

# Econ 874: Industrial Organization Theory

Fall 2020

Professor Yongmin Chen

Office: Econ 108

Class Time(remote/online)TTH: 9:30-10:45 AM

Office Hours(remote/online): Wednesday1:00-5:00 PM

Recommended books(1) The Theory of Industrial Organization by Jean Tirole (1988) MIT

Press, (2) Industrial Organization: Contemporary Theory and Practice by Pngall, Richards, and

Norman and (3) Handbook of Industrial Organization, Vol. B10 3, 2007, Mark Armstrong and

Robert Porter edits)HIO 3 surveys the major developments in IO

during the semester, which will be announced in class. You are responsible for updating course information according to announcements made in class.

Course Schedule:

1. Introduction: Research Framework and Methods  
8/25, 8/27

Readings:

- Tirole; Poppo et al.; Tables of Contents, IO 3.
- Varian, H. "How to Build an Economic Model in Your Spare Time", 1994, updated in 2009.
- Jonathan B. Berk, Campbell R. Harvey and David Hirshleifer, "

- Monika Mrázová and J. Peter Neary, “Not So Demanding Demand Structure and Firm Behavior”, AER, 2017.
- \*Andrew Rhodes and Chris Wilson, “False Advertising”, RAND, 2018

Assignment 1 (due 9/8):

(1) Exercise 1.1-9 in Tirole

(2) Short reviews of Ichihashi(2020) and Rhodes and Wilson(2018)

Student Presentation 1 (9/10): Ichihashi(2020) Rhodes and Wilson(2018)

### 3. Product Differentiation and Price Competition

9/15, 9/17, 9/22, 9/20/2 Tc -00 11.0tTd 6aETJ 2.92 0 Td ( )T[(9/)Fæe AdAJ3.92 -0.0021620.004 .1 0 T

- “Horizontal Merger Guidelines”, FTC and DOJ, 2010.  
[https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hm\\_2010.pdf](https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hm_2010.pdf)

#### Assignment 2 (due 9/29)

- (1) Exercise 5.15.9; 7.17.3 in Tirole;
- (2) Short reviews of Holmes(1989)and Armstrong and Vickers(2019).

Student Presentation 2 (10/1): Holmes (1989)Armstrong and Vickers(2019)

#### 4. Dynamic Competition

10/6, 10/8, 10/13, 10/15

- Strategic Behavior: Ideas and Applications
- Dynamic Price Competition
- Dynamic Pricing Based on Consumer Purchase History
  - A Model of Ex-post Differentiation due to Consumer Switching Costs (Chen, 1997)
  - A Model of Ex ante Differentiation due to Homogeneous Consumer Preferences (Fudenberg and Tirole, 2000)
- Repeated Interactions and Collusion

#### Readings

- Ch. 6 in Tirole
- Klempner, Paul, “The Competitiveness of Markets with Switching Costs” [(a)4 (W (c)40 (e)4 (in))]-1 (t)-2



- Chen, Y., X. Hua, and K. Maskus, "International Protection of Consumer Data" Working paper 2020.

Assignment 4 (due 10/27) Short reviews of the 4 papers below

Student Presentations 4 and 5 (10/27, 10/29) Acemoglu et al. (2019); Acemoglu et al. (2016) Bergeman et al. (2019); Taylor (2004)

Planning for Term Paper

## 6. Platform Economics

11/3, 11/5, 11/10

### Readings

- Goldfarb, A. and C. Tucker (2019). "Digital Economics", Journal of Economic Literature.
- \*Athey, S. and G. Ellison, 2011, "Position Auctions with Consumer Search", QJE.
- \*Eliaz, K. and Spiegler, R. (2011). "A Simple Model of Search Engine Pricing." Economic Journal, Vol.121, pp F329.
- \*Chen, Y. and C. He, 2011. "Paid Placement: Advertising and Search on the Internet," Economic Journal.
- Chen, Y. and T. Zhang, "Entry and Welfare in Search Markets", Economic Journal, 2016.
- Chen, Y. and T. Zhang, "Intermediaries and Consumer Search", 2018.
- \*Chen, Y., Z. Li and T. Zhang, "Experience Goods and Consumer Search", 2020.
- \*Choi, M., Y. Dai and K. Kim (2018). "Consumer Search and Price Competition" Econometrica.
- \*Andrew Rhodes et al. "Multiproduct Intermediaries" (2020) JPE, forthcoming.
- Edelman, B. and J. Wright (2014) "Price Coherence and Search Intermediation", QJE, 2015.
- Bar Isaac, H., Caruana, G. and V. Cunat "Search, Design and Market Structure", AER, 2012.
- \*de Cornière, A., and G. Taylor (2013) "Integration and Search Engine Bias," RAND
- Dinerstein, M., Einav, L., Levin, J. and N. Suri et al. "Consumer Price Search and Platform Design in Internet Commerce", AER, 2018.

- Justin Johnson, "The Agency Model and MFN", Review of Economic Studies, 2017
- Hagiu, A., and B. Jullien, "Search Diversion and Platform Competition," 2014.
- Armstrong M, Vickers, J, and Zhou, J., "Dominance and Consumer Search", RAND, 2009.

Assignment 5(due 11/5): Short reviews of the papers below

Student Presentations 6 and 7 (11/5, 11/10): Eliaz, and Spiegle(2011), de Cornière and Taylor (2013) Rhodes et al(2020) Choi et al. (2018)

Working on the Term Paper

## 7. Innovation and Intellectual Property Rights

11/12, 11/17, 11/19, 12/4

### A. Overview

- Basic Questions for the Economic Analysis of Innovation
- Some Statistics about Innovation Inputs and Outputs
- Analytical Framework

### B. Market Structure and Innovation Incentive

- The Schumpeterian View (1942)
- Arrow's Analysis (1962): Process Innovation
- Preempting Monopoly: Gilbert and Newbery (1982)
- Product Innovation: When is Arrow's Ranking Revised?
- Vertical Organization and Innovation Incentive
- Exclusive Contracts and Innovation

### C. Intellectual Property Rights

- Antitrust and Innovation
- Patent Damages Remedies
- IPRs and Continual Innovation
- IPRs and Innovation in Developing Countries

## Readings

- U.S. National Science Board [Science and Engineering Indicators 2014](http://www.nsf.gov/statistics/seind14/)  
http://www.nsf.gov/statistics/seind14/
- Arrow, K. (1962). "Economic Welfare and the Allocation of Resources for Innovations," R. Nelson ed. *The Rate and Direction of Inventive Activity*, Princeton University Press.
- Chen, Y and T. Puttitanun (2005) "Intellectual Property Rights and Innovation in Developing Countries", *Journal of Development Economics*, 78:407-424
- \*Gilbert, R. and Newbery, D. (1982). "Preemptive Patenting and the Persistence of Monopoly," *American Economic Review*, 72: 515-526.
- Chen, Y and M. Schwartz (2013). "Product Innovation Incentives: Monopoly vs. Competition", *Journal of Economics and Management Strategy*.
- Chen, Y and D. Sappington (2010). "Innovation in Vertically Related Markets", *Journal of Industrial Economics*.
- Chen, Y and D. Sappington (2011). "Exclusive Contracts, Innovation, and Welfare", *American Economic Journals: Microeconomics*.
- Chen, Y. (2014) "Refusal to Deal, Intellectual Property Rights, and Antitrust". *Journal of Law, Economics, and Organization*.
- \*Chen, Y., S. Pan and Zhang (2018). "Patentability, R&D Direction, and Cumulative Innovation" *International Economic Review*
- Chen, Y. and D. Sappington (2018). "An Optimal Rule for Patent Damages under Sequential Innovation", *RAND*.
- \*Green, J. and S. Scotchmer (1995). "On the Division of Profits in Sequential Innovation". *RAND Journal of Economics*, 26: 20-30.
- Gilbert, R. and C. Shapiro. (1990). "Optimal Patent Length and Breadth", *RAND Journal of Economics*, 21: 106-12.
- Hunt, R. (2004) "Patentability, Industrial Structure, and Innovation". *Journal of Industrial Economics*.
- O'Donoghue, T., S. Scotchmer, and J. Thisse (1998). "Patent Breadth, Patent Life, and the Pace of Technological Progress". *Journal of Economics and Management Strategy*.



- Scotchmer, Suzanne. 2004. Innovation and Incentives. Cambridge: MIT Press.
- \*Segal, I. and M. Whinston. (2007) "Antitrust in Innovative Industries." American Economic Review
- Shapiro, C. (2016). "Patent Remedies," American Economic Review, 106: 198-202.
- Vickers, John. 2010. "Competition Policy and Property Rights." Economic Journal, 120: 375-392.

Assignment 6 (due 12/2): (1) Exercise 10.10 in Tirole; (2) Discuss an issue or a case related to patenting or innovation.

12/1, 12/3: working on the term paper.

Term paper due on 12/10, before 9pm.



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