

Industrial Organization 1

Fall 2005, second quarter

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Introduction

Industrial organization (IO) is the study of imperfect competition. This course provides an overview of modern IO theory and empirical work. Firm pricing under oligopoly, the economics of collusion, how to empirically measure markups and perform simulations in markets for differentiated products are some of the topics covered. The goal of the course is that you develop fluency in the language of IO economists and become familiar with the standard tool box.

One of the reasons that make IO fun to study is the application of advanced theory and econometrics to issues that are on the news daily. How are grocery prices affected by the strength of competition? What is the effect on prices, profits and consumer welfare of the introduction of a new good? Is there too much marketing? Why was the proposed merger by SF and Sandrew opposed? Why are Swedish asphalt firms sued for more than a billion kronor by the competition authority?

Industrial Organization is not only a very lively field in its own right - but has also been an important source of intellectual arbitrage to many other areas of economics such as "new" trade theory, macroeconomics and Michael Porter-style management strategy. This makes the course valuable also for those who do not aim to specialize in IO.

9 lectures will be given by Richard Friberg (SSE) and 4 by Jonas Häckner (Stockholm University). We will also have a guest lecture from the Swedish competition authority on a recent cartel case.

What we cover in lectures

Introduction

1 Introduction and Monopoly.(RF)

Interaction with a given market structure

(theory)

2 Static oligopoly theory (JH)

3 Product differentiation (JH)

4 Repeated oligopoly, tacit collusion (JH)

(empirical work)

5 Structure-Conduct-Performance. (RF).

6 New empirical industrial organization I. (RF).

7 New empirical industrial organization II (RF).

Determinants of market structure

8 Competition policy and mergers (JH)

9 Vertical control (RF)

10 Entry and Exit (RF)

11 Strategic behavior and entry (RF)

Topics

12 Research and Development (RF)

13 Advertising (RF)

14 Guest lecture

Examination:

There will be a written examination at the end of the course (for a total of 70 points). In addition you can gain credits by solving three problem sets (one theoretical and two empirical). Each of these will be graded and each gives a maximum of 10 points. Last day to turn in assignments is December 20. The grade for the course will be determined by the total credits earned from the exam + assignments. (Total 100, 50 required for passing).

Reading list.

Most of the readings will consist of articles. We will draw on two text books

Tirole, Jean, 1989, *The theory of Industrial Organization*, MIT Press and

Martin, Stephen 2002, *Advanced industrial economics*, Blackwell.

These books are excellent for future reference. There are several excellent undergraduate text-books which can serve as complements (not required for this course): favorites are Cabral (2000), *Introduction to Industrial Organization*, MIT Press, Carlton-Perloff (2000) *Modern Industrial Organization*, AWL and Scherer-Ross (1990), *Industrial market structure and economic Performance*, Houghton-Mifflin.

1. Introduction and Monopoly

** Tirole, pages 1-4, Chapter 1, 133-139, 142-154, 307-311 and 367-374.

** Martin S, 2001, *Advanced industrial economics*, 1-9.

2. Static Oligopoly Theory

** Tirole, Chapter 5

* Kreps and Schienkman, 1983, *Quantity Precommitment and Bertrand Competition Yield Cournot Outcomes*, *Bell Journal of Economics* 14, 326-337.

3. Product Differentiation

** Tirole, Chapter 7, Sections 2.1.2 and 7.1

** Shaked and Sutton, 1982, *Relaxing Price Competition through Product Differentiation*, *Review of Economic Studies* 49, 3-13.

** D'Aspremont, Gabszewicz and Thisse, 1979, *On Hotelling's Stability in Competition*, *Econometrica* 17, 1145-1151.

* Singh and Vives, 1984, *Price and Quantity Competition in a Differentiated Duopoly*. *Rand Journal of Economics* 15, 546-554.

* Häckner, 2000, *A Note on Price and Quantity Competition in Differentiated Oligopolies*, *Journal of Economic Theory* 93, 233-239.

4. Repeated oligopoly, tacit collusion

** Tirole, Chapter 6

* Schapiro, 1989, Theories of Oligopoly Behaviour, Handbook of Industrial Organization.

* Abreu, 1986, Extremal Equilibria of Oligopolistic Supergames, Journal of Economic Theory 39, 191-225.

* Green and Porter 1984, Non-cooperative Collusion under Imperfect Price Information, Econometrica 52, 87-100.

* Rotemberg and Saloner, 1986, A Supergame-Theoretic Model of Price Wars During Booms, American Economic Review 76(3), 390-407.

* Bernheim and Whinston, 1990, Multimarket Contact and Collusive Behaviour, RAND Journal of Economics 21(1), 1-26.

* Häckner, 1995, Optimal Symmetric Punishments in a Bertrand Differentiated Products Duopoly, International Journal of Industrial Organization 14, 611-630.

5 Structure-conduct performance and competition in local markets

** Schmalensee, 1989, Inter-industry studies of Structure and Performance, in R. Schmalensee and R. Willig (eds) Handbook of Industrial Organization.

* Asplund and Friberg, 2002, Food prices and market structure in Sweden, Scandinavian Journal of Economics 104, 547-566.

** Tirole, ch 5.5

* Martin, 117-185

6. New Empirical Industrial Organization: I.

** Bresnahan, 1982, The oligopoly solution concept is identified, Economics Letters 10, 87-92.

** Genesove and Mullin, 1998, Testing static oligopoly models: conduct and cost in the sugar industry, RAND Journal of Economics 1890-1914.

* Bresnahan, 1989, Empirical Studies of Industries with market power, in R. Schmalensee and R. Willig (eds) Handbook of Industrial Organization

Corts, 1999, Conduct parameters and the measurement of market power, Journal of Econometrics 88, 227-250.

7 New Empirical Industrial Organization: II

** Berry, 1994, Estimating discrete-choice models of product differentiation, RAND Journal of Economics 33, 142-262.

** Nevo, 2000, Mergers with differentiated products: the case of the ready-to-eat cereal industry, RAND Journal of Economics 31, 395-421.

* Reiss P. and F. Wolak, 2005, Structural econometric modeling: rationales and examples from industrial organization, forthcoming Handbook of Econometrics, p. 59-87, downloadable at <ftp://zia.stanford.edu/pub/papers/reisswolak.pdf>

* Berry, Levinsohn and Pakes, 1995, Automobile prices in market equilibrium, Econometrica 63, 841-890.

Nevo, 2000, A practitioners guide to estimation of random coefficients logit models of demand, Journal of Economics and management strategy

8 Competition policy and mergers

** European Commission, 1989, Council Regulation (EEC) No. 4064/89 OJ L 395/1 30 (The EC Merger Regulation), November 1989.

** European Commission, 1997, Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law, Official Journal of the European Communities (97/C 372)

** The U.S. Department of Justice and Federal Trade Commission, 1998, 1992 *Horizontal Merger Guidelines*.

** Salinger, 1988, Vertical Mergers and Market Foreclosure, Quarterly Journal of Economics 103, 345-356.

9 Vertical control

** Tirole ch 4.

* Rey and Tirole, 2003, A primer on foreclosure, forthcoming, Handbook of Industrial Organization,

* Chipty, T (2001), "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry." American Economic Review, 91(3), 428-53.

* Villas Boas, 2003, Vertical contracts between suppliers and retailers: an empirical analysis.

10 Entry and exit - market dynamics

** Cabral, Ch 14.

** Bresnahan and Reiss, 1991, Entry and competition in concentrated markets, *Journal of Political Economy* 99, 977-1009.

* Berry and Waldfogel, 2004, Product quality and market size, manuscript, available at <http://www.econ.yale.edu/~steveb/PQ.pdf>

* Caves, 1998, Industrial Organization and new findings on the turnover and mobility of firms, *Journal of Economic Literature* 36, 1947-1982.

* Asplund, and Nocke, 2005, Firm turnover in imperfectly competitive markets, forthcoming *Review of Economic Studies*, downloadable at <http://www.econ.upenn.edu/~nocke/turbulenceshortrevised-res-final-april18-2005.pdf>

Dunne, Roberts and Samuelson, 1988, Patterns of firm entry and exit in US manufacturing industries, *RAND Journal of Economics* 19, 495-.

Sutton, (1991), *Sunk cost and market structure*, MIT Press.

Sutton, (1998), *Technology and market structure*, MIT Press.

11 Strategic behavior and entry

** Tirole, p. 305- 308, 318-319 and 323-328.

* Kadiyali, 1996, entry, its deterrence and its accommodation: A study of the US photographic film industry, *RAND Journal of Economics* 27, 452-458.

* Goolsbee and Syverson, 2005, How do incumbents respond to the threat of entry? Evidence from major airlines, manuscript GSB Chicago, downloadable at <http://gsbwww.uchicago.edu/fac/austan.goolsbee/research/sw.pdf>

Dixit, 1980, The role of investment in entry deterrence, *Economic Journal* 90, 95-106.

Fudenberg and Tirole, 1984, The fat-cat effect, the puppy-dog ploy, and the lean and hungry look, *American Economic Review*, papers and proceedings, 361-366.

12 Research and development, new products

** Tirole, p 389-399.

* Petrin, 2002, Quantifying the benefits of new products: the case of the minivan, *Journal of Political Economy* 110, 705-729.

* Friberg and Ganslandt, 2005, An empirical examination of the reciprocal dumping hypotheses, forthcoming *Journal of International Economics*.

13 Advertising

** Bagwell, K, 2005, *The Economic Analysis of Advertising*, forthcoming *Handbook of Industrial Economics*, available at <http://www.columbia.edu/%7Ekwb8/adchapterPost082605.pdf>

* Milyo, J. and J. Waldfogel, 1999, The effect of price advertising on prices: Evidence in the wake of 44 Liquormart, *American Economic Review* 89, 1081-.

* Akerberg, D. 2001, Empirically Distinguishing Informative and Prestige Effects of Advertising, *RAND Journal of Economics*, Vol. 32, No. 2, Summer 2001. pp100-118

