

Weike Zhang

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Research Interests

Firm strategy under technological and regulatory shifts; data-driven competitive dynamics. Methods: causal inference with text-as-data and computer vision for strategy research.

Education

Master in Economics (Research) Aug 2024 – Expected Jun 2026

École Polytechnique, HEC Paris, Institut Polytechnique de Paris
Palaiseau, France

Master of Data Science (Online) Aug 2024 – Expected Jun 2027

The University of Texas at Austin
Austin, USA

Bachelor of Economics, Major in Public Finance Sep 2020 – Jun 2024

Jilin University
Changchun, China

Graduation Thesis: “How Carbon Tax Affects Industrial Emission: An Empirical Analysis Based on Panel Data”

Summer School in Data Analytics and Mathematical Statistics Jul 2023

National University of Singapore
Singapore

Working Papers/Work in Progress

How Missing Data Techniques Reshape Managerial Science Conclusions Feb 2025 – Present

- Led a seven-method evaluation of missing-data techniques on the stability of managerial science conclusions; built a reproducible benchmarking pipeline across 39 published datasets, inducing MCAR/MAR/NMAR missingness at 1–50%.
- Demonstrated that ML-based imputations (e.g., MICE+LightGBM) are most robust under MAR in panel settings, while simpler methods suffice under MCAR.
- Delivered practical guidance on method selection and released a reusable pipeline for transparent, reproducible analysis; paper in preparation.

Research Experience

Pre-Doc Research Assistant Sep 2024 – Present

RA to Associate Prof. Kejia Hu (OM) and Prof. Eric Zhao (Strategy)
Saïd Business School, University of Oxford
Oxford, UK

- Built and deployed an LLM-OCR pipeline to digitize 19th-century ledgers; reduced manual transcription by ~90% and achieved 93.1% field-level accuracy on a 1,000-sentence gold set.
- Engineered an end-to-end tool to automate paper extraction, screening, and synthesis for systematic literature reviews, creating a local, traceable knowledge base.
- Applied time-series econometric techniques to historical financial data to analyze corporate strategy and competitive dynamics during the Industrial Revolution.

Research Trainee Apr 2025 – Jul 2025

Advised by Prof. Emanuele Campiglio
ERC SMOOTH Project, Economics Department, University of Bologna
Bologna, Italy
(Recipient of the Erasmus Traineeship Grant)

- Led assessment of firm-level exposure to carbon transition risk by building reproducible R pipelines to calculate adjusted financial metrics (e.g., EBIT, margin compression).

- Quantified financial risk under policy changes by engineering Carbon VaR at firm and portfolio levels across 0–2,500 USD/tCO₂ scenarios, validating results against sector benchmarks and Scope 1–3 intensities.
- Developed and validated a mapping between NACE industry codes and IPCC process categories, aligning corporate emissions with climate policy frameworks.
- Delivered portfolio- and sector-level analyses on the strategic implications of transition risk for corporate operations and supply chain management.

Research Assistant

Mar 2023 – Jun 2023

Advised by Prof. Zhifu Mi

Bartlett School of Sustainable Construction, UCL

London, UK

- Developed and evaluated predictive models to support project analysis of environmental impact
- Processed and engineered features from complex IPCC datasets using Python.

Projects

Optimal Land Allocation in a Carbon-Neutral Economy

Sep 2024 – Apr 2025

Advised by Prof. Guy Meunier, École Polytechnique

- Led development and calibration of a partial equilibrium model using FAO land-use data to determine the welfare-maximizing allocation of land between food and bioenergy production under carbon policy constraints.
- Modeled heterogeneous land productivity and area-dependent costs to evaluate the impact of policy instruments, including carbon taxes, food subsidies, and land-use regulations.
- Demonstrated via policy simulations that carefully calibrated carbon pricing is the most efficient mechanism for aligning private incentives with social welfare; confirmed robustness via sensitivity analysis across a realistic range of price elasticities.

AC21 Academic Consortium Carbon Neutrality Project

Apr 2022 – Mar 2023

- Analyzed the comparative effects of carbon taxes and emissions trading systems on firm-level costs, output, and strategic behavior using microeconomic modeling.
- Proposed a hybrid policy framework to mitigate business cost volatility while achieving environmental targets.
- Authored the working paper, “Carbon Trading and Carbon Taxes: Policy Design for Business Growth and Environmental Protection.”
- Selected as a student speaker to present research findings and policy recommendations at the AC21 Academic Forum’s Carbon Neutrality workshop.

FinTech Adoption and its Impact on Traditional Financial Services

Dec 2021 – Mar 2022

Research Contributor for a National Social Science Fund Grant Proposal

- Co-authored a grant proposal by developing a novel theoretical framework to explain the behavioral drivers of FinTech adoption, synthesizing findings from over 40 academic articles.
- Conducted quantitative analysis in Python on multi-year survey data to identify key generational trends and usage patterns in the adoption of financial technology.

Methods & Data

Programming: Python (pandas, NumPy, scikit-learn, PyTorch), R (tidyverse, data.table), Stata, Git.

NLP & LLM: Prompt Engineering, Retrieval-augmented Generation, Evaluation (BLEU/ROUGE/Exact Match), LangChain/LlamaIndex.

Econometrics: DiD/Event Study, IV/2SLS, RDD, Panel Data, VAR.

Data Sources: WRDS (CRSP/Compustat), Orbis, Refinitiv Eikon, Bloomberg.

Languages: Chinese (Native), English (Fluent).

Awards & Funding

Funding: Erasmus Traineeship Grant, University Academic Scholarship (Top 15%), 2024.