JIFAN WANG

jw2004@georgetown.edu | (202)-375-8590 | Linkedin | Github | Website

EDUCATION

- **Georgetown University**, Ph.D. candidate, Econometrics and Quantitative Economics, GPA: 3.80/4 **2021 - Dec. 2025(Anticipated)**
- **Central University of Finance and Economics**, M.S., Economics, GPA: 3.71/4 **2018 - 2021**
- **Shandong University**, B.S., Finance, GPA: 3.73/4 **2014 - 2018**

Awards: Merit-based Scholarship and Fellowship(Georgetown); China National Scholarship(Top 0.2%), the Ministry of Education of China

WORKING EXPERIENCE

- **Amazon** | *Economist Intern, Causal Inference Track* *May 2025–Aug 2025* **Seattle, WA**
  - Developed and validated a synthetic control with surrogate modeling, extending the Bayesian Directional synthetic control framework to evaluate the long-term causal impact of seller fee policy changes.
  - Designed and tested surrogate selection methods (F-test, Elastic Net, SHAP, orthogonalization) to address multicollinearity and improve inference precision, resulting in narrower confidence intervals (50–60% smaller) compared to baseline results.
  - Built and deployed a placebo testing framework (time-based and unit-based) to rigorously assess the robustness of causal impact estimates across horizons up to 360 days.
  - Enhanced regression analysis with Machine Learning estimators and Double Machine Learning to reduce fitting errors, validated results using synthetic DID, and conducted fee promotion A/B testing; leveraged AWS SageMaker, EC2, and S3 for scalable deployment.
- **Sparken Capital** | *Quant Analyst Intern* *June. 2024- Aug. 2024* **New York, NY**
  - Enhanced pricing model accuracy by analyzing corporate debt text data from Bloomberg, conducting sentiment analysis on lender comments, and integrating findings with financial metrics, resulting in a 5% improvement in default probability predictions.
  - Automated the extraction and analysis of annual reports and financial news by integrating FinRobot, FinChat, and GNews APIs, enabling real-time generation of dynamic charts, thereby streamlining workflows and enhancing data analysis efficiency by 20%.
  - Extracted and processed large volumes of structured and unstructured financial data using Python SQL and NLP techniques such as text cleaning and sentiment analysis, ensuring high-quality datasets for predictive modeling and analysis.
- **World Bank** | *Short-term Consultant* *Feb. 2024- June 2024* **Washington, DC**
  - Analyzed and decomposed efficiency and productivity across firms and countries in East Asia by assessing multiple inputs and outputs, delivering actionable insights to enhance performance.
  - Estimated causal impact of infrastructure projects in Vietnam and the Philippines on regional productivity and related industries by applying Difference-in-Differences (DID) and synthetic control methods, thereby providing data-driven policy recommendations.
  - Benchmarked productivity and technology trends across East Asia and the Pacific, using ARIMA and VAR models to forecast economic outcomes based on firm-level productivity changes, enabling policymakers to understand the broader economic implications.

RESEARCH PROJECT

Firm Dynamics and Firm Productivity Project, Georgetown University **2022–2024 Summer**

Research Assistant to Professor Toshihiko Mukoyama and Professor Dan Cao

- Conducted research on firm dynamics and labor market frictions, developing and calibrating structural models to analyze productivity dispersion and employment outcomes.
- Applied econometric techniques, including panel fixed effects models, to large-scale firm and labor datasets (BDS, Compustat, Capital IQ, and QCEW) in order to identify empirical patterns consistent with theoretical predictions.

Lab for Globalization and Shared Prosperity at Georgetown University **2023-2024**

Research Assistant

- Applied semi-supervised learning techniques to manually label features in a subset of policy documents, scaling annotations across the entire dataset, and evaluated bipartisan support for education spending using natural language processing methods.
- Deployed Python-based text analysis scripts on cloud servers to automate the examination of U.S. trade and state-level education policy documents, facilitating the identification of the China trade shock's impact on local U.S. communities.

Kaggle Competition Silver Medal: Home Credit - Credit Risk Model Stability **2024**

- **a.**Trained LGBM and CatBoost models with five-fold cross-validation and hyperparameter tuning. **b.**Conducted feature engineering and selection, identifying key variables that influenced credit risk predictions. **c.**Used model ensembling with VotingModel for predictions.

Project: International Comparison of Municipal Bond Regulations **2020**

Supported by the Ministry of Finance of the People's Republic of China

- **Supervisor:** Baoyun Qiao, Professor, Dean, China Academy of Public Finance and Public Policy
- **a.** Collected and organized municipal debt regulation data from France, Germany, and Denmark; applied panel regression methods to evaluate policy impacts on debt sustainability. **b.** Summarized management paradigms and institutional frameworks, generating data-driven quantitative insights to support enhanced transparency in China's municipal bond markets.

Project: The Capital Account Openness under Renminbi Exchange Rate Regime Reform **2019**

Supported by the National Social Science Foundation of China (Grant No. 16BJY167)

- **Project Leader:** Alice Y. Ouyang, Professor, China Academy of Public Finance and Public Policy
- **a.**Collected and cleaned macroeconomic data (capital flows, macro-prudential indicators, financial stability measures) and applied IV-GMM to analyze their effects on exchange rate volatility and credit risk. **b.** Examined how capital account openness and financial liberalization shape monetary policy effectiveness, generating data-driven policy insights.

Project: China Economic Reform Implementation Project (TCC5) **2018**

Supported by the World Bank and the Ministry of Finance of the People's Republic of China

- **Supervisor:** Leizheng Liu, Professor, Vice Dean, China Academy of Public Finance and Public Policy
- **a.**Collected and cleaned multi-source datasets and applied DID and synthetic control methods to evaluate policy performance of reform sub-projects in Yunnan, Guizhou, and Sichuan. **b.** Developed quantitative indicator systems to assess outcomes, ensure compliance with management standards, and support results-oriented decision making.

PUBLICATION, WORKING PAPER & CONFERENCE

- "Shadow Banking, Macroprudential Policy, and Bank Stability: Evidence from China's Wealth Management Product Market" with Alice Y. Ouyang, Journal of Asian Economics, 101424, Volume 78, 2022
  - This paper investigates how China's shadow banking activities—proxied by wealth management products (WMPs)—affect the stability of 269 commercial banks from 2006–2018, and whether macroprudential policies mitigate these risks. Using bank-level panel data and IV-GMM estimation, I construct a composite bank stability index to measure fragility. I find that WMP issuance significantly undermines bank stability, especially for principal-floating, long-term, and retail-oriented WMPs. The adverse effects are concentrated in large state-owned and joint-stock banks, while small and medium-sized banks are less affected. Importantly, tighter macroprudential policies enhance bank soundness and offset the destabilizing impact of shadow banking, though effects vary by product type and bank size. The results highlight the need for differentiated regulatory design across shadow banking activities and institutions
- "Economic Policy Uncertainty and the Firm–Bank Nexus: Investment, Liquidity, and Bank Risk-Taking Under Uncertainty" (Dissertation)
  - This dissertation examines how economic policy uncertainty (EPU) at both the state and firm level influences investment, liquidity management, and risk-taking by U.S. firms and commercial banks. I leverage two new EPU measures: a state-level index based on 3,500 local newspapers, and a firm-level index from 10-K MD&A disclosures using NLP. Using IV-GMM, local projections, and event studies, I find that heightened policy uncertainty reduces firm investment and borrowing while increasing precautionary cash holdings. Banks respond by cutting loan supply, reallocating toward liquid assets, and facing compositional shifts in deposits from time to demand accounts—raising liquidity risk. These effects are mediated by firm behavior and are stronger in high-leverage banks, manufacturing firms, and high-EPU states. To complement the empirical analysis, I develop a DSGE model with uncertainty shocks and use BLP demand estimation and machine learning methods (cloglog, XGBoost) to analyze deposit demand and bank run risk. The findings highlight the transmission channels through which policy uncertainty propagates across the real and financial sectors, offering new insights into macro-financial stability and regulatory design
- "Persistence in bank risk-taking" with Dan Cao(Georgetown) and Robert Kurtzman(Fed)(Working)
  - This paper studies how insider ownership interacts with bank risk to shape credit supply. Using a panel of U.S. publicly listed banks from 2004–2022, I merge Call Reports, CRSP stock return data, and SEC insider filings to construct measures of loan growth, idiosyncratic equity volatility, and insider ownership. Employing IV-GMM and panel fixed effects regressions, I show that higher idiosyncratic volatility significantly reduces banks' loan growth, but this effect is heterogeneous across ownership structures. Specifically, banks with low insider ownership experience a much stronger reduction in lending when risk rises, while banks with high insider ownership are more resilient, maintaining greater credit supply. These findings indicate that insider ownership can mitigate the adverse effects of risk shocks on lending, highlighting its role as a governance mechanism that aligns managerial incentives with long-term stability.
- Western Economic Association International Virtual International Conference, March 17-19, 2021
- Annual Macro Meetings at Georgetown, May 2, 2025
- Georgetown Center for Economic Research 2025 Alumni Conference, Sept. 12, 2025

TEACHING

- **Graduate Teaching Assistant, Georgetown University**
  - Game Theory (400-level), Fall 2022
  - International Finance (400-level), Spring 2023, Spring 2024, Fall 2024, Fall 2025
  - Empirical Macroeconomics (graduate-level), Fall 2023
    Focus on DSGE and Time Series Methods
  - International Economics (400-level), Spring 2025
- **Part-time Lecturer (before 2021), Third-party education institution, China**
  Prepared students for national graduate entrance examinations; taught courses and authored lecture notes based on *Advanced Macroeconomics* (David Romer), *Macroeconomics* (N. Gregory Mankiw), and *Microeconomics: A Modern Approach* (Hal Varian).

SKILLS

- **Tools: Causal Inference:** PSM-DID, Synthetic Control, Regression Discontinuity, Double Machine Learning, etc; **Online Experiment:** A/B test, etc; **Time Series Analysis:** ARIMA, VAR, VECM, Kalman Filter, Bayesian Time Series, etc; **Regression:** Logistic, Two Way Fixed Effect, IV-GMM, IV 2SLS, etc; **Machine Learning:** NLP/BERT/LLM, Random Forest, XGboost, LightGBM, Catboost, etc;
- **Programming:** Python, MySQL, R, Stata, MATLAB, ArcGIS, Tableau, SAS, PySpark, PowerBI, LaTeX; **AWS tools**: EC2, Sagemaker, S3, etc
- **Teaching:** Empirical Macro(Time series); Game Theory; International Finance;
- **Certificates:** CFA Level 3; NLP specification(Coursera)

REFERENCES

Dan Cao
Department of Economics
Georgetown University
Dan.Cao@georgetown.edu

Toshihiko Mukoyama
Department of Economics
Georgetown University
tm1309@georgetown.edu

Behzad Diba
Department of Economics
Georgetown University
dibab@georgetown.edu

Placement Director: Toshihiko Mukoyama tm1309@georgetown.edu
Graduate Student Coordinator: Julius Shapiro js3900@georgetown.edu 202-687-5601