

Ziyao Wang

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EDUCATION

Ph.D. in Economics, Northeastern University, Boston, USA 2021- 2026 (expected)
Dissertation Committee: James Dana (co-chair), Jordi Jaumandreu (co-chair), Santiago Caicedo, Jianfei Cao
M.S. in Economics, University of Wisconsin-Madison, USA 2021
M.S. in Finance & Economics, with Distinction, University of Southampton, Southampton, UK 2019
B.S. in Economics, China University of Geosciences, Wuhan, CHN 2017

FIELDS OF INTEREST

General Interest: Empirical Industrial Organization, Development and Growth, Digital Economics
Special Focus: Productivity, Technological Change, Market Power, Economics of AI

WORKING PAPERS

[Non-neutral Technological Change in Chinese Manufacturing](#)

[Artificial Intelligence \(AI\) and Endogenous Productivity: Evidence from Korean Firms](#) (joint with Jae Wook Jung)

Breaking the Iron Rice Bowl: Privatization, Labor Market Distortion, and Non-neutral Technological Change

WORK IN PROGRESS

The Welfare Cost of Artificial Scarcity: Evidence from Sneaker Resale Platforms

PRESENTATIONS

Chinese Economists Society North America Annual Conference, Ann Arbor, USA	Mar 2025
Western Economic Association International Annual Conference, San Francisco, USA	June 2025
Chinese Economists Society China Annual Conference, Guangzhou, China	July 2025
University of Mannheim & Center for European Economic Research (ZEW), Mannheim, Germany	July 2025
Boston University, Empirical Micro Workshop, Boston, USA	Sept 2025
BU-BC Green Line Macro Meeting, Boston, USA	Oct 2025
MIT Sloan, FutureTech Seminar, Boston, USA	Dec 2025
ASSA Annual Meeting, Philadelphia, USA	Jan 2026
Chinese Economists Society North America Annual Conference, Atlanta, USA	Mar 2026

RESEARCH EXPERIENCE

Research Assistant: *Sovereign Debt and Rollover Risk* for Jun Ma, Northeastern University 2024-Present
Research Assistant: *Synthetic Control Method with Spillover* for Jianfei Cao, Northeastern University 2021-2022

TEACHING EXPERIENCE

Northeastern University:

Lecturer: *Principle of Microeconomics* (Evaluation: 4.8/5.0)

2024 Summer

Lecturer: *Principle of Microeconomics* (Evaluation: 4.7/5.0)

2023 Summer

Discussion Instructor: *Principle of Microeconomics* (Evaluation: 4.9/5.0)

2022 Fall-2024 Spring

Teaching Assistant: *Statistics, Public Finance, Urban Economics*

2021 Fall-2022 Spring

REFeree EXPERIENCE

International Study of Economics

HONORS&FUNDINGS

- **CSSH Multi-generational Research Team Program**, Northeastern University 2022
 - **CSSH Scholar Award** (*summer funding*), Northeastern University 2021-2026
 - **Dean's List Award**, University of Southampton 2019
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LEADERSHIP&SERVICE

Student Representative – *Belonging Committee*, Department of Economics, Northeastern University Oct 2024 – Present

Vice President – *College Volunteer Association*

Outstanding Director in Student Union, China University of Geosciences 2013 –2014

SKILLS

Languages: Mandarin (native), English (fluent)

Software and Programming: MATLAB, STATA, R, Python, LaTeX, SQL

Citizenship/Visa Status: China/F1

REFERENCES

James Dana

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Jordi Jaumandreu

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Distinguished Professor,
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Artificial Intelligence (AI) and Endogenous Productivity: Evidence from Korean Firms

(joint with Jae Wook Jung)

This paper studies how artificial intelligence (AI) adoption affects firm-level productivity in South Korea. Using a 2017–2023 panel covering all major market sectors, we combine direct survey measures of AI adoption with a structural model of endogenous productivity to address selection into adoption. We find AI adoption raises revenue-based productivity by about 5% on average, with substantial heterogeneity by time since adoption that is consistent with a delayed J-curve, by sector with the largest gains in ICT and short-run losses in manufacturing, and by application area with gains concentrated in product/service development and sales and marketing rather than production processes. Using the estimates, we also examine how AI adoption relates to market power.

Non-neutral Technological Change in Chinese Manufacturing

This article identifies firm-level factor-augmenting productivity for capital, labor, and materials using Chinese manufacturing data from 1998 to 2008, a period of state-owned enterprise reform. We develop a novel method to estimate the parameters of a CES production function and recover the three types of factor-augmenting productivity. Results suggest technological change is strongly biased: labor-augmenting productivity grew 12% annually, capital-augmenting 5%, and material-augmenting 1.4%. Factor-augmenting productivity growth varies by sector and ownership. Productivity growth was driven primarily by incumbents, whereas entrants improved capital efficiency and exiters enhanced labor efficiency. We explain factor cost-share shifts through productivity gaps and relative input prices.

Breaking the Iron Rice Bowl: Privatization, Labor Market Distortion, and Non-neutral Technological Change

This paper examines how ownership transformation during China's state-owned enterprise (SOE) reform affected the direction of firm-level technological change. Using Chinese manufacturing data from 1998–2008, I estimate a nested CES production function with factor-augmenting productivities and embed privatization directly into the law of motion for each productivity to address endogenous ownership change. I also relax perfect-competition assumptions in labor markets by allowing ownership-specific rent sharing, which separates true labor-augmenting technological change from wage markdowns. Using the estimates, we quantify how privatization shifts labor-augmenting productivity and compare labor market power between SOEs and private firms.