

Ziyao Wang

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EDUCATION

Ph.D. in Economics , Northeastern University, Boston, USA	Expected 2026
<i>Advisors: James Dana, Jordi Jaumandreu, Santiago Caicedo, Jianfei Cao</i>	
M.S. in Quantitative Economics and Econometrics , 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

Empirical Industrial Organization, Productivity, Mergers and Acquisitions, Applied Econometrics

WORKING PAPERS

Non-neutral Technological Change in Chinese Manufacturing [*Job Market Paper*]

Mergers, Acquisitions, and Productivity Evolution: Evidence from the U.S. Manufacturing

On Estimating Firm-level Productivity: A Method based on Dynamic Panel

From Bitter Rivals to Better Business: Evaluating Unilateral and Coordinate Effects of the Nestlé-Starbucks Coffee Joint Venture (*joint with Muhammad Shabanpour*)

PRESENTATIONS

Chinese Economists Society North America Annual Conference, Ann Arbor, MI	March 2025
Western Economic Association International Annual Conference, San Francisco, CA	June 2025

RESEARCH EXPERIENCE

Research Assistant - Northeastern University Advisor: Prof. Jun Ma	Boston, U.S. Aug 2024- Present
Research Assistant - Northeastern University Advisor: Prof. Jianfei Cao	Boston, U.S. Nov 2021- Aug 2022
Research Assistant - University of Wisconsin-Madison Advisors: Prof. Lorenzo Magnolfi & Prof. Christopher Sullivan	Madison, U.S. June-Oct 2020

TEACHING EXPERIENCE

Northeastern University: Instructor of Record (Lecturer): Principle of Microeconomics (Effectiveness Score: 4.8/5.0)	2024 Summer
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Instructor of Record (Lecturer): Principle of Microeconomics (Effectiveness Score: 4.7/5.0)	2023 Summer
Recitation Instructor: Principle of Microeconomics (Effectiveness Score: 4.9/5.0)	2022 Fall-2024 Spring
Teaching Assistant: Statistics, Public Finance, Urban Economics	2021 Fall-2022 Spring

HONORS

• CSSH Multi-generational Research Team Funding , <i>Northeastern University</i>	2022
• CSSH Scholar Award (<i>summer funding</i>), <i>Northeastern University</i>	2021-2026
• Dean’s List Award , <i>University of Southampton</i>	2019
• Outstanding Director in Student Union , <i>China University of Geosciences</i>	2013, 2014

LEADERSHIP

Graduate Student Representative – *Diversity, Equity, Inclusion, and Belonging Committee*
 Northeastern University, Department of Economics (Oct 2024 – Present)

Vice President – *College Volunteer Association*
 China University of Geosciences (Sep 2013 – Jul 2014)

SKILLS

Languages: Mandarin (native), English (fluent)
Software and Programming: MATLAB, STATA, R, Python, LaTeX, SQL
Citizenship/Visa Status: China/F1

REFERENCES

Prof. James Dana	Prof. Jordi Jaumandreu	Prof. Santiago Caicedo	Prof. Jianfei Cao
Department of Economics and D’Amore-McKim School of Business, Northeastern University j.dana@northeastern.edu	Department of Economics, Boston University, and CEPR jordij@bu.edu	Department of Economics and D’Amore-McKim School of Business, Northeastern University sa.caicedo@northeastern.edu	Department of Economics, Northeastern University j.cao@northeastern.edu

Non-neutral Technological Change in Chinese Manufacturing [Job Market Paper]

Between 1998 and 2008, Chinese manufacturing experienced rapid revenue growth and significant shifts in input factors and cost structures, providing strong evidence of biased technological change—technological improvements that unevenly affect different factors of production. This paper develops a novel method to identify firm-level heterogeneous technological change, for capital, labor, and materials inputs, within the framework of a Constant Elasticity of Substitution (CES) production function. The estimates find gross complementarity of inputs, with an estimated elasticity of substitution of 0.315. Labor-augmenting efficiency increased fastest at an annual growth of 12.21% and demonstrated a high level of persistence, followed by capital-augmenting efficiency at 4.88% and material-augmenting efficiency at 1.41%. In addition, substantial heterogeneity in the rates of technological change is observed across manufacturing sectors. Using these estimates, we explain changes in input shares through variations in efficiency, prices, and firm dynamics, including entry and exit.

Mergers, Acquisitions, and Productivity Evolution: Evidence from the U.S. Manufacturing

This paper proposes a novel method to identify the impact of mergers and acquisitions (M&A) on productivity evolution within U.S. manufacturing firms, focusing on firm-level dynamics rather than plant-level effects. Using data for the period 2000–2020, the study evaluates productivity changes stemming from synergies between merging entities. A Cobb-Douglas production function underpins the analysis, with productivity modeled as a dynamic process influenced by M&A activities. To estimate the productivity effects, the study employs a control function approach and Generalized Method of Moments (GMM) to recover productivity parameters. The analysis captures post-M&A productivity synergies and heterogeneity across sectors. The findings contribute to the understanding of how M&A affects sector-wide efficiency and inform debates on the trade-off between market power and efficiency gains.

From Bitter Rivals to Better Business: Evaluating Unilateral and Coordinate Effects of the Nestlé-Starbucks Coffee Joint Venture (joint with Muhammad Shabanpour)

This paper focuses on the case of the joint venture of Nestlé-Starbucks instant coffee. The research assesses how the merger impacts consumer surplus, by analyzing changes in pricing, availability, and innovation of instant coffee products. It evaluates the post-merger market structure to determine the balance between efficiency gains and potential anti-competitive behavior. The outcomes will inform regulatory perspectives on future mergers within key consumer goods sectors and their alignment with welfare maximization principles.

On Estimating Firm-level Productivity: A Method based on Dynamic Panel

This paper proposes a new method for identifying the firm-level productivity based on the Dynamic Panel literature. By using the U.S. manufacturing data from 2000 to 2020, we consistently estimate the firm level productivity evolution.