

# Qian Li

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## EDUCATION

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### Ph.D. (Candidate) in Economics

University of Notre Dame

*Notre Dame, Indiana*

Aug. 2016 - Expected May 2023

### M.A. in Applied Economics

Georgetown University

*Washington, D.C.*

Aug. 2014 - May 2015

### B.S. Mathematics and Applied Mathematics

Shandong Normal University

*Jinan, China*

Sep. 2009 - May 2013

## RESEARCH EXPERIENCE

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### University of Notre Dame

*Notre Dame, Indiana*

#### Forecasting Macroeconomic Variables: A Comparison of Econometric and Machine Learning Methods (in progress)

- Forecasts macroeconomic and financial variables such as industrial production growth, employment, inflation, and stock indices in a data-rich environment with a large-scale comparison using MATLAB and Python.
- Compares forecasting accuracy across econometric, traditional machine learning, and deep learning methods.

#### Quantitative Easing and Welfare Gains under Commitment Monetary Policy at Zero Lower Bound

- Studied the optimal monetary policy under commitment when the short-term rate hits zero lower bound (ZLB).
- Derived the optimal paths under commitment at the ZLB when QE is endogenously chosen by the central bank.
- Investigated QE at the ZLB under discretionary and commitment policies and quantified welfare improvement.

#### Broker-Dealer Leverage and Monetary Policy Risk-Taking Channel Analysis

- Re-examined important findings in literature work and extended their sample to a longer period.
- Analyzed the variations in the broker-dealer sector's risk-taking response to monetary policy shock with a time-varying parameter vector autoregression model using MATLAB.

#### Research Assistant for Prof. M. Bertanha

- Converted existing MATLAB code to STATA code. Debugged and fixed issues such as rounding discrepancies.
- Assisted in designing a STATA module to conveniently estimate and assess fuzzy RDD with multiple thresholds.

## PROFESSIONAL EXPERIENCE

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### The World Bank Group

*Research Assistant, Development Prospects Group*

*Washington, D.C.*

Aug. 2015 - May 2016

- Analyzed economic and financial data from resources such as Haver Analytics and Bloomberg Terminal.
- Learned and conducted sign-restriction VAR analysis to examine spillovers from the BRICS countries.
- Assisted with emerging economies analysis chapters of the semi-annual report *Global Economic Prospects*.

### University of Notre Dame

*Lecturer, Statistics for Economics*

*Notre Dame, Indiana*

Aug. 2019 - May 2020

- Gave lectures and held office hours for two semesters' undergraduate-level statistics courses.
- Designed curriculum and coursework on probability and sampling theory, estimation, hypothesis testing, etc.

## SKILLS

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**Programming:** MATLAB, STATA, Python, Julia, C/C++

**Knowledge:** Monetary Policy, Time Series Analysis (ARIMA, Bayesian VAR), Econometrics (OLS, Logit, PCA, 2SLS, IV, DiD, RDD), Machine Learning and Neural Network (k-NN, SVM, XGBoost, CNN, RNN/LSTM)