Yuzhi HAO

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EDUCATION

The Hong Kong University of Science and Technology — Hongkong SAR
Ph.D. Economics, Business School — 2020 - 2026 Expected

The Hong Kong University of Science and Technology — Hongkong SAR
M.Phil. Economics, Business School — 2018 - 2020

Peking University — Beijing, China
B.A. Major in Economics, Minor in Mathematics — 2014 - 2018

RESEARCH

Research Field

Macroeconomics, LLM-Powered Agent-Based Modelling, Computational Economics, and Development

Publication

1. A Multi-LLM-Agent-Based Framework for Economic and Public Policy Analysis [PDF]

Yuzhi Hao and Danyang Xie   *China Journal of Econometrics, 2025, 5(3): 615-630*

- **Summary**: A Large Language Model empowered agent-based framework for economic policy analysis by leveraging heterogeneity across different Large Language Models as agents with diverse cognitive traits, demonstrating its application in simulating interest-income taxation impacts across educational groups.

Working paper

2. Macro-Monopoly Dynamics: How Large Firms Shape Aggregate Outcomes [PDF]

Yuzhi Hao and Danyang Xie

- **Summary**: A Ramsey-style model to quantify how large firms' internalization of aggregate influence generates significant distortions (6-27% output loss) and creates initial-period dependence—a novel time inconsistency source far larger than classical inconsistency.
- Job Martket Paper
- Presentation: Xiamen University EFG 2025

3. Rewiring Opportunity: How Improved Internet Infrastructure Reduces Intra-City Income Inequality in China [PDF]

Yanlin Wan, Xu Zhang, Yuzhi Hao, Aoqing Lyu and Masaru Yarime

- **Summary:** Employs staggered difference-in-differences to show that China's Broadband China Strategic Program significantly reduced intra-city income inequality by creating service sector employment opportunities for low-skilled workers, particularly in logistics, with measurable income gains among low- and middle-income households.(Submitted)

Selected Works in Progress

4. Evaluating Large Language Models as Households: Evidence from China Family Panel Studies

Yuzhi Hao and Danyang Xie

- Evaluates LLMs' ability to replicate household expenditure decisions using a role-playing framework with CFPS data, comparing model predictions against actual survey responses through distributional analysis and household-level accuracy metrics, with implications for calibrating LLM-based agents in macro models.

WORK EXPERIENCES

Ministry of Commerce of the People's Republic of China — Beijing, China
Pilot Free Trade Zone and Port Department — 2023 - 2024

- Draft policies for multiple Pilot Free Trade Zones
- Support organizing the "10th Anniversary Exhibition of Pilot Free Trade Zones" at the China International Import Expo.

Conference/Seminar Presentations

Annual Meeting of Economic Fluctuation and Growth, Xiamen University, 2025

Frontier Seminar of Public Administration, Tsinghua University, 2025

Scholars Forum Seires, University of Chinese Academy of Sciences, 2025

Awards

2025: Honorable Mention, Asian Development Bank-International Economic Association Innovative Policy Research Award

2018-2023: Postgraduate Scholarship, The Hong Kong University of Science and Technology

2016: Top Grade Scholarship (Rank 1 in Major), Peking University

2016: Leo KoGuan Scholarship, Merit Student, Peking University

Teaching

Department of Economics, HKUST

 TA for Macroeconomic Theory I (PhD-level) by Prof. Danyang Xie

 TA for International Economics (Master-level) by Prof. Jenny Xu

 TA for Monetary Economics (Master-level) by Prof. Tao Zhu

 TA for Mathematics for Business and Economics (Master-level) by Prof. Lingzhi Zhou

Skills

Programming: Python (Deep learning and LLM agent), Matlab, Stata

References

Prof. Danyang Xie
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