Analysis of Breakfast Cereals," *RAND Journal of Economics*, 33: 319-339.

□ Busse, M. and M. Rysman (2004) "Competition and Price Discrimination in Yellow Pages Advertising," *RAND Journal of Economics*, forthcoming.

E. Multiproduct Quality Competition

Johnson, Justin and David Myatt, "Multiproduct Quality Competition: Fighting Brands and Product Line Pruning", *American Economic Review*, 2003.

Johnson, Justin and David Myatt, (2006) "Multiproduct Cournot Oligopoly", *RAND Journal of Economics*, Volume 37, No. 3

Ellison, G. (2002): "A Model of Add-on Pricing," *Quarterly Journal of Economics*, 120 (2), 585-637, 2005.

Champsaur, P., and J.-C. Rochet (1989): "Multiproduct Duopolists," *Econometrica*, 57(3), 533–557.

De Fraja, G. (1996): "Product Line Competition in Vertically Differentiated Markets," *International Journal of Industrial Organization*, 14, 389–414.

Gabszewicz, J. J., A. Shaked, J. Sutton, and J.-F. Thisse (1986): "Segmenting the Market: The Monopolist's Optimal Product Mix," *Journal of Economic Theory*, 39, 273–289.

Gabszewicz, J. J., and J.-F. Thisse (1979): “Price Competition, Quality and Income Disparities,” *Journal of Economic Theory*, 20, 340–359.

——— (1980): “Entry (and Exit) in a Differentiated Industry,” *Journal of Economic Theory*, 22, 327–338.

Gal-Or, E. (1983): “Quality and Quantity Competition,” *Bell Journal of Economics*, 14, 590–600.

Spence (1980): “Multiproduct Quantity-Dependent Prices and Profitability Constraints,” *Review of Economic Studies*, 47, 821–841.

F. Purchase-Based Price Discrimination

Fudenberg, Drew and Jean Tirole, “Upgrades, Trade-ins, and Buybacks,” *RAND Journal of Economics*; 29(2), Summer 1998, pages 235-58. Formerly called “Marketing Overlapping Generations of a Durable Good.”

Fudenberg, Drew, and Jean Tirole, “Customer Poaching and Brand Switching,” *RAND Journal of Economics*, Winter 2000, Vol. 31, no. 4. (PDF).

- Bouckaert, Jan and Hans Degryse, “Softening Competition by Inducing Switching in Credit Markets,” *The Journal of Industrial Economics*, March 2004.
- Ellison and Fudenberg, “The Neo-Luddite’s Lament: Excessive Upgrades in the Software Industry,” *Rand*, vol. 31, no. 2 (PDF).
- Vilas-Bolas, J. Miguel, “Dynamic Competition with Customer Recognition,” *RAND Journal of Economics*, Vol. 30, No. 4, Winter 1999, pp. 604-631. (PDF)
- Taylor, C., “Supplier Surfing: Competition and Consumer Behavior in Subscription Markets,” Working paper, Texas A&M, 1998. (PDF).
- Chen, “Paying Customers to Switch”, *Journal of Economics and Management Strategy*, Vol. 6, 1997, pp. 877-897. (PDF)
- Greg Shaffer and Z. John Zhang “Pay to Switch or Pay to Stay: Preference-Based Price Discrimination in Markets with Switching Costs,” *Journal of Economics and Management Strategy*, 395-416, Fall 1995. (PDF).

III. Product Quality and Information

A. Monopoly and Product Quality

- Tirole, Chapter 3: Screening pp. 142-162.

B. Monopoly, Experience Goods, and Reputation

- Tirole, Chapter 2.6: pp. 116-126.
 - Tadelis, Steve, "What's in a Name? Reputation as a Tradable Asset," *American Economic Review*, 89(3), June 1999 (PDF).
 - Bergemann, Dirk, and Juuso Valimaki, "Market Diffusion with Two-Sided Learning," *RAND Journal of Economics*, Winter 1997, Vol. 28, No. 4. (PDF).
 - Cabral, Luis, "Stretching Firm and Brand Reputation" *RAND Journal of Economics*, Winter 2000, vol. 31, no. 4.
 - Hubbard, Thomas, "How Do Consumers Motivate Experts? Reputational Incentives in an Auto Repair Market," *Journal of Law and Economics*, October 2002.
 - Tadelis, Steve, The Market for Reputations as an Incentive Mechanism, *Journal of Political Economy* August 2002, 92(2):854-882
 - Dana, James and Spier, Kathryn "Bundling and Product Reputation," Working Paper
- Tirole, J. (1996). "A Theory of Collective Reputations (with applications to the persistence of corruption and to firm quality)," *Review of Economic Studies*, 63: 1-22.
- Bar Isaac, H. (2003). "Something to Prove: Uncertainty and Reputation," *RAND Journal of Economics*.
- Bar Isaac, H. (2004), "On reputation and the interaction of firm and individual reputations"
- Bergemann, Dirk, and Juuso Valimaki, "Experimentation in Markets," *Review of Economic Studies*, April 2000, vol. 67(2) No. 231, pp. 213-234. (PDF).
- Gale, Douglas, and Robert Rosenthal, "Price and Quality Cycles for Experience Goods," *RAND Journal of Economics*, Winter 1994, 590-607. (PDF)
- Shapiro, Carl, "Optimal Pricing of Experience Goods," *Bell Journal of Economics*, Autumn, 1983. (PDF).
- Riordan, M., "Monopolistic Competition with Experience Goods," *Quarterly Journal of Economics*, 1984. (PDF).
- Malaith, G. and L. Samuelson, "Who Wants a Good Reputation?" *Review of Economic Studies*, 68 (April 2001), 415-441 (PDF).
- Klein and Leffler, "The Role of Market Forces in Assuring Contractual Performance," *Journal of Political Economy*, 1981. (PDF).
- Png, I.P.L., and David Reitman, "Why are Some Products Branded and Others Not?" *Journal of Law and Economics*, 1995, pp. 207-224.

Wernefelt, "Umbrella Branding as a signal of new Product Quality: An Example of Signaling by Posting a Bond," *RAND Journal of Economics*, Vol. 19 (1988), pp. 458-466.

C. Reputation and Competition

- Hörner, Johannes, "Reputation and Competition," *American Economic Review*, 92(3), June 2002, 644-663. (PDF).
- Dana, James and Yuk-Fai Fong, "Reputation and Tacit Collusion," working paper.

Mazzeo, Ontime Performance, *Review of Industrial Organization*.

IV. Scope and Organization of the Firm

A. The Theory of the Firm

Tirole, Introduction, pp. 15-60.

Coase, "The Nature of the Firm," *Economica*, 1937, 386-405.

Williamson, O. "Transactions-Cost Economics: The Governance of Contractual Relationships," *Journal of Law and Economics*, 1979, 232-262.

Grossman and O. Hart, "The Costs and Benefits of Ownership: A Theory of Lateral and Vertical Integration," *Journal of Political Economy*, 1986, 691-719.

Klein, B., R. Crawford, and A. Alchian, "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," *Journal of Law and Economics*, 1978, 297-326.

- Matouschek, Niko, "Ex Post Inefficiencies in a Property Rights Theory of the Firm," *The Journal of Law, Economics, and Organization*, 2004, 20 (1), 125-147. (PDF).
- Whinston, Michael, "On the Transaction Cost Determinants of Vertical Integration," *The Journal of Law, Economics, and Organization*, 2003, 19 (1). (PDF)

B. Vertical Contracts and Vertical Restraints

Tirole, Chapter 4

Katz, "Vertical Contractual Relations," *Handbook of Industrial Organization*, Volume I, Chapter 11, Edited by R. Schmalensee and R.D. Willig, Elsevier Science Publishers, 1989.

Mathewson, G.F. and Winter, R., 1984, An Economic Theory of Vertical Restraints, *RAND Journal of Economics*.

Rey and Tirole, 1986, "The Logic of Vertical Restraints," *American Economic Review*.

Organizational Design as a Strategic Commitment

C. Strategic Delegation in Oligopoly (Vertical Separation)

- Fershtman and Judd, (1987), “Equilibrium Incentives in Oligopoly,” *American Economic Review*, pp. 927-940 (PDF).
- Sklivas, S. D., (1987), “The Strategic Choice of Management Incentives,” *The RAND Journal of Economics*, pp. 452-458.
- Bonanno, G. and J. S. Vickers, (1988), “Vertical Separation,” *Journal of Industrial Economics* 36(1), pp. 257-65.
- Fershtman, C., K. L. Judd, and E. Kalai, (1991), “Observable Contracts: Strategic Delegation and Cooperation,” *International Economic Review* 32(3), pp. 551-9.
- Vickers, J., (1985), “Delegation and the Theory of the Firm,” *Economic Journal* (Supplement), 95, pp. 138-147.
- Stiglitz and Rey, 1988, Vertical Restraints and Producers’ Competition, *European Economic Review*.

D1. Strategic Divisionalization

- Schwartz, M., & Thompson, E.A., “Divisionalization and Entry Deterrence,” *Quarterly Journal of Economics*, 1986, 307-321 (PDF).
- Baye, Crocker, and Ju, Divisionalization, Franchising, and Divestiture Incentives in Oligopoly, *AMERICAN ECONOMIC REVIEW*, 1996. (PDF)

D2. Partnerships as a Strategic Commitment

- Tadels and Levin, “Profit Sharing and the Role of Professional Partnerships,” *Quarterly Journal of Economics*, forthcoming, (PDF).

E. Unobservable Vertical Contracts and Strategic Delegation

Oligopoly Models

- Katz, Michael, (1991), “Game Playing Agents: Unobservable Contracts as Precommitment,” *RAND Journal of Economics*, vol. 22, no. 3, Autumn, pp. 306-328 (PDF).
- Coughlan, Anne T. and Birger Wernerfelt, (1989), “On Credible Delegation by Oligopolists: A Discussion of Distribution Channel Management”, *Management Science*, 35(2), 226-39.
- Caillaud, B., B. Jullien, and P. Picard, 1995, “Competing Vertical Structures: Precommitment and Renegotiation,” *Econometrica*, 63, 621-646.

F. Multilateral Vertical Delegation and The Commitment Problem

Monopoly models of multilateral vertical delegation

- O'Brien, D. and G. Shaffer, (1992), "Vertical Control with Bilateral Contracts," *RAND Journal of Economics*, 23(3), pp. 299-308.
- McAfee, and Schwartz, "Opportunism in Multilateral Vertical Contracting: Nondiscrimination, Exclusivity, and Uniformity," *American Economic Review*, 1994, 84, 210-230 (PDF).
- Oliver Hart and Jean Tirole, "Vertical Integration and Market Foreclosure," *Brookings Papers: Microeconomics*, 1990, 205.
- Segal and Whinston, "Robust Predictions for Bilateral Contracting with Externalities," *Econometrica*, 2003.
- Marx, L. and G. Shaffer, Opportunism and Nondiscrimination Clauses, September 2000 (PDF).
- Rey, P. and T. Vergé, "Bilateral Control with Vertical Contracts," *RAND Journal of Economics*, 2004.

G. Oligopoly Models of Multilateral Vertical Delegation

- Rey and Stiglitz, The Role of Exclusive Territories in Producers' Competition, *RAND Journal of Economics*, Vol. 16, Autumn, 1995, pp.431-451.
- "Credible Delegation," with Darwin Neher, *European Economic Review* 47 (3), 2003, 395-407.

Empirical Work

- Corts, Kenneth, "The Strategic Effects of Vertical Market Structure: Common Agency and Divisionalization in the U.S. Motion Picture Industry," *Journal of Economics and Management Strategy* 10 (4), 2001, pp. 509-528.
- Kalnins, A. and F. Lafontaine, "Multi-Unit Ownership in Franchising: Evidence from the Fast-food Industry in Texas" (with Arturs Kalnins), *RAND Journal of Economics*, 35, 2004, 747-761.

Strategic Use of Contracts: Foreclosure and Exclusive Dealing

H. Contracts as a Barrier to Entry and Strategic Foreclosure

- Spier, K. and M. Whinston, "On the Efficiency of Privately Stipulated Damages for Breach of Contract: Entry Barriers, Reliance, and Renegotiation," *RAND Journal of Economics*, Summer 1995, 180-202 (PDF).
- Aghion and Bolton, "Contracts as a Barrier to Entry," *American Economic Review*, vol. 77, 1987, 388-401 (PDF).
- Whinston, M., "Tying, Foreclosure, and Exclusion," *American Economic Review*, 1990 (PDF).

I. Vertical Mergers and Vertical Foreclosure

- Rey and Tirole, Primer on Foreclosure, *Handbook of IO*, volume 3, forthcoming.
- Ordoover, Saloner, and Salop, Equilibrium Vertical Foreclosure, *American Economic Review*, Vol. 80, 1990 (PDF).
- Michael Salinger, “Vertical Mergers and Market Foreclosure,” *Quarterly Journal of Economics*, vol. 103, 1988, pp. 345-356.

Choi, and Sang-Seung Yi, Vertical Foreclosure with the choice of input specifications,” *RAND Journal of Economics*, Winter 2000, Vol. 31, no. 4.

Chen, Yongmin, “On Vertical Mergers and Their Competitive Effects”, *RAND Journal of Economics*, Vol. 32, pp. 667-685, 2001.
- Chen, Yongmin and Michael Riordan, “Vertical Integration, Exclusive Dealing, and ex post Cartelization” (with Michael Riordan), working paper.

J. Common Agency and Exclusive Dealing

- Bernheim and Whinston, Exclusive Dealing, *JPE*, February ‘88. Available in pdf format.
- Martimort, David, “Exclusive Dealing, Common Agency, and Multiprincipals Incentive Theory,” *RAND Journal of Economics*, 27(1), Spring 1996, pages 1-31.

Rasmusen, Ramseyer and Wiley, 1991, Naked Exclusion, *American Economic Review*, December, 81(5), pp. 1137-45.

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