XUEYAN ZHANG

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EDUCATION

University of Chicago · 09/2024 - 06/2026

M.A. in Economics · Chicago, Illinois

- GPA: 3.56/4.00
- Dissertation area: Behavioral Economics, Development Economics and Behavioral Sciences
- Supervisor: Prof. Joshua Conrad Jackson
- *Related courses: ECON 35650 Behavioral and Development Economics under Anne Karing, BUSN 41902 Statistical Inference under Dacheng Xiu, ECMA 31000 Introduction to Empirical Analysis, MATH 20300 Analysis in Rn I*

Renmin University of China · 09/ 2020 - 07/2024

B.Econ. in Economics and B.A. in Management with Honors · Beijing, China

- GPA: 3.74/4.00 (Rank: 3/30)
- *Related courses: Mathematical Economics, Advanced Econometrics, Machine Learning, Game Theory, Industrial Organization, Advanced Microeconomics, Advanced Macroeconomics.*

WORKING PAPER

Social Learning in Multi-Context Environments: An Agent-Based Model of Strategic Decision-Making · 05/2025 -Present

Co-Author with Joshua Conrad Jackson

- Developed an agent-based computational model integrating reinforcement learning and social network theory to examine how agents strategically choose between model-based and model-free learning strategies across multi-dimensional contexts, balancing exploration costs against cognitive computational burdens.
- Constructed a multi-agent simulation framework where agents predict binary reward outcomes while leveraging network connections for knowledge borrowing, advancing understanding of collective intelligence and distributed problem-solving under uncertainty.
- Generated theoretical predictions that highly connected networks reduce model-based strategy reliance due to decreased exploration costs, while accumulated experience favors model-based approaches as prediction errors diminish over time.

Institutional Enforcement and Altruistic Punishment · 06/2025 – Present

Co-Author with Joshua Conrad Jackson, Ugur Mert Yasar

- Designed and implemented a Qualtrics-based public goods experiment with custom JavaScript, systematically varying state enforcement conditions to probe cooperative decision-making, building on foundational work by Lowes *et al.* and Fehr & Gächter.
- Developed complementary agent-based simulations to model the evolution of altruistic punishment under different enforcement regimes, illuminating how institutional parameters influence community-level cooperation dynamics.

The Gender Gap in Gender-Blind University Admissions · 12/2024 - Present

Co-Author with Yiming Liu, Yi Han

- Utilized advanced econometric techniques and behavioral economics models to analyze a comprehensive administrative dataset of over 6,000 high school students from Henan Province, uncovering significant gender disparities in elite university application behavior and admission outcomes.
- Developed quantitative models integrating Gaokao rankings and rank-order list data, while incorporating behavioral theories—such as bounded rationality and prospect theory—to explain how parental influence and gender stereotypes affect application decisions.
- Conducted extensive literature reviews on behavioral economics frameworks, thereby refining model specifications that capture risk aversion, decision biases, and heuristic-driven choices in a merit-based, gender-blind admissions system.

Publications

[1] Ming Chang, Hongxu Shi, Shijia Yuan, Kelin Chen, **Xueyan Zhang**, and Jinhao Zhang. "How does farmer differentiation effect agricultural water use efficiency? Evidence from China." *Agricultural Water Management (JCR Q1)*, 2025, Forthcoming (Accepted).

Research Experience

Minds, Models and Markets: How Managerial Cognition Affects Pricing Strategies   11/2023 – Present
Research Assistant, Department of Economics, University of Pittsburgh   *Prof. David Huffman*

- Led a comprehensive field study analyzing managerial cognitive skills and their influence on pricing strategies, utilizing survey data from over 20,000 gas stations.
- Designed and implemented innovative lab-in-field experiments—including a strategic money request game—to elicit managers' mental models of competitor behavior.
- Executed rigorous econometric analyses (e.g. event studies, and **synthetic difference-in-differences**) using STATA to quantify the causal impact of managerial cognition on oil pricing, profits, and overall market efficiency.

Gender Discrimination on Online Healthcare Platforms   03/2023 – 07/2024
Research Assistant, Department of Applied Economics, Renmin University of China   *Prof. Yi Han*

- Developed and implemented a comprehensive **web scraping** strategy using Python to extract detailed doctor profiles from Haodaifu Online, a leading online healthcare platform in China.
- Conducted extensive quantitative analyses and produced a series of data visualizations to examine gender biases in doctor presentation and patient engagement, shedding light on patterns of gender discrimination in the online healthcare space.

The Impact of Climate Change on Food Security   09/2022 – 02/2023
Research Assistant, Department of Agricultural Economics, Renmin University of China   *Prof. Jialing Yu*

- Curated a large-scale dataset (>60GB) integrating climate variables, grain yield statistics, and geographical data. Developed and optimized **parallel programming** workflows in Python to process and analyze big data efficiently.
- Conducted comprehensive literature reviews on climate change impacts and advanced big data analytics techniques. Integrated insights from state-of-the-art research into the development of spatial and statistical analysis methods using Python and **ArcGIS**.

China's Relocation for Poverty Alleviation Program   10/2022 – 02/2024
Research Assistant, Department of Agricultural Economics, Renmin University of China   *Prof. Jianjun Tang*

- Designed standardized questionnaires and coordinated extensive fieldwork across 12 counties in western China, ensuring data quality and consistency across diverse geographical and cultural contexts.
- Analyzed program impacts on household welfare using advanced econometric techniques including **propensity score matching** and instrumental variables in Stata, quantifying causal effects of poverty alleviation interventions.

Achievements and Recognitions

2024	M.A. Director's Scholarship, University of Chicago
2023	RUC Academic Outstanding Scholarship ∣ Top 10%
2022	Kaggle Movie Popularity Prediction Competition ∣ Top 10%
	Outstanding Paper of National Undergraduate Academic Forum on Agricultural Economics and Management, First Prize
2021	Scholarship from Da Bei Nong Group ∣ Top 5%
	RUC Academic Outstanding Scholarship ∣ Top 10%
	First Prize of RUC Innovation Cup Academic Competition

Teaching Assistantship

2024	Mathematical Economics (Undergrad)	Prof. Jialing Yu
2024	Behavioral and Experimental Economics (Undergrad)	Prof. Yi Han

Technical Proficiency

- **Programming Languages:** Python(Reinforment Learning), STATA, R, MATLAB, SQL
- **Survey Tools:** Qualtrics, Prolific
- **Language:** English (Proficient), Chinese (Native)
- **Standardized Tests:** GRE Verbal 162 - 89%, Quantitative 170 - 94%