Economics 195: How Markets Work

Fall 2011

Lectures: Wednesday & Friday, 2:50-4:10 pm, Old Chem 123

Instructor: Andrew Sweeting, Soc Sci 220A (email: atsweet "at" duke.edu)

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Objectives:

This course provides students with the theoretical and empirical tools to understand how markets work and so answer a variety of policy-relevant questions. Examples will include: the use of price discrimination and bundling as profitable pricing or marketing strategies, the identification of predatory pricing or collusion in antitrust analysis and recent controversies surrounding the design of procurement and insurance markets. In each case, students will use real data and case documents to justify or illustrate their conclusions, so econometrics is a pre-requisite for taking the course. The course provides a natural introduction to advanced topics in Industrial Organization, Market Design, Marketing, Corporate Strategy, Antitrust and Regulation.

Office Hours:

Regular office hours are **Tuesdays 1:30-2:30**, although this may not be possible some weeks. I will also be available straight after class on Fridays and usually on Wednesdays. Send me an email if you want to meet and these times are inconvenient.

Materials:

Lecture notes containing definitions, math and diagrams will be available on Blackboard, together with links to the key readings. In class I will use a combination of slides, whiteboard and handouts.

This is the first time this course has been offered. The notes will inevitably contain mistakes, so please let me know when you find them. Please let me know if you want to change the speed or particularly like or dislike features of the class.

Class Participation:

This is a small, advanced undergraduate class. There will be a lot of opportunities for formal participation (e.g., presentations and discussions) but it's just as important to ask questions/raise objections/suggest examples and provoke debate. This will be rewarded in the final grade.

Textbooks :

There is no required textbook, but there are several books that cover the topics we will discuss. I particularly like a new book (on reserve in the library, pretty cheap copies on Amazon)

Paul Belleflamme and Martin Peitz, *Industrial Organization: Markets and Strategies*, Cambridge University Press, 2010 (BP below)

Also on reserve is a book which covers many of the empirical methods at a level that is a bit beyond what we discuss in this course

Peter Davis and Eliana Garces, *Quantitative Techniques for Competition and Anti-trust Analysis*, Princeton, 2010

Some books that may be worth looking at include:

Jeffrey Church and Roger Ware, *Industrial Organization: A Strategic Approach*, Irwin, 2000 (long, link to a free copy on Blackboard)

Jean Tirole, *The Theory of Industrial Organization*, MIT, 1987 (a classic)

James Stock and Mark Watson, *Introduction to Econometrics*, Second or Third edition (which you should be familiar with from Econometrics)

Michael Whinston, *Lectures on Antitrust Economics*, MIT, 2006 (on reserve)

Statistical Packages:

Problem sets will require using STATA and for one exercise MATLAB. You can use whatever package you choose, so if you are an ace SAS/R/SPSS/C programmer you can use your preferred language, but solutions will only be provided in STATA/MATLAB.

Stata is available on the computers in 229 Social Sciences as well as in the Basement (Room 01) of the Old Chem Building.

http://www.socsci.duke.edu/it/compute/stata.html

Stata is updated frequently, although most things we will do should work fine on any version of Stata you will find on campus. If you want, you can buy many different levels of STATA under their plan for students:

http://www.stata.com/order/new/edu/gradplan.html

When using STATA create a log file so you can keep track of what you are doing e.g.,

log using c:\..\problemset2_log.log, replace

You can hand in annotated log files as part of your problem set solutions.

MATLAB is available on a Duke campus wide license.

Course Policies:

Class Participation	30%
Problem Sets	30%
Final	40% (Sat Dec 17 pm)

You must hand in your own problem sets, but I am happy for you to cooperate when you are completing them. We will usually discuss parts of the problem sets in class.

If you would like to submit a paper instead of doing the final, let me know. If you are doing an Honors Thesis related to the course you can turn in a paper based on that, as long as you do at least one in-class presentation on what you are working on.

Course Outline
(Subject to Change and Completion)

Lecture 1, August 30: motivating questions; market definition; relationship to Marketing, Industrial Organization, Strategy, Law and Economics; antitrust; role of empirical analysis

BP, Chapters 1 and 2

Topics in Monopoly Pricing and Demand Estimation

Lecture 2, Sept 2: Monopoly Pricing; Assumption of Profit Maximization; Market Power and Welfare; 1st and 3rd Degree Price Discrimination

Advanced Reading/Class Discussion: S. Levitt (2006)**,** An Economist Sells Bagels: A Case Study in Profit Maximization, NBER Working Paper 12152

Problem Set 1: Empirical evidence of 3DPD (due in-class Sept 9), based on K Graddy, ""Do Fast Food Chains Price-Discriminate on the Race and Income Characteristics of an Area", Journal of Business and Economic Statistics, 1997

BP, Chapter 8

Lecture 3, Sept 7: 3DPD; 2nd Degree Price Discrimination

Problem Set 2: Theoretical analysis of 2DPD (due in-class Sept 14)

BP, Chapters 8 and 9

Lecture 4, Sept 9: 2DPD; Introduction to Empirical Demand Estimation

Davis and Garces, Chapter 9

Lecture 5, Sept 14: Demand Estimation and Application to 2DPD

Class Presentation: McManus (2007), "Nonlinear Pricing in an Oligopoly Market: The Case of Specialty Coffee", RAND, 38(2), 512-532

Problem Set 3: Nested Logit Demand Estimation for Autos using EU Car Data (due in class Sept 21)

Lecture 6, Sept 16: Competition and Price Discrimination; Ethics of Price Discrimination

Class Presentation**:** M Busse and M Rysman (2005), "Competition and Price Discrimination in Yellow Pages Advertising", RAND, 36, 378-390

Class Discussion: Ethics of price discrimination

BP, Chapters 8 and 9

Lecture 7, Sept 21: Monopoly Bundling

Problem Set 4: Demand Estimation to Assess Value of Bundling using Individual Data (due Sept 30)

BP, Chapter 11

Lecture 8, Sept 23: Durable Goods pricing

BP, Chapter 10

Lecture 9, Sept 28: Professor Away. Discussion of problem set solutions.

Class Presentation: J Chevalier and A Goolsbee (2009), "Are Durable Goods Consumers Forward-Looking: Evidence from College Textbooks", QJE, 124 (4): 1853-1884

Oligopoly Behavior

Lecture 10, Sept 30: Introduction to Standard Models of Competition – Cournot/Bertrand

Problem Set 5: Theoretical Analysis of Mergers (due Oct 5)

BP, Chapter 15

Lecture 11, Oct 5: Merger Theory and Merger Policy

Reading: M Whinston, *Lectures on Antitrust Economics*, chapter on horizontal mergers

Lecture 12, Oct 7: Demand Estimation and Merger Simulation

Problem Set 6: Computation of Merger Counterfactuals (due Oct 16)

Lecture 13, Oct 12: Empirical Evidence on Mergers and Merger Simulations

Class Presentation: C. Peters (2006), "Evaluating the Performance of Merger Simulations: Evidence from the US Airline Industry", Journal of Law and Economics, 49(2), 627-649

Class Discussion/Debate: Whole Foods and Wild Oats

Lecture 14, Oct 14: Strategic Behavior – Taxonomy; Bundling; Chicago School/One Monopoly theory

BP, Chapters 16 and 17

Lecture 15, Oct 19: Bundling; Entry Deterrence and Predation

Class Discussion/Debate: GE/Honeywell Merger

Problem Set 7: American Airlines (due Oct 26)

Lecture 16 Oct 21: Endogenous Market Structure

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

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

J. Sutton (1997), "One Smart Agent", RAND, 28(4), 605-628

Lecture 17 Oct 26: Predation & Endogenous Market Structure

Class Discussion/Debate: American Airlines predation case

Problem Set 8: Endogenous Market Structure empirics

Lecture 18 Oct 28: Endogenous Market Structure; Class Presentations Sutton

Class Presentation: Sutton case studies or P Ellickson (2004), “Supermarkets as a Natural Oligopoly”, mimeo

Collusion and Cartels

Lecture 19 Nov 2: Theory of Tacit Collusion; Cartels; Facilitating Practices

Problem Set 9: Collusion

BP, Chapter 14

Lecture 20 Nov 4: Cartels and Facilitating Practices

Class Presentation: Airline Tariff Publishing Company; Canadian Retail Gasoline

Auctions

Lecture 21 Nov 9: Private value auctions and the Revenue Equivalence Theorem

D. Lucking Reiley (1999), "Using Field Experiments to Test Equivalence between Auction Formats: Magic on the Internet", *American Economic Review*, 89 (5): 1063-1080.

S. Athey, J. Levin and Enrique Seira (2011), "Comparing Open and Sealed Bid Auctions: Evidence from Timber Auctions", *Quarterly Journal of Economics*, 126 (1): 207-257.

Problem Set 10: Collusion in Auctions

Lecture 22 Nov 11: Common/affiliated value auctions. Detection of collusion in auctions.

K. Hendricks. and R. Porter (1988), "An Empirical Study of An Auction with Asymmetric Information", *American Economic Review*, 78: 865-83.

R. Porter and D. Zona (1999), “"Ohio School Milk Markets: An Analysis of Bidding", *RAND Journal of Economics*, 30: 263-288.

Lecture 23 Nov 16: Multi-unit auctions and application to Treasury and electricity markets

C. Wolfram (1998), "Strategic Bidding in a Multi-Unit Auction: An Empirical Analysis of Bids to Supply Electricity in England and Wales", *RAND Journal of Economics*, 29: 703-25.

P. Malvey, C. Archibald and S. Flynn (1996), "Uniform-Price Auction: Evaluation of the Treasury Experience", U.S. Treasury

Lecture 24 Nov 18: Medicare Procurement Auctions

Class Presentation

We will use materials at: http://www.cramton.umd.edu/papers/health-care

Asymmetric Information

Lecture 25 Nov 30: Motivating examples of insurance markets; expected utility theory, definition of risk aversion

M. Machina (1987), "Choice Under Uncertainty: Problems Solved and Unsolved", *Journal of Economic Perspectives*, Summer 1987, p.121-154.

J. Brown, N. Coe and A. Finkelstein (2007), "Medicaid Crowd-Out of Private Long-Term Care Insurance Demand: Evidence from the Health and Retirement Survey", *Tax Policy and the Economy,* vol. 21, p.1-34

Lecture 26 Dec 2: Adverse selection and moral hazard

G. Akerlof, (1970), "The Market for "Lemons": Quality Uncertainty and the Market Mechanism", *Quarterly Journal of Economics,* vol. 84, p.488-500.

A. Finkelstein and K. McGarry (2006), "Multiple Dimensions of Private Information: Evidence from the Long-Term Care Insurance Market", *American Economic Review,* September 2006, Vol. 96(4), p.938-958

Problem Set 11: Empirical evidence of adverse and advantageous selection

Lecture 27 Dec 7: Adverse selection in insurance markets; methods for reducing adverse selection

L. Einav and A. Finkelstein (2011), "Selection in Insurance Markets: Theory and Empirics in Pictures", *Journal of Economic Perspectives,* vol. 25(1), Winter 2011, p.115-138.

M. Rothschild and J. Stiglitz (1976), "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information", *Quarterly Journal of Economics,* Vol. 90(4), p.629-649.

Lecture 28 Dec 9: Government design of insurance markets; "Obamacare"

L. Einav, A. Finkelstein and J. Levin (2010), "Beyond Testing: Empirical Models of Insurance Markets", *Annual review of Economics,* Vol. 2 p.311-336.

On "Obamacare" there are many interesting opinion pieces with contrasting takes on the efficacy of the proposals. Some to look at are:

M. Feldstein (2009), "Obamacare's All About Rationing", *WSJ*, August 18 2009. Available at: http://www.nber.org/feldstein/wsj09072009.html

M. Feldstein (2009), " A Better Way to Health Reform", *Washington Post*, October 8 2009. Available at: http://www.nber.org/feldstein/wsj09072009.html

A. Enthoven (2011), "What Paul Ryan's Critics Don't Know About Health Economics", *WSJ,* June 3 2011. Available at: http://online.wsj.com/article/SB10001424052702303657404576357750584271340.html

U. Reinhardt (2011), "Does the Ryan Plan Curb Health Spending?", *NYT Economix,* April 29 2011. Available at: http://economix.blogs.nytimes.com/2011/04/29/does-the-ryan-plan-curb-health-spending/

U. Reinhardt (2011), "The Economics of Privately Sponsored Social Insurance", *NYT Economix,* April 1 2011. Available at: http://economix.blogs.nytimes.com/2011/04/01/the-economics-of-privately-sponsored-social-insurance/

U. Reinhardt (2009), "What is Socialized Medicine?: A Taxonomy of Health Care Systems", *NYT Economix*, May 8 2009. Available at: http://economix.blogs.nytimes.com/2009/05/08/what-is-socialized-medicine-a-taxonomy-of-health-care-systems/

P. Krugman (2010), "One Health Care Reform, Indivisible", *NYT,* January 8 2010. Available at: http://krugman.blogs.nytimes.com/2010/01/08/one-health-care-reform-indivisible/