Meng-Yu Liang

2011/09/20

Industrial Organization (I)
Course Outline

General Information:

Course Hours: W 1:20-3:10

Place: 社科研三

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

Grading: Grades will be based on problem sets (30%) and two exams (30%, 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
Handbook of Industrial Organization, North Holland, Vol. 3.

Whinston, Michael (2006) .Lecures on Antitrust Economics.. MIT Press.

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

Vives, Xavier. 1990. Nash Equilibrium with Strategic Complementarities. *Journal of Mathematical Economics* 19: 305-321.

*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.

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

4. Mechanism Design and Auction Theory

Maskin, E. (2004) "The Unity of Auction Theory: Milgrom's Masterclass," *Journal of Economic Literature,* Vol. XVII, pp. 1102-1115.

5. Signaling Games and Reputation Effect

Cho, I-K. and D. Kreps (1987), "Signaling Games and Stable Equilibria," *The Quartery Journal of Economics*, Vol.CII, pp. 179-221.

Govindan , S. (1995), "Stability and the Chain Store Paradox," *Journal of Economic Theory*, Volume 66, Issue 2, Pages 536-547

Govindan, S & R. Wilson (2009), "On Forward Induction," *Econometrica,* vol. 77(1), pages 1-28