# Yiran Cao (Carol)


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| China, Hong Kong SAR, | Born: | 30.04.1995 |
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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, Competition policy.

*Working Papers*

- Search and Competition in Expert Markets. (with Y. Chen, Y. Ding, T. Zhang), working paper, 2022, R&R, ***RAND Journal of Economics.***
- Partial Vertical Integration, and Market Foreclosure. (with P. Lin), working paper, 2022
- Killer Acquisition in Vertically Related Industries. (with P. Lin and T. Zhang), working paper, 2023.
- Killer Acquisitions: Competition Test and Remedies. (with P. Lin), working paper, 2023.

*Work in Progress*

- Patterns of Competitive Interaction with Consumer Search.

## Teaching

*Instructor, Lingnan University:*

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

*Teaching Assistant, Lingnan University:*

- Tools for Economic Analysis (Undergraduate level) *2020 Spring*

## Presentations

- 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

## Abstract of Working Papers

**Search and Competition in Expert Markets.**
with Yongmin Chen, Yucheng Ding, and Tianle Zhang. (*R&R at Rand Journal of Economics*)

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.

**Killer Acquisition in Vertically Related Industries.**
with Ping Lin, and Tianle Zhang.

Incumbent firms may acquire start-ups to eliminate potential competition without intending to develop new technology (killer acquisitions). We develop a model to examine the incentives and welfare implications of killer acquisitions under different market structures: vertical separation and integration. Our model focuses on the competition between an incumbent upstream firm and a startup with the potential to develop superior technology, where the incumbent has the option to acquire the startup and decide whether to pursue the superior technology. We find that killer acquisitions are more likely when the cost of developing the superior technology is moderate under both vertical separation and vertical integration. However, these acquisitions lead to a welfare loss only when the development cost is relatively low. Comparing vertical integration and separation, the probability of killer acquisition is higher (lower) when the incumbent firm has a greater (smaller) chance of successfully developing the superior technology.

**Killer Acquisitions: Competition Test and Remedies.**
with Ping Lin.

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.

**Partial Vertical Integration, and Market Foreclosure.**
with Ping Lin.

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.

## References


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