

Danyang Shi

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Education

- 2022 M.S. in Economics, China University of Petroleum, Beijing (CUPB)
GPA: 3.83/4.0 (Rank 1st; converted from a 5.0-scale GPA at CUPB)
- 2020 B.S. in Economics Sciences, China University of Petroleum, Beijing
GPA: 3.67/4.0, Major GPA: 3.89/4.0 (converted from a 5.0-scale GPA at CUPB)
- 2018 Exchange program: National University of Singapore (NUS)

Awards & Honors

- 2022 Excellent Graduate Student and Outstanding Graduate Honor, CUPB
- 2021 National Scholarship for Graduate Students, Ministry of Education of China
- 2021 The First-class Scholarship, CUPB
- 2020 Scholarship for Outstanding Academic Performance (Graduate Level), CUPB
- 2019 First Price in CUPB Academic Student Paper Competition
- 2018 Program Outstanding Student Award, NUS

Research Interests

Complex network and matrix analysis; Spatial statistics; Multivariate models; Bayesian statistics; Hierarchical models; Mixture models; Applications in global health and ecological environment.

Journal Papers

1. Qi, M., **Shi, D.**, Feng, S. Assessing the interconnectedness and systemic risk contagion in the Chinese banking network. *International Journal of Emerging Markets*. 17(3), 889-913. 2022. (SJR Q2)
2. Qi, M., **Shi, D.**, Li, C. Improving oil supply security: using a risk optimization model to China and India. *Discrete Dynamics in Nature and Society*. 2021. (SJR Q3)
3. Qi, M., **Shi, D.**, Li, C. The impact of short-term funds on the performance and risk of commercial banks. *Research on Financial Regulation*. (08), 66-81. 2021. (in Chinese)
4. Zeng, Y., Dong, C., Höök, M., Sun, J., **Shi, D.** Can the Shanghai LNG Price Index indicate Chinese market? An econometric investigation using price discovery theory. *Frontiers in Energy*. 14(4), 726-739. 2020. (SJR Q2)

Research Experience

1. **Comparison of two scalable models for non-Gaussian spatial data**
with Xiaotian Zheng (Research Fellow at University of Wollongong, Australia), Aug 2022 - present
Fit two spatial generalized linear mixed models, one with basis functions using R package FRK, the other one with Vecchia-Laplace approximations using R package GPvecchia.
2. **Assess the interconnectedness and systemic risk contagion in China's banking network** (Published in *International Journal of Emerging Markets*)
with Ming Qi (Professor at CUPB), Sept 2020 - Mar 2022

Built a complex network of 320 banks and a matrix of inter-bank lending based on the maximum entropy algorithm using UCINET and draw pictures in Gephi; Conducted simulation experiments of credit shock and liquidity shock in **Matlab**.

3. ***Whether the Shanghai LNG Price Index can reflect the real market*** (Published in *Frontiers in Energy*)
with Yeli Zeng (Lecturer at CUPB), Mar 2019 - Aug 2020

Tested the long-term equilibrium, short-term adjustment mechanism and the responses to market information shocks of time series data of four-year Shanghai LNG Price Index in **SPSS**; Used methods including vector autoregression model, vector error correction model, Granger causality test and impulse response analysis.

4. ***The effect of China's carbon emission trading policy***
with Li Gao (Associate Professor at CUPB), Sept 2018 - June 2019

Compared the greenhouse gases emission before and after a carbon reduction policy; Extended the difference-in-difference (DID) model to triple difference (DDD) model (added industry dimension) under fixed effects; Regressed longitudinal data of 30 provinces and 28 industries in 10 years in **Stata**.

Working Experience

Teaching Assistant, CUPB Department of Economics, Sept 2020 - Jan 2021

Econometrics, Undergraduate, Spring 2020, Lecturer Yeli Zeng.

Taught methods of regression and programming in **Stata**.

Data analysis Assistant, JoinQuant Investment Management Co. LTD, Beijing, June 2021 - Dec 2021

Used **Python** and **Power BI** to analyze and process data (more than 150 fund products) for investment decision making, and to generate and publish weekly reports for fund products.

Investment Research Assistant, Chengnuo Asset Management Co., LTD, Shenzhen, June 2020 - Aug 2020

Collected data of listed companies in liquor industry in **Wind and Hibor databases**; Analyze financial indicators and operation trends of enterprises; Wrote an in-depth research report on Wuliangye company.

Data analysis Assistant, Euromonitor Information Consulting, London, June 2019 - Aug 2019

Collected data of more than 20 dairy companies by desk study and market survey; Analyzed enterprise competitiveness with business analytical models; Presented products information by **Excel VBA and Power BI**.

Volunteer Activities and Leadership

Head of Southeast Asia Region, Australian Youth International Volunteer Organization, 2019 - present

Organize college students to participate in volunteer activities in Southeast Asian countries such as Cambodia, Vietnam and Indonesia, including volunteer teaching, animal and environment protection, etc; Responsible for contacting orphanages and poor villages, arranging volunteer work, and awarding certificates as judges.

Team Leader, CUPB Debate team, 2016 - 2018

Led the debate team to participate in six intramural competitions and two extramural competitions; Awarded *Excellent Debate Team Prize* twice.

Language & Skills

Languages: Proficient in English: TOEFL 107 (speaking 25), GRE 333+4; Native in Chinese (Mandarin).

Software: Skilled in R, Matlab, Stata, SPSS, LaTeX.