

Meng-Yu Liang

February 2016

Econ 7096: Industrial Organization (I)

產業組織一

Course Outline

General Information:

Course Hours: W 3:30-5:20 Place: 社科研 604

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Lecture notes: <https://sites.google.com/site/mengyuliangio/> and

<http://idv.sinica.edu.tw/mliang/Teaching.htm>

Grading: Grades will be based on discussion participation (10%), presentation (40%) and one exam (50%) .

Reference Books:

Hart, O., Firms, Contracts, and Financial Structure, Clarendon Press, Oxford, 1995.

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

Paul Milgrom, Putting Auction Theory to Work, Cambridge University Press, 2004

Readings:

Daniel Kahneman , Thinking, Fast and Slow, 2011

James Surowiecki , The Wisdom of Crowds, 2005

Dan Ariely. Predictably Irrational : The Hidden Forces That Shape Our Decisions, Harper Collins, 2008.

Lectures:

1. Supermodularity and Complementarity in Economics

1.1 Lattice Theory and supermodularity

- a) Cardinal: supermodular and increasing differences
- b) Ordinal: quasi-supermodular and single crossing property
- c) Single crossing property and Spence-Mirrlees condition
- d) application: consumer and growth theory, monopoly pass-through, assortative matching

1.2 Stochastic:

- a) log-supermodular and Monotone likelihood Ratio Order
- b) application: portfolio and firm investment problems

1.3 Supermodular games

application: oligopoly competition , macroeconomic coordination failure, arms races, bank runs, warrant exercise, technology adoption and diffusion, R&D competition, pretrial bargaining, coordination in teams, search model, signaling games

Amir, Rabah. 2003. Supermodularity and Complete Complementarity in Economics: An Elementary Survey, mimeo.

Athey, Susan C. 2001. Single Crossing Properties and the Existence of Pure Strategy Equilibria in Games of Incomplete Information. *Econometrica* 69:861-89.

Athey, Susan C. 2002. Monotone Comparative Statics Under Uncertainty. *Quarterly Journal of Economics* 117:187-223.

Edlin Aaron, and Chris Shannon. 1998. Strict Single Crossing and the Strict Spence-Mirrlees Condition: A Comment on Monotone Comparative Statics, *Econometrica* 66:1417-1425.

Milgrom, Paul, and John Roberts. 1990. Rationalizability, Learning, and Equilibrium in Games with Strategic Complementarities. *Econometrica* 58:1255-1278.

Milgrom, Paul, and Christina Shannon. 1994. Monotone Comparative Statics. *Econometrica* 62:157-180.

Topkis, M. Donald. 1998. Submodularity and Complementarity. Princeton, NJ: Princeton University Press.

2 Theory of the Firm

2.1 Holdup Problem

2.2 Ownership Contracts

2.3 Optimal Legal Rules for Breach Remedies

3. Market Structure and Competition

3.1 Product Quality, Product Differentiation

3.2 Durable Goods Monopoly

Deneckere, Raymond and Meng-Yu Liang (2008), "Imperfect Durability and the Coase Conjecture," *The Rand Journal of Economics*, vol 39(1), page 1-19.

3.3 Horizontal Mergers, Entry and Exit

3.4 Vertical Restraints

3.5 Price Discrimination

4. Mechanism Design and Auction Theory

Myerson, R. and Satterthwaite M.A. "Efficient Mechanism for Bilateral Trading." *Journal of Economic Theory*, Vol. 28 (1983), pp. 265-281.

Cramton, P., Gibbons, R., and Klemperer, P. "Dissolving a Partnership Efficiently." *Econometrica*, Vol. 55 (1987), pp. 615-632.

Maskin, E. (2004) "The Unity of Auction Theory: Milgrom's Masterclass," *Journal*

of Economic Literature, Vol. XVII, pp. 1102-1115.

Jihong Lee and Hamid Sabourian 2011. "Efficient Repeated Implementation."

Econometrica, Vol.79, No. 6., 1967-1994.

Eric Budish, Yeon-Koo Che, Fuhito Kojima, and Paul Milgrom 2013, "Designing Random

Allocation Mechanisms: Theory and Applications," *American Economic Review*

103, 2 , 585-623.

5. Timing and Self Control

DellaVigna, Stefano, and Ulrike Malmendier. 2004, "Contract Design and Self-control: Theory and Evidence". *The Quarterly Journal of Economics* 119.2, 353–402.

Esteban, S. . E. Miyagawa and M. Shum, 2007 "Nonlinear pricing with self-control preferences," *Journal of Economic Theory* 135, 306-338.

Fudenberg, Drew and David K. Levine 2012, "Timing and Self Control,"

Econometrica 80, 1, 1-42.

Galperti, S. 2015, "Commitment, Flexibility, and Optimal Screening of Time Inconsistency," *Econometrica*, 83 (4), 1425-1465.

Gul, F. and W. Pesendorfer 2001, "Temptation and Self Control," *Econometrica*, 69, 1403-1436.

Noor, J. 2007, "Commitment and Self Control," *Journal of Economic Theory*, 135, 1–34.