

# Si Zuo

PhD Student in Economics  
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## Education

**Cornell University**, Ithaca, NY

PhD in Economics, SC Johnson Graduate School of Management & Economics Department,  
September 2019 - Present

**Hong Kong University of Science and Technology**, Hong Kong

Master of Science, Economics, September 2018 - June 2019

**Sun Yat-sen University**, Guangzhou, China

Bachelor of Science, Economics, October 2014 - June 2018

**Nagoya University**, Nagoya, Japan

Exchange Student, October 2016 - February 2017

## Research Interest

empirical IO, quantitative marketing, platform, online retailing, algorithms

**methodology**: causal inference, structural model, machine learning, and game theory.

## Working Papers

1. [Price Signaling and Reputation Building: Evidence from a Service Platform](#), with Yangguang Huang (HKUST) and Chenyang Li (Cornell).

Covered by [South China Morning Post](#). Presented in HKUST (2023, Guangzhou), Lingnan University (2023, Hong Kong), Jinan University (2022, Guangzhou), International Industrial Organization Conference (2022, Boston), North America Summer Meeting (2022, Miami), Asia-Pacific Industrial Organization Conference (2021, NUS).

Abstract: To build a reputation on online platforms, new firms need to accumulate reviews through sales and consider the corresponding pricing strategy. We construct a dynamic model with both price signaling and a review-based reputation system. A high-quality firm can signal its unobserved quality by setting a lower introductory price than that of a low-quality firm because the high-quality firm benefits more from accumulating reviews in early periods. Using data from Zaihang, a service platform, we find empirical evidence that experts with high unobserved ability indeed adopt low introductory prices. We use an expert's performance on another platform as an instrument for the expert's ability to provide evidence for the causal relationship. The price and sales dynamics in the data are also

consistent with the model predictions. The platform can accelerate quality revelation by facilitating price signaling. To do so, platforms could make price comparison easier and provide training to new firms about signaling.

2. **Stores Going Online: Market Expansion or Self Cannibalization?**, with Yangguang Huang and Chenyang Li

Presented in International Industrial Organization Conference (2023, Washington, D.C., Scheduled), Eastern Economic Association Annual Meeting (2023, New York)

Abstract: With the rise of e-commerce, more and more chain stores have opened online sales channels. For one chain, there are usually one online store and many offline stores. Online stores may cannibalize the sales of the existing physical stores because of their advantage in lower shopping costs. On the other hand, the online sales channel is usually a tool for advertisement, which may expand the offline store's market. From our novel daily revenue data of 380 offline stores from 2016 to 2020, we identify the countervailing cannibalization effect and the informative effect of opening up online branches on offline stores. We first use exogenous demand shocks (weather, Covid-19, and online shopping festivals) to provide solid evidence of these two effects. We then separately estimate these two effects by a structural model. We find that the cannibalization effect dominates the informative effect in most cases. The electronics category has the largest cannibalization effect, while the cosmetics and jewelry category has the smallest.

## Work in Progress

3. **Consumer Learning in the Presence of Personalized Recommendations**, with Omid Rafeian

Abstract: Recommender systems are now an integral part of the digital ecosystem. However, the increased dependence of users on recommender systems has heightened concerns among consumer protection advocates and regulators. Past studies have documented various threats personalization algorithms pose to different aspects of consumer welfare, through violating consumer privacy, unfair allocation of resources, or creating filter bubbles that can lead to increased political polarization. In this work, we bring a consumer learning perspective to this problem and examine whether personalized recommender systems hinder consumers' ability to learn their own preference preferences. We develop a multi-armed bandits framework where consumers learn their preference parameters in the presence of a recommender system. We introduce a notion of regret which is defined as the regret when consumers make decisions on their own. We theoretically show that the presence of the recommender system acts as a barrier to consumer learning. We then discuss different consumer protection policies and document the welfare implications of each.

4. **Bundling Promotion on Online Platforms**, with Vrinda Kadiyali and Young-hoon Park

Abstract: Bundling is an effective marketing tool, but how bundling could promote low-awareness new products is under-studied. In addition, online shopping platforms make it easier for firms to form bundles with other firms and use online algorithms. Working with a large caviar company in China, we implement a field experiment to show that bundling could promote the sales of the new product and has a significant spillover effect on other products. In addition, we separate the channels behind the bundling: bundle effect, information effect, and the promotion effect. We find the bundle effect is the dominant effect. We provide managerial implications on how the bundling strategy could be implemented and combined with platform keyword-searching algorithms.

## Conference Talks and Invited Talks

2023, Innovation, Entrepreneurship, and Technology Workshop (Cornell); Eastern Economic Association Annual Meeting (New York); Marketing Science Conference (Miami, Scheduled); Fudan University (Shanghai, Scheduled);

2022, National Association for Business Economics: Tech Economics Conference (Seattle, Platform Session Chair); Marketing Brown Bag Seminar (Cornell); International Industrial Organization Conference (Boston)

2021, Asia-Pacific Industrial Organization Conference (NUS, Virtual); Emerging Markets Research Day (Cornell)  
 2019, Asia Meeting of the Econometric Society (Xiamen University, China)

## Teaching Experience

### Instructor

**Industrial Organization, Consulting and Business Strategy** Fall 2022  
 MBA Elective Course, Course Designer and Lead Instructor, 32 students enrolled, evaluation 4.4/5  
 SC Johnson Graduate School of Management, Cornell University

**IO Research Workshop** Winter 2022  
 CICER Winter Camp, Cornell Institute for China Economic Research

### Teaching Assistant

**AI for Marketing Strategy** (MBA Elective Course, with sessions) Spring 2023  
 with Prof. Emaad Manzoor, Johnson Graduate School of Management, Cornell University

**Data Analysis and Modeling** (MBA Core Course, with sessions) Summer 2022  
 with Prof. Omid Rafeian, Johnson Graduate School of Management, Cornell University

**Applied Microeconomics II: Game Theory** (PhD Core Course) Spring 2022  
 with Prof. Michael Waldman, Dyson School of Applied Economics and Management, Cornell University

**Microeconomics Theory I** (PhD Core Course, with sessions) Fall 2021  
 with Prof. David Easley, Economics Department, Cornell University

**Microeconomics for Management** (MBA Core Course) Fall 2020 & Summer 2021  
 with Prof. Yi Chen & Prof. Michael Waldman, Johnson Graduate School of Management, Cornell University

**Strategy** (Cornell-Tsinghua Finance MBA Core Course) Winter 2021 & Spring 2021  
 with Prof. Thomas Jungbauer, Johnson Graduate School of Management, Cornell University

### Guest Lecturer

**Conversations in Business Analytics** (MS in Business Analytics Core Course) Oct. 2022  
 Johnson Graduate School of Management, Cornell University

## Fellowships, Honors and Grants

July 2023, Funded Attendee, NBER's Innovation Research Boot Camp.  
 July 2022, Emerging Market Theme Grants, \$1,500, SC Johnson College of Business, Cornell University  
 Mar 2021, Strategy and Business Economics Small Grant, \$ 3,000, SC Johnson College of Business, Cornell University  
 Sept 2020, Passed with Distinction First Year PhD Sequence, \$ 1,000, Economics Department, Cornell University  
 2019-2024, Johnson Fellowship, Cornell University  
 2016-2017, JASSO Scholarship, Ministry of Education, Japan

## **Research Assistant Experience**

Spring 2023, Research Assistant for Prof. Benjamin Leyden, Cornell University  
Fall 2022, Research Assistant for Prof. Michael Waldman, Cornell University  
Spring 2022, Research Assistant for Prof. Yi Chen, Cornell University  
Fall 2021- Winter 2022, Research Assistant for Profs. Shanjun Li and Panle Jia Barwick, Cornell University  
Feb 2021-May 2021, June 2020, Research Assistant for Prof. Thomas Jungbauer, Cornell University  
July 2020- Dec 2020, Research Assistant for Prof. Marcel Preuss, Cornell University  
Sep 2018- June 2019, Research Assistant for Prof. Yuk Fai Fong, Hong Kong University of Science and Technology

## **Referee Service**

Journal of Industrial Economics

## **Professional Experience**

Fall 2022- present, PhD Liaison for Strategy Business Economics Seminars, SC Johnson College of Business, Cornell University  
Fall 2021-Spring 2022, Digitization Reading Group Organizer, Cornell University  
Fall 2021-Spring 2022, Economics Graduate Students Works in Progress Seminar Organizer, Cornell University  
Spring 2021-Winter 2022, IO Student Reading Group Organizer, Cornell University

## **Language**

Chinese (Native)  
English (Proficient)  
Japanese (Proficient, JLPT N1 Highest Level)  
French (Intermediate)

## **Skills**

Stata, R, Python, Matlab, Stan

**March 15, 2023**