LIU Yaoyao

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EDUCATION

National University of Singapore Singapore
Ph.D. Student in Analytics and Operations *Aug 2023 - Present*

The Chinese University of Hong Kong-Shenzhen Shenzhen, China
Master of Science in Economics ; GPA: 3.85 *Jan 2021 - Nov 2022*

Courses: Advanced Econometrics, Advanced Macroeconomics, Advanced Monetary Economics and Financial Markets, Quantitative Methods in Economics, Analysis of Financial Time Series, Direct Research in Economics

University of Wisconsin-Madison Madison, The United States
Master of Science in Economics ; GPA: 3.857 *Jan 2020 - Dec 2020*

Courses: Advanced Econometrics, Advanced Macroeconomics, Advanced Microeconomics, International Finance

Central University of Finance and Economics Beijing, China
Bachelor of Economics ; GPA: 90.07/100 *Sep 2015 - Jun 2019*

Courses: Calculus, Linear Algebra, Ordinary Differential Equations, Dynamic Optimization, Stochastic Process, Real Analysis;Intermediate Econometrics, Macroeconomics, Microeconomics; Fixed Income Securities Analysis, Investment, Financial Economics

RESEARCH PROJECTS

- **Buyer Direct Finance, Multiple Small Suppliers, and Uncertain Yields**: (Nov 2022 - Present) (Cooperated with Prof. Rui Chen)
  - **Abstract**:
    This paper is going to study the utilities and efficiencies of commonly used tools, multiple sourcing and buyer-direct financing (BDF) under the existence of uncertain yields. To measure the utilities of the two tools, this paper will compare the outcomes of using each tool separately and the baseline case where neither of the tools is used. The paper will also address the relationship between the tools by answering the question that whether the joint effects is offset or amplified. The current conclusion is that the use of BDF can efficiently alleviate negative impacts of supply risks, and the remaining questions will be studied in the future.

- **Regional Exchange Rate Shocks and Labor Market Responses: Evidence from China**: (Sep 2021 - Dec 2021)
  - **Abstract**:
    This paper is going to study how region-specific exchange rate movements will impact the regional labor markets. Using China's Custom data, ComTrade data, and bilateral exchange rate data, the regional-specific exchange rate movements and corresponding Bartik exposures were constructed. The preliminary regression results show that the impacts of exchange rate appreciation on real wages and employment growth through export channel are positive but not significant; it seems that the impacts are transmitted to regional labor markets mainly through the import channel and are negative. The final goods competition and low-skilled labor substitution channels are proposed and will be tested in the future study.

- **Retailer Mediation Financing for SME Suppliers**: (Jan 2021 - May 2021)
  - **Abstract**:
    Supply chain finance is widely studied all around the world. Most of the traditional studies focus on the access to capital of retailers, such as trade credit, while the financing obstacles of suppliers received relatively little attention, especially for small and medium-sized suppliers. In this paper, I study the financing choices of an SME supplier between commercial loan and Retailer Mediation Financing when there exists information asymmetry and multiple forms of contracts. I build a two-stage theoretical model to find the optimal solutions and maximum expected profits for both retailer and supplier. My results show that the implementation of Retailer Mediation Financing can significantly increase the production quantity as well as the profits of both the retailer and supplier, and hence improve the supply chain efficiency compared to commercial loan when the initial capital of the supplier is very inadequate. More importantly, the results are consistent among different forms of contracts, meaning that the supplier's preference will not alter when changing the types of contracts.

- **Estimating the Impact of Corporate ESG Ratings on the Local Epidemic Prevention and Unemployment Rates**: (Jun 2020 - Aug 2020)(Cooperated with Xuefeng Qu and Yiwei Liang)
  - **Abstract**:
    This paper uses the relevant data of 2062 companies in 356 counties in 48 states in the United States and the characteristic data of the corresponding states and counties to study the impact of corporate ESG ratings on the local epidemic prevention and control and unemployment rate during the epidemic. In order to deal with the endogenous problems, we weight the company's ESG ratings by company sales and number of employees, and use the weighted three-period lagged ESG ratings as explanatory variables. The research results show that higher company ESG ratings have negative effects on the cumulative infection rates of COVID-19, but the effects are relatively small and insignificant; however, higher ESG ratings can reduce the local unemployment rate, and the three-period lagged ESG rating increases by 1%, and the unemployment rate fell by about 2%. Finally, we also study the impacts of each rating of the comprehensive ESG rating on the local epidemic prevention and unemployment rates. The results show that the social item has a stronger and more significant impacts.

- **Estimating the Impact of the Universal Two-Child Policy on the Structure of Family Expenditure**: (Sep 2019 - Dec 2019)

- **Abstract**:

  This paper measures the impact of the universal Two-child Policy on the structure of family expenditure by exploring the quasi-experimental design created by China's unique Family Planning Policy. Since the previous One-Child Policy only applied to the Han and Zhuang ethnic groups and not to ethnic minorities, we construct a DID estimator to determine the impact of the universal Two-child Policy on the structure of family expenditures. It turns out that the consumption expenditure in family expenditure has been significantly reduced by 3.9% after the arrival of the policy, the proportion of entertainment has been significantly reduced by 4.2%, and the policy reduced family medical costs by 1.7%.

- **New Way to Make Comments: Can C2C Shopping Website Simultaneously Protect the Interests of Buyers and Sellers**: (Sep 2017 - Jan 2018)

  - **Abstract**:

    The paper studies a sequential incomplete information game theory model with the example of Taobao.com's newly launched function " asking others" in 2015, which works as an important tool for consumers to obtain clear and true judgements about the sellers. The use of the tool forms such a case in which the buyer knows all the information about the seller, but the seller does not know the judgement types of the buyer. By assuming that the buyer can provide honest judgements, malicious bad reviews, as well as exaggerated evaluation, and all these evaluations will impact the seller's reputation and profits, the results of the model show that as long as there are enough buyers who can objectively and fairly give evaluations, the seller will have incentives to conduct honest transactions with any type of consumers. In the case of repeated games, fastidious consumers may hide themselves and give good reviews to sellers who trade in good faith to achieve long-term cooperation.

Teaching Experience

The Chinese University of Hong Kong-Shenzhen — Shenzhen, China
Teaching Assistant (Full-time) — *Dec 2021 - Present*

- **Intermediate Econometrics**: Homework correction and answering questions for students
- **Data Analytics and Decision Making**: Homework correction, tutorials, and answering questions for students

Internship Experience

China Securities Co.,ltd. — Beijing, China
Research Assistant (Part-time) — *Jul 2020 - Sep 2020*

- **Collecting and analyzing information**: Assisted researchers to collect information of the retail industry, and used Excel to integrate and analyze the market sizes and competition patterns of e-commerce, supermarkets, clothing, cosmetics and other sub-sectors.
- **Writing reports**: Assisted in writing multiple company mid-year report reviews, retail industry weekly reports, and in-depth reports on retail companies.

Hopu Investment Management Co., Ltd. — Beijing, China
Research Assistant (Part-time) — *Apr 2019 - May 2019*

- **Collecting and analyzing information**: Collected, analyzed and summarized various materials for a large real estate company's investment projects, and made corresponding display materials for it.
- **Conducting financial analysis**: Collected data of similar assets in related industries, and conducted preliminary processing of the data, assisted in the construction of financial forecast models, DCF models, computed project profitability, net present values and other indicators, and conducted sensitivity analysis.

Honors and Awards

- Presidential Award for Outstanding Graduate Students - 2022
- Dean's List - 2022
- Second Class Scholarship for Academic Excellence - 2021
- First Prize of The 4th Global University Green Finance Research Competition - 2020
- Well-Rounded Development Scholarship - 2018
- Scientific Research Innovation Scholarship - 2018