

Fall 2006
Columbia University

Economics G6253: Theory of Industrial Organization

Yeon-Koo Che

- **General Information:**

Class Hours: W 4:10pm-6:00pm

Place: 501 International Affairs Building

Contract Information: (Phone) 854-8276; (E-mail) yc2271@columbia.edu

- **Grading:**

1. About 4-5 problem sets (group work allowed)

2. Final Take Home Exam (group work *Not* allowed)

- **Useful Books**

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

READING LIST

Lecture 1: Monotone Comparative Statics Methodologies

* Milgrom, P., and Shannon C., 1994, "Monotone Comparative Statics," *Econometrica*, 62: 157-180.

Milgrom, P., and Roberts, J., 1994, "Comparing Equilibria," *American Economic Review*, 84: 441-459.

Edlin, A., and Shannon, C., 1998, "Strict Monotonicity in Comparative Statics," *Journal of Economic Theory*, 81: 201-219.

Lectures 2: Hold-Up and The Theory of the Firm

* Che and Sakovics, "Hold-Up Problem," New Palgrave (<http://www.columbia.edu/yc2271/files/papers/holdup.pdf>)

* Holmström, B., and Roberts, J., 1998, "The Boundaries of the Firm Revisited," *Journal of Economic Perspectives*, 12, 73-94.

* Hart, O., 1995, *Firms, Contracts, and Financial Structure*, Clarendon Press, Oxford (Chapters 1 and 2).

Grout, P.A. (1984). "Investment and Wages in the Absence of Binding Contracts: A Nash Bargaining Approach," *Econometrica*, 52, 449-460.

Grossman, S., and Hart, O., 1986, "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration," *Journal of Political Economy*, 94: 691-719.

Hart, O., and Moore, J., 1990, "Property Rights and the Nature of the Firm.," *Journal of Political Economy*, 98: 1119-1158.

De Meza, D., and Lockwood, B., 1998, "Does Asset Ownership Always Motivate Managers? Outside Options and the Property Rights Theory of the Firm," *Quarterly Journal of Economics*, 361-386.

* Edlin, A.S., and Reichelstein, S., 1996, "Holdups, Standard Breach Remedies, and Optimal Investment," *American Economic Review*, 86, 478-501.

Maskin, E., and Tirole, J., 1999, "Unforeseen Contingencies and Incomplete Contracts," *Review of Economic Studies*, 66, 83-114.

Tirole, J., 1999, "Incomplete Contracts: Where Do We Stand?" *Econometrica*, 67, 741-781.

* Che, Y.-K., and Hausch, D.B., 1999, "Cooperative Investments and the Value of Contracting," *American Economic Review*, 89: 125-147.

Hart, O., and Moore, J., 1999, "Foundations of Incomplete Contracts," *Review of Economic Studies*, 66: 115-138.

* Che, Y.-K., and Sakovics, J., 2004, "A Dynamic Model of Holdup and Incomplete Contracts," *Econometrica*, 72, 1063-1103.

Lecture 3: Static Models of Oligopoly

Tirole, ch. 5.

Bulow, Geanakoplos, and Klemperer, 1985, "Multimarket Oligopoly: Strategic Substitutes and Complements," *JPE*, 488-511.

Klemperer and Meyer, 1989, "Supply Function Equilibrium in Oligopoly under Uncertainty," *EMA*, 1243-77.

*Kreps and Scheinkman, 1983, "Quantity Precommitment and Bertrand Competition Yield Cournot Outcomes," RJ, 326-337.

Davidson and Deneckere, 1986, "Long-Run Competition in Capacity, Short-Run Competition in Price, and the Cournot Model," RJ, 1986, 404-415.

Lecture 4: Product Quality and Product Differentiation

*Tirole, ch. 2, 7.

*d'Asprement, Gabszewicz, and Thisse, 1979, "On Hotelling's Stability in Competition," EMA, 17, 1145-51.

*Salop, 1979, "Monopolistic Competition with Outside Goods," BJE, 10, 141-156.

Deneckere, R. and M. Rothschild, 1992, "Monopolistic Competition and Preference Diversity," REW, 1992, 361-73.

Klein and Leffler, 1981, "The Role of Market Forces in Assuring Contractual Performance," JPE, 615-41.

*Shaked and Sutton, 1982, "Relaxing Price Discrimination through Product Differentiation," RES, 3-13.

Shaked and Sutton, 1990, "Multiproduct Firms and Market Structure," RJ, 45-62.

Spence, 1976, "Product Selection, Fixed Costs, and Monopolistic Competition," RES, 217-35.

Ma and Burgess, 1993, "Quality Competition, Welfare and Competition," Journal of Economics, 58, 153-173.

Lecture 5: Repeated Games and Collusion

Tirole, Chapter 6.

*Abreu, 1988, "On the Theory of Infinitely Repeated Games with Discounting," EMA, 383-96.

*Green and Porter, 1984, "Noncooperative Collusion under Imperfect Price Information," EMA, 87-100.

Abreu, Pearce and Stacchetti, 1990, "Toward a Theory of Discounted Repeated Games with Imperfect Monitoring," EMA, 1041-63.

* Rotemberg and Saloner, 1986, "Supergame-Theoretic Models of Business Cycles and Price Wars during Booms," *AER*, 390-407.

Lecture 6: Dynamic Models of Oligopoly

*Maskin and Tirole, 1988, "A Theory of Dynamic Oligopoly I", *EMA*, 540-570.

Maskin and Tirole, 1988, "A Theory of Dynamic Oligopoly II", *EMA*, 571-600.

Maskin and Tirole, 1987, "A Theory of Dynamic Oligopoly III", *European Economic Review*, 947-968.

Hendel and Lizzeri, 1999, "Adverse Selection in Durable Goods Market," *AER*, 89, 1097-1115.

Gilbert and Newbery, 1982, "Preemptive Patenting and the Persistence of Monopoly," *AER*, 72, 514-26.

* Cabral and Riordan, 1994, "The Learning Curve, Market Dominance, and Predatory Pricing," *Econometrica*, 62, 1115-40.

Lecture 7: Consumer Search, Switching, Advertising, and Privacy

Tirole, ch. 2, 7.

Schmalensee, "Advertising and Market Structure," in *New Developments in the Theory of Industrial Organization*.

*Milgrom and Roberts, 1986, "Price and Advertising Signals of Product Quality," *JPE*, 796-821.

*Varian, 1980, "A Model of Sales," *AER*, 70, 651-59.

*Bagwell and Ramey, 1994, "Coordination Economies, Advertising and Search Behavior in Retail Markets," *AER*, 84, 498-517.

Bagwell, "Advertising," Forthcoming, *Handbook of IO*

Klemperer, 1987, "The Competitiveness of Markets with Switching Costs," *RJ*, 18, 138-150.

Klemperer, 1992, "Equilibrium Product Lines: Competing Head-to-Head May Be Less Competitive," *AER*, 740-55.

Taylor, 2003, "Supplier Surfing: Competition and Consumer Behavior in Subscription Markets," *RAND Journal of Economics*, 34, 223-246.

Taylor, 2003, "Privacy in Competitive Markets," mimeo., Duke University

Gerstner and Hess, 1991, "A Theory of Channel Price Promotion," *AER*, 872-886.

Dudey, M., 1990, "Competition by Choice: The Effect of Consumer Search on Firm Location Decisions," *AER*, 1092-1104.

Lecture 8: Tying and Vertical Foreclosure/Separation

* Whinston, 1990, "Tying, Foreclosure, and Exclusion" *AER*, 837-859.

* Rey and Tirole, 2006, "Primer on Foreclosure," forthcoming, Handbook of IO III.

* Ordober, Saloner and Salop, 1990, "Equilibrium Vertical Foreclosure," *AER*, 127-42.

Bolton and Whinston, 1990?, "Vertical Foreclosure and Supply Assurance," *RES*

Hart and Tirole, 1993, "Vertical Integration and Market Foreclosure," *BPEA*, forthcoming.

Salinger, 1988, "Vertical Mergers and Market Foreclosure," *QJE*, 335-56.

* Choi and Yi, 2000, "Vertical foreclosure and the choice of input specification," *RJ*, 31, 717-743.

Heavner, 2004, "Vertical Enclosure: Vertical Integration and the Reluctance to Purchase from a Competitor," *JIE*, 52, 179-199.

Lecture 9: Vertical Restraints I

* Tirole, ch. 4.

Katz, "Vertical Contractual Relations," Handbook.

*Mathewson and Winter, 1987, "The Competitive Effects of Vertical Agreements: Comment," *AER*, 1057-62.

* Bernheim and Whinston, 1998, "Exclusive Dealing," *JPE*, 64-103.

* Chen and Riordan, 2006, "Vertical Integration, Exclusive Dealing and Ex Post Cartelization," mimeo.

Segal, I., and Whinston, M., 2000, "Exclusive Contracts and Protection of Investments," *RJ*, 603-633.

Lecture 10: Vertical Restraints II

* Aghion and Bolton, 1987, "Contracts as a Barrier to Entry," *AER*, 388-401.

* Rasmusen, Ramseyer and Wiley, 1991, "Naked Exclusion," *AER*, 1137-45.

* Segal and Whinston, 2000, Naked Exclusion: Comment, *AER*, 90, 296-309

Spier, K., and Whinston, M., 1995, "On the Efficiency of Privately Stipulated Damages for Breach of Contract: Entry, Barriers, Reliance, and Renegotiation" *Rand Journal of Economics*, 26: 180-202.

McAfee and Schwartz, 1994, "Multilateral Vertical Contracting: Opportunism, Nondiscrimination, and Exclusivity," *AER*, 84, 210-230.

Marx and Shaffer, 1999, "Predatory Accommodation: Below-Cost Pricing without Exclusion in Intermediate Goods Markets, *RJ*, 30: 22-43.

Deneckere, Marvel and Peck, 199?, "Demand Uncertainty, Niche Competition, and the Loss Leader Enigma," *QJE*, ??.

Shaffer, G., 1991, "Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices," *RJ*, 120-35.

Gal-Or, 1991, "Optimal Franchising in Oligopolistic Markets with Uncertain Demand," *IJIO.*, 9: 343-364.

Lecture 11: Managerial Incentives and Financial Contracting

* Fershtman and Judd, 1987, "Equilibrium Incentives in Oligopoly," *AER.*, 77: 927-940.

Sklivas, S., 1987, "The Strategic Choice of Managerial Incentives," *RJ*, 18: 452-458.

* Brander and Lewis, 1986, "Oligopoly and Financial Structure," *AER*, 76, 956-70.

* Bolton and Scharfstein, 1990, "A Theory of Predation Based on Agency Problems in Financial Contracting," *AER*, 80, 93-106.

Jean-Baptiste and Riordan, 2003, "Capital Markets Constrain Industry Scale" (with Eslyn). Working Paper, March, 2003. (<http://www.columbia.edu/mhr21/capital-markets.pdf>).

Lecture 12: Price Discrimination

*Tirole, ch. 3.

Milgrom, P., and Segal, I., 2000, "Envelope Theorems," *Econometrica*, 70, 583-601 (pdf in: http://www-econ.stanford.edu/faculty/segal_homepage.html).

Varian, H., "Price Discrimination," Handbook.

*Varian, H., 1985 "Price Discrimination and Social Welfare," AER, 870-75.

Holmes, T., 1989, "The Effects of Third-Degree Price Discrimination in Oligopoly," AER, 244-50.

Katz, M., 1987, "The Welfare Effects of Third-Degree Price Discrimination in Intermediate Goods Markets," AER, 154-67.

*Maskin and Riley, 1984, "Monopoly with Incomplete Information," RJ, Summer, 171-96.

*Deneckere and McAfee, 199?, "Damaged Goods," JEMS.

Gale and Holmes, 1992, "Advance-Purchase Discounts and Monopoly Allocation of Capacity," AER.

Che and Gale, 2000, "The Optimal Mechanism for Selling to Budget-Constrained Consumers," JET, 92, 198-233.

Lectures 13 and 14: Auctions and Procurement

McAfee P. and J. McMillan, 1987, Auctions and Bidding, *Journal of Economic Literature*, 25: 669-738.

* Milgrom, P.R., 1989, "Auctions and Bidding: A Primer," *Journal of Economic Perspectives*, 3: 3-22.

* Myerson, R. 1981, "Optimal Auction Design," *Mathematics of Operations Research*, 6: 58-73.

Klemperer, P., 1999, "Auction Theory: A Guide to the Literature," *Journal of Economic Survey*, 13, 227-286.

Laffont and Tirole, 1987, "Auctioning Incentive Contracts," JPE. 95: 921-937.

Riordan, M. and Sappington, D., 1987, "Awarding Monopoly Franchises," AER. 77: 375-87.

McAfee and McMillan, 1986, "Bidding for Contracts: A Principal-Agent Analysis," RJE., 17: 326-338.

* Che, 1993, "Design Competition through Multidimensional Auctions," RJ, Winter.