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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)
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 could be learned after 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 continuous-time principal-agent model in which the principal evaluates the agent's performance over time after the agent stops working. Postponing payments comes with a delay due to the agent's relative impatience. Thus, the principal faces a trade-off between paying earlier with a less precise evaluation and paying later with a more precise evaluation. In the optimal contract, the principal never terminates the agent before a success or a failure. The optimal payment scheme features a combination of reward for success and compensation for failure. Both the reward and compensation are increasing over time. The reward is made with a delay after the agent stops working and the delay decreases over time. The agent gets better off as he stays longer in the relationship even before achieving a success.

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 dynamic principal-agent model where the wage is fixed and the principal chooses when to fire the agent conditional on the history of performance. In each period, the high type has a higher probability of getting a good outcome if he exerts 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. The optimal contract is reminiscent of the two-track system in most Chinese universities, where the tenure-track faculty receives a higher wage but also faces a higher requirement. On the other hand, the non-tenure-track faculty receives a lower wage but is very unlikely to be fired.

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 decides whether to delegate to the agent or not in each period. The agent always wants to be delegated and has a different preferred action. Whether the agent is able to choose the principal's preferred action depends on his ability to acquire information. When the ability is common knowledge, I show that the agent is best 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 a high ability.

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