

DEEQA FALL 2014

Topics in Industrial Organization

Jean Tirole

The course will discuss recent theoretical papers and revisit policy debates concerning various topics in industrial organization.

Prerequisites:

The course is by and large self-contained. However, some familiarity with basic notions of price discrimination would be helpful.

I encourage students to acquire minimal knowledge of mechanism design (in particular concerning the trade-off between efficiency and rent extraction and the notion of virtual surplus) prior to class.

Schedule: September 9- December 2, Tuesdays 2-5 PM

[There will be a long hiatus between October 28 and November 18: I'll be absent on November 4 and 18 and October 28 and November 11 are holidays. We'll arrange a replacement session.]

Location:

Syllabus:

Starred items are papers that will receive particular emphasis. Of course the emphasis may change as the course evolves.

I. Price discrimination: Multiple suppliers and common agency

Background reading: basic notions of price discrimination. For instance, pages 153-158 of my book *The Theory of Industrial Organization* (1988, MIT Press), and/or pages 246-268 of Fudenberg-Tirole *Game Theory* (1991, MIT Press).

Armstrong, M. and J. Vickers, J. (2001) "Competitive Price Discrimination." *Rand Journal of Economics*, 32, 579-605.

Bénabou, R. and J. Tirole (2013) "Bonus Culture", mimeo.

*de Clippel, G., Eliaz, K. and K. Rozen (2014) "Competing for Consumer Inattention", forthcoming *Journal of Political Economy*.

*Calzolari, G., and V. Denicolo (2013) "Competition with Exclusive Contracts and Market-Share Discounts", *American Economic Review* 103(6): 2384–2411.

*Garrett, D., Gomes, R., and L. Maestri (2014) "Competitive Screening under Heterogeneous Information," mimeo, TSE.

Johnston, J., and D. Myatt (2006) "Multiproduct Cournot Oligopoly", *Rand Journal of Economics*, 37: 583-601.

*Rochet, J.C., and L. Stole (2002) "Nonlinear Pricing with Random Participation," *Review of Economic Studies*, 69(1): 277-311.

Veiga, A. and G. Weyl (2014) "Product Design in Selection Markets", mimeo.

II. Intertemporal price discrimination

Background reading: Chapter 10 of Fudenberg-Tirole *Game Theory* 1991 MIT Press.

*Battaglini, M. (2005) "Long-Term Contracting with Markovian Consumers," *American Economic Review*, 95(3): 637-658.

*Board, S., and M. Pycia (2014) "Outside Options and the Failure of the Coase Conjecture," forthcoming, *American Economic Review*.

Conlisk, J., Gerstner, E. and Sobel, J. (1984) "Cyclic Pricing by a Durable Goods Monopolist," *Quarterly Journal of Economics*, Vol. 99, pp. 489-505.

Esö, P. and B. Szentes (2013) "Dynamic Contracting: An Irrelevance Result", mimeo.

*Niedermayer, A., and A. Shneyerov (2013) "For-Profit Search Platforms," forthcoming, *International Economic Review*.

Pavan, A., Segal, I., and J. Toikka (2014) "Dynamic Mechanism Design: A Myersonian Approach," *Econometrica*, 82: 601-653.

Skrzypacz, A. and J. Toikka (2013) "Mechanisms for Repeated Bargaining," mimeo, Stanford and MIT.

Sobel, J. (1991) "Durable Goods Monopoly with Entry of New Consumers." *Econometrica* 59 (5): 1455–85.

*Tirole, J. (2014) "From Bottom of the Barrel to Cream of the Crop: Sequential Screening with Positive Selection", mimeo.

Advance booking and deadline effects

*Board, S. and A. Skrzypacz (2013), 'Revenue Management with Forward-Looking Buyers,' mimeo UCLA and Stanford.

Chen, C. (2012) "Name Your Own Price at Priceline.com: Strategic Bidding and Lockout Periods," *Review of Economic Studies*, Vol. 79, pp. 1341-1369.

Dilme, F. and F. Li (2014) "Revenue Management without Commitment: Dynamic Pricing and Periodic Fire Sales", mimeo.

Ely, J., Garrett, D. F., and T. Hinnosaar (2013) "Overbooking," mimeo.

Garrett, D.F. (2013) "Incoming Demand with Private Uncertainty," mimeo.

*Hörner, J. and L. Samuelson (2011) "Managing Strategic Buyers", *Journal of Political Economy*, 119: 379- 425.

Nocke, V., Peitz, M., and F. Rosar (2011) "Advance-Purchase Discounts as a Price Discrimination Device," *Journal of Economic Theory*, 146: 141—162.

III. Third-degree price discrimination

*Aguirre, I., Cowan, S. and J. Vickers (2010): "Monopoly Price Discrimination and Demand Curvature", *American Economic Review* 100(4), 1601-1615.

*Bergemann, D., Brooks, B., and S. Morris (2013) "The Limits of Price Discrimination," mimeo.

Chen, Y., and M. Schwartz (2013) "Differential Pricing When Costs Differ: A Welfare Analysis", mimeo.

Cowan, S. (2013) "Welfare-Increasing Third-Degree Price Discrimination », Oxford.

Third-degree price discrimination and backward integration

*Innes, R. and R. Sexton (1994) "Strategic Buyers and Exclusionary Contracts", *American Economic Review*, 84: 566-584.

Pricing and passthrough:

Chen, Y. and M. Riordan (2008): "Price-Increasing Competition", *Rand Journal of Economics*, 39, 1042-1058.

Gabaix, X., Laibson, D., Li, D., Li, H., Resnick, S. and C. de Vries (2013) "The Impact of Competition on Prices with Numerous Firms", mimeo.

Hoffman, F., Inderst, R. and M. Ottaviani (2014) "Persuasion through Selective Disclosure: Implications for Marketing, Campaigning, and Privacy Regulation", mimeo.

*Johnson, J. and D. Myatt (2006) "On the Simple Economics of Advertising, Marketing and Product Design", *American Economic Review*, 96: 757-784.

Johnston, J., and D. Myatt (2014) "The Properties of Product Line Prices," mimeo, London Business School.

Weyl, G., and M. Fabinger (2013) "Pass-Through as an Economic Tool: Principles of Incidence under Imperfect Competition," *Journal of Political Economy*, 121(3): 528--583.

IV. Multi-product firms: bundling, product line design and price discrimination

Alger, I. (1999) "Consumer Strategies Limiting the Monopolist's Power: Multiple and Joint Purchases", *Rand Journal of Economics*, 30: 736-757.

Anderson, S. and L. Celik (2014) "Product Line Design", mimeo.

Armstrong, M. (2013) "A More General Theory of Commodity Bundling," *Journal of Economic Theory*, Elsevier, 148(2): 448-472.

*Armstrong, M., and J. Vickers (2010) "Competitive Non-linear Pricing and Bundling," *Review of Economic Studies*, 77(1): 30--60.

*Carroll, G. (2014) "Robustness and Multidimensional Screening" (paper not yet available).

*Chen, Y. and M. Riordan "Profitability of Product Bundling" (2013), *International Economic Review*, 54.

Chen, Z., and P. Rey (2012) "Loss Leading as an Exploitative Practice" *American Economic Review* 102 (7): 3462-82.

*Rhodes, A., (2013) "Multiproduct retailing," mimeo.

*Zhou, J. (2014) "Multiproduct Search and the Joint Search Effect," mimeo.

Umbrella branding

Cabral, L. (2009) "Umbrella Branding with Imperfect Observability and Moral Hazard," *International Journal of Industrial Organization*, 27(2): 206—213.

Choi, J. P. (1998) "Brand Extension and Informational Leverage," *Review of Economic Studies*, 65: 655--669.

Bundling of property held by multiple firms: Portfolio choices and intellectual property

Boutin, A. (2014) "Screening for Good Patent Pools", mimeo, ECARES, ULB.

Choi, J. P. (2010) "Patent Pools and Cross-Licensing in the Shadow of Patent Litigation", *International economic Review*, 51(2): 441—460.

*Lerner, J. and J. Tirole (2014) "Standard Essential Patents", forthcoming *Journal of Political Economy*.

Public policy toward mergers and joint marketing agreements

Jaffe, S. and G. Weyl (2013) "The First-Order Approach to Merger Analysis," *American Economic Journal: Microeconomics*, vol. 5, no. 4.

Llobet, G. and J. Padilla (2014) "The Licensing of Complementary Innovations and the Threat of Litigation", mimeo.

Nocke, V., and M.D. Whinston (2010) "Dynamic Merger Review," *Journal of Political Economy*, 118(6): 1200-1251.

Nocke, V., and M.D. Whinston (2013) "Merger Policy with Merger Choice," *American Economic Review*, 103(2): 1006—1033.

Quint, D. (2014) "Imperfect Competition with Complements and Substitutes", mimeo, University of Wisconsin.

Rey, P. and J. Tirole (2013) "Cooperation vs. Collusion: How Essentiality Shapes Competition", mimeo, TSE.

V. Recent advances in platform economics (multi-sided markets)

Ambrus, A., Calvano, E. and M. Reisinger (2014) "Either or Both Competition: A "Two-Sided" Theory of Advertising with Overlapping Viewerships", mimeo.

Beach, N. and A. Hagiu (2014) "Bitcoin: The Future of Digital Payments?" Harvard Business School Case Study.

*Bourguignon, H., Gomes, R., and J. Tirole (2014) "Shrouded Transaction Costs", mimeo, TSE.

*Edelman, B. and J. Wright (2014) "Price Coherence and Adverse Intermediation", mimeo.

Gentzkow, M., Shapiro, J. and M. Sinkinson (2014) "Competition and Ideological Diversity: Historical Evidence from US Newspapers", mimeo, Chicago.

Gomes, R. (2014) "Optimal Auction Design in Two-Sided Markets" *Rand Journal of Economics*, Vol. 45 (2014), pp. 248-272.

Renault, R. (2014) "Platform Contents", mimeo, University Paris 9.

Weyl, G. (2010) "A Price Theory of Multi-Sided Platforms", *American Economic Review*, 100(4).

Weyl, G. and A. Veiga (2014) "Product Design in Selection Markets", Chicago and TSE, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1935912

Weyl, G. and A. White (2013) "Insulated Platform Competition," under revision at *Journal of Political Economy*. http://home.uchicago.edu/weyl/IPC_5_12.pdf

Further topics if time permits:

VI. More on search

Armstrong, M., Vickers, J., and J. Zhou (2009) "Prominence and Consumer Search," *Rand Journal of Economics*, 40(2): 209—233.

Athey, S., and G. Ellison (2011) "Position Auctions with Consumer Search," *Quarterly Journal of Economics*, 126(3): 123--1270.

Bar-Isaac, H., Caruana, G. and V. Cunat (2012) "Search, Design and Market Structure", *American Economic Review*, 102(2): 1140—1160.

Blake, T., Nosko, C., and S. Tadelis (2014) "Consumer Heterogeneity and Paid Search Effectiveness: A Large Scale Field Experiment," mimeo, <http://faculty.haas.berkeley.edu/stadelis/Tadelis.pdf>.

Cabral, L. (2012) "Reputation on the Internet," in Peitz and Waldfogel (Eds), *The Oxford Handbook of the Digital Economy*, Oxford University Press.

de Cornière, A., and G. Taylor (2013) "Integration and Search Engine Bias," University of Oxford, forthcoming in the *Rand Journal of Economics*.

Dinerstein, M., Einav, L., Levin, J. and N. Sundaresany (2013) "Consumer Price Search and Platform Design in Internet Commerce", mimeo.

Einav, L., Kuchler, T, Levin, J. and N. Sundaresany (2013) "Learning from Seller Experiments in Online Markets", mimeo.

Ellison, G. and A. Wolitzky (2012) "A Search Cost Model of Obfuscation", *Rand Journal of Economics*, 43(3): 417—441.

Ellison, S. and G. Ellison (2014) forthcoming paper.

Hagiu, A., and B. Jullien (2013) "Search Diversion and Platform Competition," Harvard Business School working paper [R&R at *International Journal of Industrial Organization*].

Hervas-Drane, A. (2013) «Word of Mouth and Sales Concentration," R&R for *International Journal of Research in Marketing*, <http://ssrn.com/abstract=1025123>.

Inderst, R., and M. Ottaviani (2012) "Competition through Commissions and Kickbacks" *American Economic Review*, 102(2): 780—809.

Janssen, M. and S. Shelegiaz (2013) "Consumer Search and Double Marginalization", mimeo, University of Vienna.

Larsen, B. (2014) "The Efficiency of Dynamic, Post-Auction Bargaining: Evidence from Wholesale Used-Auto Auctions", mimeo, Stanford University.

Varian, H. (2009) "Online Ad Auctions", *American Economic Review*, 99(2): 430-34.

Wilson, C. (2010): "Ordered Search and Equilibrium Obfuscation", *International Journal of Industrial Organization* 28(5), 496-506.

VII. Consumer protection

Armstrong, M. and Y. Chen (2013): "Discount Pricing", working paper.

Carlin, B. (2009): "Strategic Price Complexity in Retail Financial Markets", *Journal of Financial Economics* 91, 278-287.

Corts, K. (2012): "Prohibitions on False and Unsubstantiated Claims: Inducing the Acquisition and Revelation of Information through Competition Policy", *Journal of Law and Economics* forthcoming.

Corts, K. (2013): "Finite Optimal Penalties for False Advertising", *Journal of Industrial Economics* forthcoming.

Drugov, M. and M. Troya-Martinez (2013): "Vague Lies: How to Advise Consumers When They Complain", working paper.

Inderst, R., and M. Ottaviani (2013) "Sales Talk, Cancellation Terms, and the Role of Consumer Protection" *Review of Economic Studies*, 80 (3): 1002-1026,

Piccolo, P., Tedeschi, P. and G. Ursino (2012), "Deceptive Advertising with Rational Buyers", working paper (under revision at *Rand*).

VIII. Privacy

Bergemann, D. and A. Bonatti (2013) "Selling Cookies", mimeo.

Calzolari, G. and A. Pavan (2006) "On the Optimality of Privacy in Sequential Contracting," *Journal of Economic Theory*, 130(1): 168-204.

Casadesus-Masanell, R., and A. Hervas-Drane (2014) "Competing with Privacy," forthcoming *Management Science*. http://www.hbs.edu/faculty/Publication%20Files/13-085_95c71478-a439-4c00-b1dd-f9d963b99c34.pdf

de Corniere, A. and R. de Nijs (2013): "Online Advertising and Privacy", mimeo.