FUQIN ZHOU

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New Jersey Institute of Technology ◇ University Heights, Newark, NJ 07102
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EDUCATION

New Jersey Institute of Technology *September 2022 - Present*
Ph.D. candidate in Business Data Science

Renmin University of China *2014-2018*
B.A. in Financial Engineering

RESEARCH INTEREST

Food Supply Chain Management, Food Economy, Business Data Science, FinTech.

PUBLICATIONS

[1] A. Chang, **F. Zhou**, N. El-Rayes, J. Shi, "Food Transportation and Price Impacted by Diesel Price and Truck-driver Shortage pre-, amid and post Pandemic", *Transportation Research Part E: Logistics and Transportation Review*, 2024, Volume 192, 103794, ISSN 1366-5545. **ABDC Ranking: A*; SJR: Q1**. doi:10.1016/j.tre.2024.103794

[2] **F. Zhou**, A. Chang, J. Shi, "How the Economic Policy Uncertainty (EPU) impacts FinTech: The implication of P2P lending markets", *Finance Research Letters*, 2024, 106268, ISSN 1544-6123. **Lead and Corresponding Author; ABDC Ranking: A; SJR: Q1**. doi:10.1016/j.frl.2024.106268

WORKING PAPERS

Food on Road: A Novel County-Level Analysis of Road Density and its Impact on Food Prices in the U.S. Market, with Jasmine (Aichih) Chang, Jim Shi

Abstract: Food crisis has been prevailing for decades. Recently, the world-wide economic inflation, especially in food price, has exacerbated the food crisis dramatically. This study examines how transportation infrastructure, e.g., road density, influences food price through the lens of food access and mobility. Using 2010 and 2020 U.S. county-level datasets in conjunction with other data sources, empirically we reveal that, in the U.S. market, higher road density significantly reduces cost per meal by enhancing local and regional food mobility. In particular, ceteris paribus, one mile/mile^2 increase in road density reduces the cost per meal by 1.3%. We further reveal that road density helps narrow price disparities tied to store availability, while such price dampening effect diminishes or vanishes in or near densely populated areas. These findings shed light on how infrastructure influences food mobility and price equity, and offer evidence-based implications for urban planners, transportation policymakers, and local governments. This study makes several salient contributions to the extant literature. First, it documents empirical evidence from the U.S. market on how infrastructure affects food prices, along with other geographic, demographic, and temporal factors. Second, the study offers a nuanced and deep understanding of how transportation networks interact with local food market, spatially and temporally. Last but not least, this study enriches the food-transportation literature with novel empirical evidence by curating a county-level road density dataset.

WORK IN PROGRESS

Ripple Effects of Tariff Shocks: Estimating Supply Chain Disruptions and Transportation Cost Spillovers in the U.S. Tomato Market, with Jasmine (Aichih) Chang, Jim Shi

Abstract: This study investigates the indirect effects of import tariffs on food prices, with a focus on the U.S. tomato market. Specifically, it examines how policy-induced tariff shocks affect prices through

the transportation channel. Employing a Difference-in-Differences (DiD) approach, the analysis identifies the causal relationship between tariff changes and food prices. Furthermore, the study develops a U.S. tomato transportation network model to estimate the resulting shifts in transportation costs, providing insights into the broader economic consequences of trade policy.

Integrating AI-Powered XR Wearables for Real-Time Shelf-Life Estimation and Pricing Optimization, with Jasmine (Aichih) Chang

Abstract: Fresh food retailers operate in a highly uncertain environment where product perishability and fluctuating consumer demand make pricing and inventory management especially challenging. This project proposes an AI-enabled dynamic pricing system using XR wearables to track freshness and adjust prices in real time. By linking fixed purchase costs with prices shaped by perishability and fluctuating demand, retailers can optimize product selection, ordering, and pricing. The approach aims to boost profitability, reduce waste, and improve decision-making in fresh food retail.

The Impact and Implications of Bag Tax Policies on Sustainable Operations: A Systems Dynamics Approach, with Nesreen El-Rayes, Jasmine (Aichih) Chang, Jim Shi

Abstract: This study investigates the impact of bag tax policy in the United States. By leveraging 71k historical dataset and Vensim modeling, we simulate the interactions and feedback loops to demonstrate and forecast policy impacts, providing evidence-based recommendations for optimizing tax structures and accompanying measures to maximize environmental and social benefits.

RESEARCH GRANTS

[1] NSF I-Corps National, Entrepreneurial Lead, "Empowering Molecular Discovery: A Graph Neural Network Approach with Explainable AI", 2025, $50,000.

[2] NJIT NSF I-Corps, Entrepreneurial Lead, "Empowering Molecular Discovery: A Graph Neural Network Approach with Explainable AI", 2024, $3,000.

PROFESSIONAL EXPERIENCE

China Agricultural Bank Shenzhen Branch (Shenzhen, China) June 2018-June 2022
Product Manager, Department of Individual Financing

PROFESSIONAL CERTIFICATES

CFA Level II Candidate, Certification of China Banking Professional, Certification of China Wealth Management Professional, Certification of China Insurance Professional

CONFERENCE PRESENTATION

"Food on Road: A Novel County-Level Analysis of Road Density and its Impact on Food Prices in the U.S. Market", 2025 Decision Sciences Institute (DSI) Annual Conference, Doctoral Research Showcase, Orlando, Florida

"Impact of Rising Diesel Prices and Truck Driver Availability on Food Transportation and Distribution", 2024 Decision Sciences Institute (DSI) Annual Conference, Phoenix, Arizona

"SCGNN: Forecasting Food Prices with Constructed Supply Chain Graph and Adopted Graph Neural Network Model", 2024 INFORMS Annual Meeting, Seattle, Washington

"Impact of Rising Diesel Prices and Truck Driver Availability on Food Transportation and Distribution", 2024 Northeast Decision Sciences Institute (NEDSI) Annual Conference, Boston, Massachuset

"Impact of Rising Diesel Prices and Truck Driver Availability on Food Transportation and Distribution", Northeast Decision Science Institute (NEDSI) 2023 Annual Meeting, Washington, DC

TEACHING INTERESTS & EXPERIENCE

Teaching Interest

Business Data Analytics, Data Mining (Python), Finance, Fintech, Financial Markets, Statistics, Supply Chain Management.

Teaching experience

Martin Tuchman School of Management, New Jersey Institute of Technology

Instructor

MGMT116 Quantitative Analysis with Applications for Business	Spring 2025(Rating: 3.3/4)
MGMT216 Business Data Analytics	Fall 2024(Rating: 3.7/4)

Lab Assistant

NJIT Bloomberg Lab	2022-2023

Teaching Assistant

FIN310 Data-Driven Financial Modeling	Summer 2023
FIN218 Financial Markets & Institutions	Fall 2023
FIN430 Options and Futures Markets	Fall 2023
FIN417 Investments Management	Fall 2023
FIN641 Derivatives Markets	Fall 2023
FIN218 Financial Markets & Institutions	Spring 2024
FIN216 Business Data Analytics	Spring 2024
Academic Tutor: Accounting, Finance and Management	2022-2023

SELECTED HONORS

2025-2026 Ph.D. Research Assistant Scholarship, MT School of Management, NJIT

2025 MTSM Award for Excellence in Research (PhD Research Award)

2024 Best Reviewer Certificate for Omega: The International Journal of Management Science

2023 Leader of NJIT Team - 2023 Bloomberg Trading Challenge (Top 20%)

2023 Ph.D. Summer Research Assistantship for USDA Project

2023 Ph.D. Summer Teaching Assistantship

2022 Ph.D. Teaching Assistant Scholarship for 4 years, MT School of Management, NJIT

2017 Merit Award Scholarship, Renmin University

2016 Outstanding Undergraduate Research, Renmin University

SKILLS & EXPERTISE

Python, R, STATA, Latex, MySQL, Bloomberg, ArcGIS Pro

Jasmine (Aichih) Chang
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