

Meng-Yu Liang

February 2014

Econ 7096: Industrial Organization (I)

產業組織一

Course Outline

General Information:

Course Hours: W 3:30-5:20

Place: 社科研一

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

Grading: Grades will be based on discussion participation (20%), presentation (40%) and one exam (40%) .

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

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.

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 Comple Complementarity in Economics: An Elementary Survey, mimio.

- 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.
- John Quah and Bruno Strulovici 2012. Aggregating the Single Crossing Property. *Econometrica* forthcoming.
- 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
- 3.3 Horizontal Mergers, Entry and Exit
- 3.4 Vertical Restraints
- 3.5 Price Discrimination

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

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

Fudenberg, Drew and David K. Levine 2012, "Timing and Self Control," *Econometrica* 80, 1, 1-42.

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.