Tianhao Zhao

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Education

Ph.D. in Economics, Emory University (expected)   2019-2025
Dissertation: Essays on housing and macroeconomics
Advisor: Vivian Yue

M.A. in Economics, Emory University   2019-2022

B.S. in Economics (Financial Engineering), Beihang University   2014-2018

Research Interest

Macroeconomics, International finance, Computational economics

Research Papers

Working paper

Ding, C. and Zhao, T., 2024. Frictions, net worth shocks, and heterogeneous impacts. *Available at SSRN 4915272.*

Work in progress

Financial Dollarization, Exchange Rate, and Macroprudential Policy (with Cheng Ding, Vivian Yue, and Aliaksandr Zaretski)

Dissertation Chapters

Asymmetric impacts of net worth shocks on the U.S. economy: Evidence from U.S. counties.

Abstract*: This chapter examines the persistent and asymmetric effects of net worth shocks on the U.S. economy following the Great Recession, using a new county-level panel dataset (CountyPlus) covering 2003 to 2019. Employing local projections with functional coefficients, the study estimates semi-parametric impulse responses to capture the amplifying effects of downward nominal wage rigidity and collateral constraints at varying magnitudes of net worth shocks. The findings reveal substantial heterogeneous impacts of net worth shocks, which are notably more severe during economic busts.*

Downward nominal wage rigidity and collateral constraints: A theory for understanding the post-Great Recession U.S. economy.

Abstract*: This chapter develops a continuous-time heterogeneous agent model to explain the prolonged downturn of the U.S. economy following the Great Recession. The model incorporates downward nominal wage rigidity, collateral constraints, endogenous idiosyncratic unemployment risk, and illiquid housing wealth. Using the sequence-space Jacobian method for estimation and*

the CountyPlus dataset, the analysis reveals significant interactions between wage rigidity and collateral constraints, which together contribute substantially to the slow recovery of the recent U.S. economy.

Deep learning insights into geographically heterogeneous impacts of net worth shocks on U.S. household balance sheets.

Abstract: *This paper examines the spatial-temporal heterogeneity in the loss of U.S. household wealth during the Great Recession, addressing the challenges posed by the endogeneity of household net worth shocks and the interconnectedness of local economies. The study employs a deep neural network model with an embedded structural layer that treats counties as open, interconnected economies. Leveraging the CountyPlus dataset and a network structure representing economic linkages between U.S. counties, the model estimates the heterogeneous effects of net worth shocks while addressing endogeneity concerns.*

Journal Articles

Jiang, Y., Zhao, T. and Zheng, H., 2021. Population aging and its effects on the gap of urban public health insurance in China. *China Economic Review, 68*, p.101646.

Jiang, Y., Zheng, H. and Zhao, T., 2019. Socioeconomic status and morbidity rate inequality in China: based on NHSS and CHARLS data. *International Journal of Environmental Research and Public Health, 16(2)*, p.215.

Wang, S., Zhao, T., Zheng, H. and Hu, J., 2017. The STIRPAT analysis on carbon emission in Chinese cities: An asymmetric laplace distribution mixture model. *Sustainability, 9*(12), p.2237.

Scholarly Presentation

Brown bag seminar, Nov 2024 (scheduled), Federal Reserve Bank of Atlanta

Midwest Macroeconomics Meetings, 2024, Purdue University

International Conference on Empirical Economics, 2024, Pennsylvania State University Altoona

Professional Service

Referee, BMC Public Health (SCI Q1)

Session chair, International Conference on Empirical Economics, 2024, Pennsylvania State University Altoona

Funding

Professional Development Support Conference Funds, Emory University

Teaching

Instructor, Emory University, Atlanta GA   Fall 2022
ECON 112: Principles of Macroeconomics

Teaching assistant, Emory University, Atlanta GA

ECON 421: Micro-econometric Data Analytics	Spring 2024
ECON 610: Macroeconomic Theory I	Fall 2023
ECON 212: Intermediate Macroeconomics	Fall 2023
ECON 363: Political Economy of China	Spring 2023
ECON 112: Principles of Macroeconomics	Spring 2022
ECON 363: Political Economy of China	Spring 2021
ECON 363: Political Economy of China	Fall 2020

Research Assistantship

Research assistant, Emory University, Atlanta GA   Fall 2023
For Esfandiar Maasoumi
Engaged in the research on the inference of automatic debiased machine learning.

Research assistant, Emory University, Atlanta GA   Spring 2023
For Vivian Yue
Conducted analysis on the development of digital currency.

Research assistant, Emory University, Atlanta GA   Fall 2021
For Kaiji Chen
Undertook empirical research on China's saving rate using survey data.

Research assistant, Emory University, Atlanta GA   Spring 2021
For Mi Luo
Analyzed the spillover effects of school performance on labor market outcomes.

Research assistant, Beihang University, Beijing China   2017-2019
For Haitao Zheng
Modeled China's public health system with overlapping generation models.

Software

Julia, Python, MATLAB, R, Stata, C, SAS, Fortran, SQL

References

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