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DOCTORAL STUDIES
Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2009
DISSERTATION: "Essays on Contract Theory and Organizational Economics"

DISSERTATION COMMITTEE AND REFERENCES

Professor Bengt Holmstrom
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Professor Jerry Hausman
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PRIOR EDUCATION

M.A	Economics	Zhejiang Univ., Zhejiang, China	*2001*
B.A	Economics	Zhejiang Univ., Zhejiang, China	*1998*

CITIZENSHIP P.R. China

LANGUAGES English, Chinese Mandarin

RESEARCH & TEACHING FIELDS
Primary Fields: Applied Micro Theory, Applied Econometrics,
Secondary Fields: Organizational Economics, Political Economics

TEACHING EXPERIENCE

Introductory Microeconomics (undergraduate, MIT course 14.01), Instructor	Fall-2006-Spring-2008
Microeconomics: Theory & Public Pol. (undergraduate, MIT course 14.03) Teaching Assistant	Fall-2008

RELEVANT POSITIONS

Research Fellow, Institute of Business Research, Peking University Beijing, China	2001-2004
Visiting Scholar, Yale Law School, New Haven, CT	2003

FELLOWSHIPS, HONORS, AND AWARDS

MIT Graduate Fellowship, 2004-2009

Zhukezhen Award (the university's highest honor medal for undergraduate), Zhejiang University, China, 1997

Outstanding Graduate of Zhejiang Province, People's Government of Zhejiang Province, China, September 2001, (1 out of 1,000)

National Award for Outstanding Graduates, National Association of Student Unions, People's Republic of China, December 1997, (100 out of million)

PRESENTATIONS

Identifying Contract Optimality without Knowing Functions: Moral Hazard and Statistical Inference I (Parametric Identification), Econometric Society, North America Summer Meeting, Pittsburgh, PA, June 20, 2008

PUBLICATIONS

Fang, Hanming & Ke, Rongzhu (2004), Rotating Bidding: A Mechanism to Allocate Common Pool Resource, Compared with Bargaining Solution, *China Economic Quarterly*, 3(2), 331-356.

Ke, Rongzhu & Zhang, Weiying (2002) Contract Disputes and Court Verdicts Involving Chinese Private Enterprises. in L. Song (Ed.), *China's Third Economic Transformation: The Rise of the Private Economy* (Chapter 13). Routledge Press (New York).

RESEARCH PAPERS:

"Identifying Contract Optimality Non-parametrically with Moral Hazard: First Order Approach and Statistical Inference" (Job Market Paper)

This paper develops a non-parametric methodology for identifying contract optimality in the presence of moral hazard. Following the first order approach, a standard method of computing optimal contracts, the paper first proves two theoretical properties of the solutions to the moral hazard problem. First, we show that the profit loss (relative to the optimal contract) for given effort level has a unique lower bound. The second property is an equivalence between the first order condition (Mirrlees-Holmstrom Condition) and the Cramer-Rao Lower Bound (CRLB). These two properties provide the foundations for (1) identifying optimality, and (2) performing statistical inference on the agent's primitives based on an observed sequence of pairs of outputs and payments. The paper shows that under some weak conditions, contract optimality is identified, as long as the output generating process is additive in effort and noise. Identification does not require the agent's effort to be observed by the principal or the econometrician, and requires no knowledge of (1) the details of the contract, (2) the agent's cost of effort, (3) the agent's monetary utility, or (4) the distribution of output. Based on the approach proposed in this paper, we test contract optimality for a piece-rate contract, and estimate bounds on the profit loss for cotton weavers in Zhejiang Province, China.

"The Insurance Role of Rosca in the Presence of Credit Markets: Theory and Evidence" (Joint with Hanming Fang and Li-an Zhou)

Rotating Savings and Credit Associations (Roscas) are an important informal financial institution in many parts of the world. Existing models of Roscas assume that their participants do not have access to formal financial markets and predict that the implicit interest rates in bidding Roscas should be declining over their lives. Evidence from survey and field data sets from Wenzhou of Zhejiang Province in Southeastern China shows instead that Roscas are prevalent even in the presence of formal financial markets and more interestingly a large fraction of Rosca participants reported borrowing from the formal credit market to fulfill their Rosca obligations and saving their extra Rosca earnings in the formal credit market. Moreover, we find that the implicit interest rates observed in a unique Rosca bidding data set are not monotonically declining over its life. We develop a sequential auction model of risk averse Rosca participants facing income risks to investigate the interaction between formal and informal financial institutions to provide a possible explanation of the above two phenomena in the Chinese data. In this model, a Rosca provides insurance to its participants even in the presence of formal credit markets. The intuition is that while the formal credit market allows individuals to smooth their intertemporal income risks by borrowing and saving, a Rosca provides an additional instrument for its participants to share contemporaneous income. We also show that in this model it is possible that the implicit interest rate in equilibrium may not be declining over the life of a Rosca.

RESEARCH IN PROGRESS

"Optimal Wage Commitment under Career Concern"
This paper explores the optimal time pattern of wage commitment in a career concern framework. It is shown that by choosing the appropriate length of wage commitment the over-signaling problem in Holmstrom (1982) can be alleviated, and efficiency can be improved. This paper proves that in a general n-period discrete model, given that the social welfare function is super concave (maximized value of a concave function is also concave in exogenous parameters), updating the wage period by period is optimal when the effort level is below the first best one. However, the optimal wage commitment deviates from the time pattern in the classical model when the effort is above the first-best level. This paper also shows that the first best effort level can be restored if severance pay is allowed to be contingent on past history of employment.

"On an Efficient Mechanism with Ex Post Individual Rationality Constraint"
This paper explores existence of an efficient allocation which is interim incentive compatible, ex post individually rational (IR) and ex post budget balance. Two basic results are shown. (1) In private value with linear preference situation, there exist mechanisms meeting all of these four requirements whenever the Vickery mechanism runs expected surplus. Furthermore, the agent's ex post payoff can be non-decreasing in his own type regardless of other bidders' realizations (ex post monotonicity). This result is stronger than well known existence theorems, in which interim IR constraint is considered (Krishna and Perry, 1998; Ledyard and Palfrey, 2007). To indicate the significance of the ex post IR constraint, it is shown that when the ex post individual rationality constraint is imposed, no efficient partner-dissolving mechanism exists, in contrast to Crampton, Gibbons and Klemperer (1987), keeping everything else the same. (2) In the public good and concave preference situation, this paper provides a generalization of the Myerson-Satterthewaite theorem, justifying how divisibility of object, initial endowment distribution, and preferences affect possibility of no trade. An explicit example is shown to indicate that if preferences are concave, the Myerson-Satterthewaite theorem does not hold even though the initial endowment allocation is extreme.