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EDUCATION

Ph.D., Economics, Boston University, Boston MA, May 2021 (expected)
Dissertation Title: *Essays on Dynamic Contracts*
Dissertation Committee: Barton Lipman, Juan Ortner, and Chiara Margaria

B.S., Mathematics, Peking University, Beijing, China, 2015

B.A., Economics, Peking University, Beijing, China, 2015

FIELDS OF INTEREST

Microeconomic Theory, Contract Theory

WORKING PAPERS

"Dynamic Incentive Provision When Evaluation Takes Time," September 2020. Job Market paper.
"Screening under Fixed-wage Employment," September 2020.

WORK IN PROGRESS

"Dynamic Delegation with Adverse Selection"

PRESENTATIONS

The 6th World Congress of the Game Theory Society, Budapest, Hungary, 2021 (scheduled)
European Winter Meeting of the Econometric Society (virtual), 2020 (scheduled)
The 30th Stony Brook International Conference on Game Theory, Stony Brook, NY, 2019

FELLOWSHIPS AND AWARDS

Dean's Fellowship, Boston University, Fall 2015- Spring 2020
Summer Research Grant, Boston University, Summer 2019
Silver Medalist of China Mathematical Olympiad (CMO), 2010 and 2011

TEACHING EXPERIENCE

Teaching Assistant, Microeconomic Theory (Ph.D. core), Department of Economics, Boston University, Fall 2016 - Spring 2020

LANGUAGES
English (fluent), Mandarin Chinese (native)

COMPUTER SKILLS: MATLAB, R, LaTeX

CITIZENSHIP/VISA STATUS: China/F1

REFERENCES

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Dynamic Incentive Provision When Evaluation Takes Time (Job Market Paper)

In a principal-agent relationship, evaluation of the agent's performance may take time. For example, the value of a new product or new theory may not be immediately recognized when it is first introduced. Side effects of a new drug may not be learned until many years of use. Similarly, the performance of a new trading strategy needs to be tested under different market conditions, which may take a long time. In this paper, I study a dynamic principal-agent model in which the agent continuously works on a project to get a success. The principal observes imperfect signals on the agent's performance over time after the agent stops working. Postponing payments is costly due to the agent's relative impatience. I derive optimal contracts in two different settings. When the agent observes success, he exerts full effort until a success and reports it truthfully in the optimal contract. The principal induces effort by making deferred payments after the agent's report of success. To induce truth-telling, the principal makes a constant flow payment before report after a certain time threshold. When the agent cannot observe success, the principal sets a deadline and makes deferred payments after the deadline. To reduce the agent's procrastination rent, the principal terminates the project with small probabilities or makes payments before the deadline, depending on the information structure.

Screening under Fixed-wage Employment

An agent's performance is jointly determined by his ability and his effort. To induce the agent to work hard, the principal would ideally punish the agent when he has a bad performance due to lack of effort instead of lack of ability. In addition, the principal is more willing to hire an agent with higher ability. When both effort and ability are unobservable, however, it is unclear how to incentivize the agent. In this paper, I study a discrete time principal-agent model where the wage is fixed and the principal designs a firing policy to incentivize the agent to work. In each period, the agent works on a project with binary outcomes. The high type has a higher probability of getting a good outcome if he exerts high effort. The principal observes the outcome in each period but does not observe the agent's type or effort. I show that in the optimal contract, the principal hires the high type for sure and hires the low type with some probability. But conditional on being hired, the low type's contract is more preferred by both types.

Dynamic Delegation with Adverse Selection

Delegated decision making is commonly observed in many economic activities. Within an organization, headquarters may delegate to division managers who have better information but also a different objective. The relationship is usually ongoing and the conflict of interest can be persistent. In this paper, I study a dynamic principal-agent model where the principal with full commitment power delegates the project initiation decision to the agent in each period. The quality of each project can be good or bad and is i.i.d. over time. The agent wants to initiate all projects but the principal only wants the good ones. Before making a decision, the agent observes an imperfect signal on the quality of the project. The informativeness of the signal is determined by the agent's ability. Once a project is initiated, its quality will be publicly observed. When the agent's ability is common knowledge, I show that the agent is better off when his ability is not too high or too low. When the ability is private information, the optimal contract features pooling at the top, where the principal offers a same contract to agents with high abilities.

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