

Industrial Organization I

This course will cover a range of topics in Industrial Organization. There will be a mixture of theory and empirics, but the emphasis will be on recent empirical work rather than cutting-edge theory.

Grading: I will hand out theoretical problem sets for some topics; for other weeks I will assign one or two papers to read and expect you to be able to discuss them in class. The first week there will be an empirical exercise (using some material from 395.22). I will also hand out one paper for you to review.

Everyone must do the reading exercises. However, I am happy for you to pursue a research project as an alternative to doing the other problem sets. Please come to see me if you are interested.

Reading List: the list is designed to help your research and covers a lot of material that I will not discuss. The starred papers have the most relevance to the class. Feel free to make suggestions if you find other papers you like and I may well add papers as we go along.

Everyone should get themselves a copy of

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

It does not cover the most recent theory, but it forms the basis of the “common language” of IO economists.

Some of the journal titles are abbreviated

AER	American Economic Review	JET	Journal of Economic Theory
BJE	Bell Journal of Economics	JIE	Journal of Industrial Economics
EMA	Econometrica	JLE	Journal of Law and
EJ	Economic Journal	JPE	Journal of Political Economy
IJIO	International Journal of Industrial Organization	QJE	Quarterly Journal of Economics
JE	Journal of Econometrics	RJE	Rand Journal of Economics
JEH	Journal of Economic History	ReStat	Review of Economics and Statistics
JEL	Journal of Economic Literature	ReStat	Review of Economics and Statistics
JEMS	Journal of Economics & Management Strategy		

1. The Theory of Market Structure (week 1)

J. Panzar, “Technological Determinants of Firm and Industry Structure”, Handbook of Industrial Organization, vol. 1 chp. 1

What are the welfare effects of more firms?

* N.G. Mankiw and M.D. Whinston, “Free Entry and Social Inefficiency,” RAND Journal of Economics, 1986, 48-58, <http://links.jstor.org/sici?sici=0741-6261%28198621%2917%3A1%3C48%3AFEASI%3E2.0.CO%3B2-O>

* S. Berry and J. Waldfogel, "Free Entry and Social Inefficiency in Radio Broadcasting" *Rand Journal of Economics*, 30 (Autumn 1999), 397-420

How does the number of firms change as market size increases?

J. Sutton, *Sunk Costs and Market Structure*, 1991, MIT Press, chapters 1-3 and industry studies in chapters 6, 8, 9

J. Sutton, *Technology and Market Structure*, 2001, MIT Press

* J. Sutton, "One Smart Agent", *RJE*, 1997, 605-628, <http://links.jstor.org/sici?sici=0741-6261%28199724%2928%3A4%3C605%3AOSA%3E2.0.CO%3B2-N>

T. Bresnahan, "Sutton's Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution of Concentration: Review Article," *RJE*, 1992, 23(1), 137-52,

A. Shaked and J. Sutton, "Multiproduct Firms and Market Structure", *RJE*, 1990, 45-62
<http://links.jstor.org/sici?sici=0741-6261%28199021%2921%3A1%3C45%3AMFAMS%3E2.0.CO%3B2-7>

A. Shaked and J. Sutton, "Natural Oligopolies", *EMA*, 51(5), 1469-1484
<http://links.jstor.org/sici?sici=0012-9682%28198309%2951%3A5%3C1469%3ANO%3E2.0.CO%3B2-3>

* P. Ellickson, "Supermarkets as A Natural Oligopoly", forthcoming *RAND*,
<http://www.econ.duke.edu/~paule/SupermarketsAsNO.pdf>

* B. Bronnenberg, S.K. Dhar and J-P Dube, "Endogenous Sunk Costs and the Geographic Distribution of Brand Shares in Consumer Package Goods Industries", mimeo, 2005,
<http://www.nber.org/~confer/2005/ios05/dube.pdf>

Size Distribution of Firms

* J. Sutton, "Gibrat's Legacy", *JEL*, 1992, 35(1), 40-59, <http://links.jstor.org/sici?sici=0022-0515%28199703%2935%3A1%3C40%3AGL%3E2.0.CO%3B2-C>

(more details of Sutton's model of the size distribution are contained in *Technology and Market Structure* and an LSE STICERD working paper EI/9 "The Size Distribution of Businesses, Part I", 1995)

H. Simon and C. Bonini, "The Size Distribution of Business Firms", *AER*, 1958, 48(4), 607-17, <http://links.jstor.org/sici?sici=0002-8282%28195809%2948%3A4%3C607%3ATSDOBF%3E2.0.CO%3B2-3>

R. Lucas, "On the Size Distribution of Business Firms", *Bell Journal of Economics*, 1978, 9(2), 508-523, <http://links.jstor.org/sici?sici=0361-915X%28197823%299%3A2%3C508%3AOTSDOB%3E2.0.CO%3B2-S>

B. Jovanovic, "Selection and the Evolution of Industry," *Econometrica*, 1982, 649-670,
<http://links.jstor.org/sici?sici=0012-9682%28198205%2950%3A3%3C649%3ASATEOI%3E2.0.CO%3B2-O>

L. Cabral and J. Mata, "On the Evolution of the Size Distribution: Facts and Theory", *American Economic Review*, 2003, 93(4), 1075-90, <http://pages.stern.nyu.edu/~lcabral/papers/AER%202003.pdf>

Why determines the degree of product differentiation? Is it optimal?

S. Anderson, A. de Palma, and J. F. Thisse, *Discrete Choice Theory of Product Differentiation*, Chapters 6-9, Cambridge: MIT Press, 1992

S. Anderson, A. de Palma, and Y. Nesterov, "Oligopolistic Competition and the Optimal Provision of Products," *Econometrica*, Vol. 63, No. 6, November 1995, pp. 1281-1302, <http://links.jstor.org/sici?sici=0012-9682%28199511%2963%3A6%3C1281%3AOCATOP%3E2.0.CO%3B2-L>

P. Klemperer and A. Padilla, "Do Firms' Product Lines Include Too Many Varieties?," *RJE*, 28(3), pp. 472-488. <http://links.jstor.org/sici?sici=0741-6261%28199723%2928%3A3%3C472%3ADFPLIT%3E2.0.CO%3B2-5>

E. Prescott and M. Visscher, "Sequential Location among Firms with Foresight", *Bell Journal of Economics*, 1977, 378-39, <http://links.jstor.org/sici?sici=0361-915X%28197723%298%3A2%3C378%3ASLAFWF%3E2.0.CO%3B2-N>

A. Dixit and J. Stiglitz, "Monopolistic Competition and Optimal Product Diversity", *AER*, 1977, 297-308, <http://links.jstor.org/sici?sici=0002-8282%28197706%2967%3A3%3C297%3AMCAOPD%3E2.0.CO%3B2-%23>

P. Steiner, "Program Patterns and Preferences, and the Workability of Competition in Radio Broadcasting", 1952, *QJE*, 66(2), 194-223, <http://links.jstor.org/sici?sici=0033-5533%28195205%2966%3A2%3C194%3APPAPAT%3E2.0.CO%3B2-Z>

2. Price Discrimination (week 2)

Theory: Monopoly

* Tirole, chap. 3 (including the appendix).

Varian, H., "Price Discrimination," Chapter 10 in *HIO*, Vol. I.

* McAfee, P., J. McMillan, and M. Whinston, "Multiproduct Monopoly, Commodity Bundling, and Correlation of Values," *QJE*, May 1989, 371-83.

Armstrong, M., "Multiproduct Nonlinear Pricing," *EMA*, January 1996, 51-76.

Armstrong, M. "Price Discrimination by a Multi-Product Firm, *ReStud*, 1999, 151-68.

Theory: Oligopoly

Stole, L., "Price Discrimination and Imperfect Competition," forthcoming in *Handbook of Industrial Organization*, Vol. 3. <http://gsblas.uchicago.edu/papers/hio.html>

Borenstein, S., "Price Discrimination in Free Entry Markets," *RJE*, Autumn 1985, 380-97.

Holmes, T., "The Effects of Third Degree Price Discrimination in Oligopoly," *AER*, March 1989, 241-50

* Corts, K., "Third-Degree Price Discrimination in Oligopoly: All-Out Competition and Strategic Commitment," *RJE*, Summer 1998, 306-23.

Armstrong, M. and J. Vickers [2006], "Competitive Price Discrimination," RJE, 579-605.

Dana, J., "Advance Purchase Discounts and Price Discrimination in Competitive Markets," JPE, April 1998, 395-422

Spulber, D., "Product Variety and Competitive Discounts," JET (48), 1989, 510-25.

Stole, L., "Nonlinear Pricing and Oligopoly," JEMS (4), Winter 1995, 529-62.

Ellison, G., "A Model of Add-on Pricing," QJE, May 2005, 585-637.

Empirical Evidence

E. Blackstone, "Restrictive Practices in the Marketing of Electrofax Copying Machines: The SCM Corporation Case," JIE, March 1975, 189-202.

S. Borenstein, "Selling Costs and Switching Costs: Explaining Retail Gasoline Markets," RJE, Autumn 1991, 354-69.

S. Borenstein and N. Rose, "Competition and Price Dispersion in the U.S. Airline Industry," JPE, August 1994, 653-83.

A. Cohen, "Package Size and Price Discrimination: Evidence from Paper Towels," mimeo, Virginia, 2001.

P. Goldberg, "Dealer Price Discrimination in New Car Purchases: Evidence from the Consumer Expenditure Survey," JPE, June 1996, 622-54.

* P. Leslie, "Price Discrimination in Broadway Theater," RJE, Autumn 2004, 520-41.

A. Nevo and C. Wolfram, "Why Do Manufacturers Issue Coupons? An Empirical Analysis of Breakfast Cereals," RJE, 2002, 33(2), 319-339,

* A. Shepard, "[Price Discrimination and Retail Configuration](#)," JPE, February 1991, 30-53. J

Ivaldi, M. and D. Martimort, "Competition under Nonlinear Pricing," Annales d'Economie et de Statistique (34), 1994, 71-114.

McManus, Brian. 2001. "[Nonlinear Pricing in an Oligopoly Market: the Case of Specialty Coffee](#)." Washington University Olin School of Business. Mimeo.

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3. Search & Price Dispersion (week 2 & week 3)

Theory

P. Diamond, "A Model of Price Adjustment", Journal of Economic Theory, 1971, 3, 156-168

H. Varian, "A Model of Sales," American Economic Review, 1980, 70, 651-658,
<http://links.jstor.org/sici?sici=0002-8282%28198009%2970%3A4%3C651%3AAMOS%3E2.0.CO%3B2-A>

* D. Stahl, "[Oligopolistic Pricing with Heterogeneous Consumer Search](#)," International Journal of Industrial Organization, 1996, 14, 243-268,

R.P. McAfee, "Multiproduct Equilibrium Price Dispersion," Journal of Economic Theory, 1995, 67 (1), 83-105

M. Baye and J. Morgan, "Information Gatekeepers on the Internet and the Competitiveness of Homogeneous Product Markets," AER, 2001, 91(3), 454-474

Evidence

* A. Sorensen, "Equilibrium Price Dispersion in Retail Markets for Prescription Drugs," Journal of Political Economy, 2000, 108, 833-850,
<http://www.journals.uchicago.edu/JPE/journal/issues/v108n4/008408/008408.web.pdf>

A. Sorensen, "Price Dispersion and Heterogeneous Consumer Search for Retail Prescription Drugs," mimeo, <http://www.stanford.edu/~asorensen/papers/search.pdf>

G. Ellison and S. Ellison, "Search, Obfuscation, and Price Elasticities on the Internet," mimeo, <http://web.mit.edu/gellison/www/search.pdf>

* H. Hong and M. Shum, "Using Price Distributions to Estimate Search Costs", RJE, 2006, 37(2), 257-275 <http://www.econ.jhu.edu/people/shum/papers/price.pdf>

* A. Hortacsu and C. Syverson, "Product Differentiation, Search Costs and Competition in the Mutual Fund Industry", QJE, 2004, 119(2), 403-456
<http://juno.ingentaselect.com.turing.library.northwestern.edu/vl=1460736/cl=86/nw=1/fm=docpdf/rpsv/cw/mitpress/00335533/v119n2/s2/p403>

4. Advertising (week 3)

Theory

Tirole, 2.2-2.4, 7.3

K. Bagwell, "The Economic Analysis of Advertising", <http://www.columbia.edu/%7Ekwb8/Adchap2003-combined.pdf>

G.S. Becker and K.M. Murphy, "A Simple Theory of Advertising as a Good or Bad", QJE, 1993, 941-964, <http://links.jstor.org/sici?sici=0033-5533%28199311%29108%3A4%3C941%3AASTOAA%3E2.0.CO%3B2-4>

P. Milgrom and J. Roberts, "Price and Advertising Signals of Product Quality", JPE, 1986, 94, 796-821, <http://links.jstor.org/sici?sici=0022-3808%28198608%2994%3A4%3C796%3APAASOP%3E2.0.CO%3B2-2>

b. Empirical Evidence

* D. Akerberg "Empirically Distinguishing Informative and Prestige Effects of Advertising," Rand Journal of Economics, 2001, 32(2), 316-333,
<http://search.epnet.com.turing.library.northwestern.edu/login.aspx?direct=true&AuthType=cookie.ip.url,uid&db=buh&an=4836684>

L. Benham, "The Effects of Advertising on the Price of Eyeglasses", Journal of Law and Economics, 1972, 337-52, <http://links.jstor.org/sici?sici=0022-2186%28197210%2915%3A2%3C337%3ATEOAOT%3E2.0.CO%3B2-A>

G. Jin and P. Leslie "The Effects of Disclosure Regulation: Evidence from Restaurants." Quarterly Journal of Economics, 2003, 409-51, <http://konstanza.ingentaselect.com.turing.library.northwestern.edu/vl=1426783/cl=18/nw=1/fm=docpdf/rpsv/cw/mitpress/00335533/v118n2/s2/p409>

* J. Milyo. and J. Waldfogel, "The Effect of Price Advertising on Prices: Evidence in the Wake of 44 Liquormart," American Economic Review, 1999, 89, 1081-96, <http://www.jstor.org/view/00028282/ap000007/00a00030/0?config=jstor&frame=noiframe&userID=12aa00bc@mit.edu/01cc9933c0050da216d&dpi=3>

J. Rizzo and R. Zeckhauser, "Advertising and Entry: The Case of Physician Services," Journal of Political Economy, 1990, 476-500, <http://links.jstor.org/sici?sici=0022-3808%28199006%2998%3A3%3C476%3AAAETCO%3E2.0.CO%3B2-H>

R. Sauer and K. Leffler, "Did the Federal Trade Commission's Advertising Substantiation Program Promote More Credible Advertising?", American Economic Review, 1990, 191-203, <http://links.jstor.org/sici?sici=0002-8282%28199003%2980%3A1%3C191%3ADTFTCA%3E2.0.CO%3B2-Y>

5. Strategic Interaction – Complete Information (week 4)

Theory

* Tirole, pp. 207-8, Chapter 8 and supplementary section

D. Fudenberg and J. Tirole, "The Fat Cat Effect, the Puppy Dog Ploy and the Lean and Hungry Look", AER, 1984, 361-6, <http://links.jstor.org/sici?sici=0002-8282%28198405%2974%3A2%3C361%3ATFETPP%3E2.0.CO%3B2-S>

J. Bulow, J. Geanakoplos and P. Klemperer, "Multimarket Oligopoly: Strategic Substitutes and Complements", JPE, 1985, 488-511, <http://links.jstor.org/sici?sici=0022-3808%28198506%2993%3A3%3C488%3AMOSSAC%3E2.0.CO%3B2-D>

R. Schmalensee, "[Entry Deterrence in the Ready-to-Eat Breakfast Cereal Industry](#)," Bell Journal of Economics, 1978, 9, 305-327.

K. Judd, "Credible Spatial Preemption," Rand Journal of Economics, 1985, 16, 153-166, <http://links.jstor.org/sici?sici=0741-6261%28198522%2916%3A2%3C153%3ACSP%3E2.0.CO%3B2-D>

* A. Dixit, "The Role of Investment in Entry Deterrence", EJ, 1980, 721-9, <http://links.jstor.org/sici?sici=0013-0133%28198003%2990%3A357%3C95%3ATROIIE%3E2.0.CO%3B2-D>

D. Fudenberg and J. Tirole, "Learning-by-Doing and Market Performance", Bell Journal of Economics, 14(2), 1983, 522-530, <http://links.jstor.org/sici?sici=0361-915X%28198323%2914%3A2%3C522%3ALAMP%3E2.0.CO%3B2-5>

D. Fudenberg and J. Tirole, "Capital as a Commitment: Strategic Investment to Deter Mobility", JET, 227-256

* J. Gelman and S. Salop, "Judo Economics: Capacity Limitation and Coupon Competition", BJE, 1983, 315-25, <http://links.jstor.org/sici?sici=0361-915X%28198323%2914%3A2%3C315%3AJECLAC%3E2.0.CO%3B2-A>

C. Matutes & P. Regibeau, "Mix and match: product compatibility without network externalities," Rand Journal of Economics, 1988, 19, <http://links.jstor.org/sici?sici=0741-6261%28198822%2919%3A2%3C221%3A%22AMPCW%3E2.0.CO%3B2-7>

P. Bolton and D. Scharfstein, "A theory of predation based on agency problems in financial contracting", American Economic Review, 1990, 80(1), 94-106, <http://links.jstor.org/sici?sici=0002-8282%28199003%2980%3A1%3C93%3AATOPBO%3E2.0.CO%3B2-5>

P. Aghion and P. Bolton, "Contracts as a Barrier to Entry", American Economic Review, 1987, 77(3), 388-401 <http://links.jstor.org/sici?sici=0002-8282%28198706%2977%3A3%3C388%3ACAABTE%3E2.0.CO%3B2-7>

D. Besanko, U. Doraszelski, Y. Kryukov and M. Satterthwaite, "Learning-By-Doing, Organizational Forgetting, and Industry Dynamics", 2004, Northwestern Working Paper <http://www.kellogg.northwestern.edu/faculty/satterthwaite/research/2004-1217%20Besanko-Doraszelski-Krykov-Satt%20Learning.pdf>

b. Evidence

* J. Chevalier, "[Capital Structure and Product Market Competition: Empirical Evidence from the Supermarket Industry](#)", American Economic Review, 1995, 85(3), 415-435.

D. Matsa, "Capital Structure as a Strategic Variable: Evidence from Collective Bargaining", mimeo, Northwestern University, <http://ssrn.com/abstract=933698>

L. Dafny, "Entry Deterrence in Hospital Procedure Markets: A Simple Model of Learning-By-Doing", 2003, NBER 9871, <http://www.nber.org/papers/w9871>

* G. Ellison and S. Ellison, "[Strategic Entry Deterrence and the Behavior of Pharmaceutical Incumbents Prior to Patent Expiration](#)," MIT, mimeo.

V. Kadiyali, "[Entry, its Deterrence, and its Accommodation: A Study of the U.S. Photographic Film Industry](#)," The Rand Journal of Economics, 1996, 27, 452-478.

M. Lieberman, "[Post Entry Investment and Market Structure in the Chemical Processing Industry](#)," Rand Journal of Economics, 1987, 18, 533-549.

R. Smiley. 1988. "Empirical Evidence on Strategic Entry Deterrence," International Journal of Industrial Organization, 6, 167-180,

6. Strategic Interaction – Incomplete Information (week 4 or 5, may not be covered)

Theory

Tirole, Sections 9.0-9.7

J. Ordover and G. Saloner, "Predation, Monopolization and Antitrust" in HIO

* P. Milgrom and J. Roberts, "Limit Pricing and Entry Under Incomplete Information: An Equilibrium Analysis," *Econometrica*, 1982, 50, pp. 443-460, <http://links.jstor.org/sici?sici=0012-9682%28198203%2950%3A2%3C443%3ALPAEUI%3E2.0.CO%3B2-E>

P. Milgrom and J. Roberts, "Predation, Reputation, and Entry Deterrence," *Journal of Economic Theory*, 1982, 27, 288-312

* D. Fudenberg and J. Tirole, "[A 'Signal-Jamming' Theory of Predation](http://links.jstor.org/sici?sici=0741-6261%28198623%2917%3A3%3C366%3AA%22TOP%3E2.0.CO%3B2-O)," *Rand Journal of Economics*, 1986, 17, 366-76, <http://links.jstor.org/sici?sici=0741-6261%28198623%2917%3A3%3C366%3AA%22TOP%3E2.0.CO%3B2-O>

7. Vertical Relationships, Tying and Foreclosure (week 5)

Theory

* Tirole, Chapter 4 (including supplementary section).

S. Salop and D. Scheffman, "Raising Rivals' Costs," *American Economic Review*, 1983, 267-271
<http://links.jstor.org/sici?sici=0002-8282%28198305%2973%3C267%3ARRC%3E2.0.CO%3B2-G>

J.A. Ordover, G. Saloner and S.C. Salop, "Equilibrium Vertical Foreclosure," *American Economic Review*, 1990, 80, 127-142
<http://links.jstor.org/sici?sici=0002-8282%28199003%2980%3C127%3AEVF%3E2.0.CO%3B2-M>

B. Douglas Bernheim and M. Whinston, "Exclusive Dealing," *JPE*, 1998, 64-103,
<http://links.jstor.org/sici?sici=0022-3808%28199802%29106%3A1%3C64%3AED%3E2.0.CO%3B2-B>

S. Salop and M. Riordan, "Evaluating Vertical Mergers: A Post-Chicago Approach," *Antitrust Law Journal*, 1995, 63, 513-568,
<http://www.heinonline.org.turing.library.northwestern.edu/HOL/PDF?handle=hein.journals/antil63&id=521&print=section§ion=25&ext=.pdf>

O. Hart and J. Tirole, "Vertical Integration and Market Foreclosure," *Brookings Papers on Economic Activity: Microeconomics*, 1990, 205-286. <http://links.jstor.org/sici?sici=1057-8641%281990%291990%3C205%3AVIAMF%3E2.0.CO%3B2-V>

P. Rey and J. Tirole "A Primer on Foreclosure", 2003, mimeo,
<http://venus.unive.it/rosen/papers/primer20030716.pdf>

M. Whinston, "Tying, Foreclosure, and Exclusion", *AER*, 1990, 80(4), 837-859,
<http://links.jstor.org/sici?sici=0002-8282%28199009%2980%3A4%3C837%3ATFAE%3E2.0.CO%3B2-P>

I. Segal and M.D. Whinston, "Exclusive Dealing and the Protection of Investments", *RJE*, 2000, 603-33,

D. Besanko and M. Perry, "Exclusive Dealing in a Model of Retail Competition", *IJIO*, 1994, 297-329

P. Aghion and P. Bolton, "Entry Prevention Through Contracts with Customers," American Economic Review, 77, June 1987, pp. 388-401, <http://links.jstor.org/sici?sici=0002-8282%28198706%2977%3A3%3C388%3ACAABTE%3E2.0.CO%3B2-7>

B. Klein, "Market Power in Aftermarkets," Managerial and Decision Economics, Vol. 17, 143-164 (1996). <http://links.jstor.org/sici?sici=0143-6570%28199603%2F199604%2917%3C143%3AMPIA%3E2.0.CO%3B2-W>

C. Shapiro, "Aftermarkets and Consumer Welfare: Making Sense of Kodak," Antitrust Law Journal, 1995, 63 p. 483

Empirical Evidence

* S. Villas-Boas, "Vertical Contracts Between Manufacturers and Retailers: An Empirical Analysis," University of California, Berkeley, mimeo, 2001
http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1002&context=are_ucb

J. Asker, "Diagnosing Foreclosure due to Exclusive Dealing", 2004, <http://ssrn.com/abstract=609162>

J. B. Heide, et.al., "Exclusive Dealing and Business Efficiency: Evidence from Industry Practice" Journal of Law and Economics, October 1998, 387-407, <http://links.jstor.org/sici?sici=0022-2186%28199810%2941%3A2%3C387%3AEDABEE%3E2.0.CO%3B2-H>

K.S. Corts, "The Strategic Effects of Vertical Market Structure: Common Agency and Divisionalization in the US Motion Picture Industry", JEMS, 2001, 10, 509-552

R. Gilbert & J. Hastings, "Pricing Vertical Integration in Gasoline Supply: An Empirical Test of Raising Rivals' Costs," University of California Energy Institute, POWER Working Paper PWP-084, July 2001.
<http://www.ucei.org/PDF/pwp084.pdf>

J. Mortimer, "Vertical Contracts in the Video Rental Industry", mimeo, Harvard, 2004
<http://post.economics.harvard.edu/faculty/mortimer/papers/04jmp401.pdf>

S.J. Ornstein and D.M. Hanssens, "Resale Price Maintenance: Output Increasing or Restructuring? The Case of Distilled Spirits in the United States", JIE, 1987, 36, 1-18, <http://links.jstor.org/sici?sici=0022-1821%28198709%2936%3A1%3C1%3ARPMOIO%3E2.0.CO%3B2-N>

F. Lafontaine, "Agency Theory and Franchising: Some Empirical Results", Rand Journal of Economics, 1992, 23, 263-283, <http://links.jstor.org/sici?sici=0741-6261%28199222%2923%3A2%3C263%3AATAFSE%3E2.0.CO%3B2-P>

C.A. Evans, C.M. Grimm and C. Winston, "Foreclosure of Railroad Markets: A Test of the Chicago Leverage Theory", JLE, 1992, 295-310, <http://links.jstor.org/sici?sici=0022-2186%28199210%2935%3A2%3C295%3AFORMAT%3E2.0.CO%3B2-K>

A. Hortcasu and C. Syverson, "[Cementing Relationships: Vertical Integration, Foreclosure, Productivity, and Prices](#)", 2004, mimeo, U Chicago

T. Chipty, "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry", AER, 2001, 428-453,

8. Network Externalities and Adoption of New Technologies with Externalities (week 6)

Theory

G. Ellison and D. Fudenberg, "[Rules of Thumb for Social Learning](#)," Journal of Political Economy, 1993, 101, 612-643

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