

# Tianyi Li

Dept of Economics, The Pennsylvania State University  
512 Kern Building  
University Park, PA 16802

Cell: +1 (646) 896-9874  
Email: lity356@gmail.com  
Website: <https://tianyi2.wixsite.com/psu-econ>

## CURRENT POSITION

Visiting Assistant Professor of Economics, The Pennsylvania State University, 2024-current

## RESEARCH INTERESTS

Industrial Organization, Applied Microeconomics, Economics of Shortages

## EDUCATION

PhD, Economics, University of Minnesota, 2024  
MSc, Economics, London School of Economics, 2017  
BA, Economics, Cornell University, 2016

## PAST EMPLOYMENT

Department of Economics, University of Minnesota	Graduate TA	2018-2024
Federal Reserve Bank of Minneapolis	Research Analyst	2020-2023
School of Professional Studies, Columbia University	Instructor	Summer 2018

## SCHOLARLY WORK

### *Working Papers*

- “Value of ‘Availability’ during Demand Shocks: Evidence from U.S. Retailers during the Covid Pandemic” (Under Review)
- “Who Benefits from Anti-Gouging Laws? The Case of Personal Cleaning Products during Covid-19” (Job Market Paper)

### *In Progress*

- “Inventory Acquisition and Distribution by Retail Chains During Times of Shortages”

## PUBLICATIONS

- Li, Tianyi. “The Social Activities and Cross-Cultural Integration of International Students—A Case Study of Students in Oxford University.” *Theory and Practice of Education*. Vol. 35. No. 34, 2015. pp. 25-29.

## TEACHING

### *The Pennsylvania State University*

Labor Economics and Labor Markets (Instructor)	Spring 2025
Economics of Public Expenditures (Instructor)	Spring 2025
The Economics of Sports (Instructor)	Fall 2024, Fall 2025

### *University of Minnesota*

International Trade (Writing Instructor)	Spring 2024
Development Economics (Writing Instructor)	Fall 2023
Principles of Microeconomics (Head Teaching Assistant)	2019-2020

*Columbia University, School of Professional Studies*

Intro to Business, Finance, and Economics (Instructor)

Summer 2018

## HONORS AND AWARDS

Fall 2023      *Distinguished Teaching Award*, University of Minnesota  
 Spring 2023      (Nomination) *Doctoral Dissertation Fellowship*, University of Minnesota  
 2018-2019      *Thomas J. Sargent Graduate Fellowship*, University of Minnesota

## CONFERENCE PRESENTATIONS AND INVITED TALKS

2025: Western Economic Association International Conference (San Francisco, CA)  
 International Industrial Organization Conference (Philadelphia, PA)  
 University of Minnesota (Applied Micro Workshop) (Minneapolis, MN)  
 Chinese Economists Society North America Conference (Ann Arbor, MI)

2024: Asia-Pacific Industrial Organisation Conference (Seoul, Korea)  
 Chinese Economists Society NA Conference--Rising Star Session (Lewisburg, PA)  
 The Chinese University of Hong Kong, City University of Macau,  
 The Brattle Group

2023: The 4th Annual Heller-Hurwicz Alumni Conference (Minneapolis, MN)

## SERVICE

Grant Reviewer      Council of Graduate Students, University of Minnesota      2022

## PROGRAMMING SKILLS

Python, Julia, R, STATA

## LANGUAGES

Mandarin Chinese (*native*), English (*fluent*), German (*basic communication*)

## REFERENCES

**Professor Thomas Holmes**

Dissertation Advisor

[holmes@umn.edu](mailto:holmes@umn.edu)

Department of Economics

University of Minnesota

**Professor Amil Petrin**

Committee Member

[petrin@umn.edu](mailto:petrin@umn.edu)

Department of Economics

University of Minnesota

**Professor Joel Waldfogel**

Committee Member

[jwaldfog@umn.edu](mailto:jwaldfog@umn.edu)

Department of Economics

University of Minnesota

**Professor Sung Jae Jun**

Supervisor at Penn State

[suj14@psu.edu](mailto:suj14@psu.edu)

Associate Department Head,

Department of Economics

Pennsylvania State University

## ABSTRACTS

### 1. Value of “Availability” during Demand Shocks: Evidence from U.S. Retailers during the Covid Pandemic

This paper studies the value of large retail chains in providing product access for consumers during demand shocks. Focusing on U.S. consumers shopping for personal cleaning products during Covid, I evaluate the cost of stockouts across retail chains and the distributional impact of stockouts across markets. Since stockouts are not directly observed from data, I develop an algorithm to quantify the extent of stockouts across stores using weekly sales data. Demand analysis shows that product differentiation is large enough such that the stockouts of popular products have led to significant welfare loss for consumers. Two patterns of product availability emerged among retail chains: High-Availability Retailers (HARs) such as discount stores and warehouse clubs have greater inventories and lower stockout rates than Low-Availability Retailers (LARs). The uneven distribution of HAR stores across markets drives the inequality in product access during times of scarcity, with shoppers in “availability deserts”—markets scarce in HAR stores—experiencing poorer product access and lower welfare. This paper has strong policy implications for preventing retail store exits from low-income neighborhoods with poor product access.

### 2. Who Benefits from Anti-Gouging Laws? The Case of Personal Cleaning Products during Covid-19

This paper examines the impact of anti-gouging laws on retail prices, sales, and consumer welfare during demand shocks. Using data on U.S. consumers shopping for personal cleaning products during the early Covid-19 pandemic, I analyze the enforcement of anti-gouging laws across online and brick-and-mortar retail markets, simulate the implementation of the law (in the form of price caps) on Amazon, and quantify the welfare effect. Recognizing that price caps affect supply decisions, I develop a structural model in which supply responds endogenously to pricing constraints. Results show that anti-gouging laws had little impact on brick-and-mortar retailers, which largely adhered to their pre-crisis pricing and inventory strategies. In contrast, there were frequent violations of the law in online markets. The welfare effects of binding price caps depend heavily on market conditions that vary over time, which implies that static, time-invariant price caps are unlikely to deliver optimal welfare outcomes. The findings highlight the value of alternative (more efficient) redistribution mechanisms, such as lump-sum transfers to low-income households through coupons or vouchers.

### 3. Inventory Acquisition and Distribution by Retail Chains During Times of Shortages

Economists have recognized the heterogeneity in product availability across retail chains during times of scarcity. However, the underlying causes of the heterogeneity remain underexplored: does it stem from high-availability retailers (HARs) having better logistics that enable more efficient distribution of supplies to stores? Or is it driven by HARs’ greater bargaining power in acquiring supplies from upstream manufacturers? This paper seeks to address this question by studying the inventory procurement and

distribution behaviors of major retail chains. Since the distribution behavior is not directly observable from data, I quantify the extent of product stockout using weekly sales data, then infer retailers' distribution strategy from the stockout patterns. Holding fixed total inventory stock, HARs such as discount stores exhibit lower stockout rates and small variations across stores, suggesting more efficient logistics in distributing supplies to each location. In terms of inventory procurement, retailers did not significantly increase their product varieties and prices in response to local demand shocks, but HARs like discount chains and warehouse clubs were relatively more successful in holding prices constant during the crises.

**Additional abstracts and papers can be found on my website <https://tianyi2.wixsite.com/psu-econ>**

(This Version: June 2nd, 2025)