

# Zhuozhen Zhao

900 University Avenue, Riverside, CA 92507

☎ 608-556-6546 | ✉ zzhao043@ucr.edu | 🌐 zhuozhenzhao

“Creative Thinker & Problem Solver.”

## Education

---

### University of California, Riverside

PH.D. IN ECONOMICS (GPA: 3.88/4)

Riverside, CA

Sep. 2017 - Expected Jun. 2022

### University of Wisconsin, Madison

M.S. IN ECONOMICS

Madison, WI

Aug. 2015 - May. 2017

### Jilin University (China)

B.A. IN ECONOMICS

Changchun, China

Aug. 2011 - Jun. 2015

## Research Interests

---

Industrial Organization, Applied Econometrics, Innovation and Research & Development

## Working Papers

---

### “Investing in High-end or Low-end? Competition and Innovation with Unobserved Choices of Firms” [Job Market Paper]

I construct a structural model of a dynamic duopoly with multi-product firms to examine how competition affects firms' strategic innovations on high-end and low-end product lines. I identify and estimate the model using data of the US-brand large SUV industry with GM-Ford duopoly, in the circumstance where firms' R&D choices between product lines are unobserved. I find that in the case where the competitor devotes itself into upgrading only high-end products, the firm chooses to compete face-to-face with its competitor: keeping investments in high-end products to remain competitive, but reducing investments in low-end ones to save effort. In the case where the competitor puts more effort in the low-end product line, the firm reacts by investing predominantly in both lines to thoroughly build up market power.

### “Does the Competitor Stimulate the Firm to Innovate More and Release Sooner?”

I construct a structural model of dynamic duopoly for durable goods to examine how competition affects firms' endogenous innovation with optimal releasing time. Firms dynamically decide pricing, how much to invest in R&D, and when to release new versions. I estimate my model using data of the personal computer microprocessor industry with Intel-AMD duopoly. Comparing the baseline market structure of duopoly and the counterfactual without AMD present, I find that firms' average investment is 12.4% less and the frontier quality upgrading rate is 0.9% lower in monopoly, but the average new product releasing probability is slightly higher. Moreover, the industry profit is decreased by 10% and consumer surplus is reduced by 4.7% without competition.

## Selected Experience

---

### Research Assistant to Professor Ruoyao Shi

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Sep. 2019 - Present

- Data Collection and Empirical Application of Two Step M Estimation in Semiparametric Models

### Teaching Assistant

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Sep. 2018 - Present

- Ph.D. Courses: Microeconomics Theory I; Microeconomics Theory III
- Undergraduate Courses: Introduction to Microeconomics/ Macroeconomics

### Organizer, Economics Brown Bag Colloquium

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Mar. 2021 - Jun. 2021

## Seminar Presentations

---

May. 2020	Economic Theory Colloquium, University of California, Riverside
May. 2021	Economics Brown Bag Colloquium, University of California, Riverside
Jun. 2021	Econometrics Colloquium, University of California, Riverside
Oct. 2021	Econometrics Colloquium, University of California, Riverside

## Awards and Honors

---

2021	Dissertation Year Program Award, University of California, Riverside
2021	University Teaching Certificate, University of California, Riverside
2017	Dean's Distinguished Fellowship, University of California, Riverside
2014	Honorable Mention, Mathematical Contest in Modeling
2013	First Prize Scholarship, Jilin University, China

## Skills

---

<b>Software:</b>	Python, Matlab, STATA, C++, R, SQL, $\LaTeX$
<b>Languages:</b>	Chinese Mandarin (native), English (fluent)

## References

---

Urmee Khan (Co-Chair)  
Associate Professor of Economics  
University of California, Riverside  
Tel: +1 (951) 827-7809  
Email: [urmee.khan@ucr.edu](mailto:urmee.khan@ucr.edu)

Ruoyao Shi (Co-Chair)  
Assistant Professor of Economics  
University of California, Riverside  
Tel: +1 (951) 827-1494  
Email: [ruoyao.shi@ucr.edu](mailto:ruoyao.shi@ucr.edu)

Tae-Hwy Lee  
Professor of Economics  
University of California, Riverside  
Tel: +1 (951) 827-1509  
Email: [tae.lee@ucr.edu](mailto:tae.lee@ucr.edu)

Jiawei Chen  
Associate Professor of Economics  
University of California, Irvine  
Tel: +1 (949) 824-3189  
Email: [jiaweic@uci.edu](mailto:jiaweic@uci.edu)

Hiroki Nishimura  
Associate Professor of Economics  
University of California, Riverside  
Tel: +1 (951) 827-4975  
Email: [hiroki.nishimura@ucr.edu](mailto:hiroki.nishimura@ucr.edu)