

Yiran Cao (曹奕然)

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Education

Lingnan University, Hong Kong

Ph.D., Economics.

2019 - 2022

Thesis title: **Essays on the Effects of Mergers on Competition.**

Outstanding Thesis

Supervisors: Ping Lin (Chief), Tianle Zhang.

M.Sc. in International Banking and Finance.

2018 - 2019

Shandong Normal University, China

B.A. in Economics.

2013 - 2017

Experience

Research Fellow, Lingnan University, Hong Kong.

2023.10 - to present

Postdoctoral Fellow, Lingnan University, Hong Kong.

2022.10 - 2023.10

- *Supervisor: Tianle Zhang*

Research

Research Interests

Industrial Organisation, Information Economics, and Competition Policy.

Working Papers

1. **Search and Competition in Expert Markets.** (with Yongmin Chen, Yucheng Ding, Tianle Zhang), working paper, 2022, R&R, *RAND Journal of Economics*. (Job Market Paper)

We develop a model in which consumers sequentially search experts for recommendations and prices to treat a problem, and experts simultaneously compete in these two dimensions. Consumers have either zero or a positive search cost. In equilibrium, experts may “cheat” by recommending an unnecessary treatment with positive probabilities, prices follow distributions that depend on a consumer’s problem type and the treatment, and consumers search with Bayesian belief updating about their problem types. Remarkably, as search cost decreases, both expert cheating and prices can increase stochastically. However, if search cost is sufficiently small, competition will force all experts to behave honestly.

2. **Killer Acquisitions, Competition Test, and Remedies.** (with Ping Lin), working paper, 2023.

Killer acquisitions have become a big competition concern globally recently. We establish a “synergy effect test” for evaluating the competitive impact of start-up acquisitions. An acquisition is welfare-enhancing if and only if the level of synergy effect exceeds a threshold which is proportionate to the unilateral effect in the post-R&D product market. A Commit-to-Continue remedy can effectively eliminate KA transactions, while a product-line divestiture remedy can eradicate welfare-reducing non-KA transactions. We also consider voluntary divestitures by the acquiring firm in a Cournot setting. We show that KA is considerably less likely to occur due to a reversed merger paradox effect.

3. **Upstream Killer Acquisitions and Market Structure.** (with Ping Lin and Tianle Zhang), working paper, 2023.

Incumbent firms may acquire start-ups to eliminate potential competition by terminating the development of new technologies (killer acquisitions). We examine the incentives and welfare implications of acquisition by an upstream incumbent firm of a start-up with an R&D project to develop a superior input technology. We show that killer acquisitions occur in equilibrium when the cost of developing the superior technology is moderate and the upstream incumbent has no or weak synergy advantage in developing such technology, regardless of market structure. Relative to vertical separation, the likelihood of killer acquisitions is higher (lower) under vertical integration if the incumbent possesses a greater (smaller) probability of successfully developing the superior technology, leading to a lower (higher) welfare.

4. **Partial Vertical Integration, and Market Foreclosure.** (with Ping Lin), working paper, 2022

This paper investigates whether a partial vertical merger results in market foreclosure, and how the integrating firm’ foreclosure strategy affects consumer welfare, in a successive duopoly setting. The result suggests that the magnitude of partial ownership shares has a significant impact on the integrated firm’s incentive in foreclosing competitors. The integrated upstream firm, in particular, chooses input foreclosure if and only if the ownership stake is significant enough, and the integrated downstream firm executes customer foreclosure if and only if the ownership stake is intermediate. Furthermore, consumers benefit the most when the ownership share is intermediate.

Selected Work in Progress

- **Patterns of Competitive Interaction with Consumer Search.** (with Yongmin Chen and Tianle Zhang)

Teaching

Instructor, Lingnan University:

- Behavioural Economics (Undergraduate level) *2022 Fall*
- Intermediate Microeconomics (Undergraduate level) *2023 Summer*

- Tools for Economic Analysis (Undergraduate level)

2020 Spring

Presentations

- 2023: Seminar, China Institute of Regulation Research, Zhejiang University of Finance & Economics.
- 2023: Brownbag seminars, Lingnan University.
- 2023: CRESSE-Lingnan International Conference on Competition Policy
- 2023: The First Lingnan-Shanda Workshop on Industrial Economics and Competition Policy.
- 2022: The Second International Conference on Antitrust Theory and Practice of Shandong University.
- 2022: Brownbag seminars, Lingnan University.
- 2020: Brownbag seminars, Lingnan University.

Skills

Tools

Mathematica, Stata, Python, Latex, Github.

Languages

Mandarin Chinese (Native), English (Fluent), Cantonese (Elementary).

Honors and Awards

- Outstanding PhD thesis. 2022
- Outstanding Performance Scholarship. 2018
- Outstanding Graduate of Shandong. 2017

References

Tianle Zhang (tianlezhang@ln.edu.hk)

Professor of Economics

Department of Economics

Lingnan University

Ping Lin (plin@sdu.edu.cn)

Chair Professor of Economics

School of Economics

Shandong University

Yongmin Chen (yongmin.chen@colorado.edu)

Professor of Economics

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