Xiang LI, Ph.D.

Visiting Professor

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Department of Economics, Lewis & Clark College, Portland, OR, USA

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lx0413

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About me

I am an economist and a data scientist with 7 years of experience in quantitative analysis and statistical programming (R, Python, SQL, Git). I am bilingual in Chinese and English.

ABOUT ME

- My expertise focuses on applying time-series econometrics skills to perform economic forecasting and nowcasting.
- I am interested in using complex data to study the impact of monetary policy on macroeconomic variables and financial markets.
- I also conduct research using approaches to textual analysis.
- I am enthusiastic about supporting business decision-making and and presenting results to technical and non-technical audiences.

EDUCATION

2016-2021 Ph.D., Economics — University of Oregon
Eugene, OR, USA
- Dissertation Committee: Jeremy Piger (Chair), George Evans, David Evans, Thien H. Nguyen (Computer Science)

2014-2015 M.S., Policy Economics — University of Illinois
Urbana-Champaign, IL, USA
- Areas of Specialization: Industrial Organization

2009-2013 B.S., Economics — University of International Business and Economics
Beijing, China
- Minor in Japanese

PRIMARY POSITIONS

2023- Visiting Professor — Lewis & Clark College
Portland, OR, USA

2021-2022 Assistant Professor — Butler University
Indianapolis, IN, USA

2021 Research Fellow — Singapore Management University
Singapore

RESEARCH EXPERIENCE

Nowcasting Business Cycle Phases with High-Frequency Data

- *Objective*: I want to propose a procedure to measure probabilities of the U.S expansions and recessions post 1980.
- *Method*: I constructed a novel real-time dataset using vintages of U.S. macroeconomic data. I established a mixed-frequency dynamic factor model and extracted a daily index to proxy for economic activity using Kalman filter and Maximum Likelihood Estimation. I trained a supervised Markov regime-switching classifier to measure recession probabilities.
- *Result*: My model significantly and consistently improves the speed at which expansions and recessions can be identified in the United States since 1980. As representative examples, my model identified the 2007-2009 Great Recession on March 30, 2008, 246 days ahead of the National Bureau of Economic Research (NBER) announcement. During the Covid-19 pandemic, while the NBER announced on June 8, 2020 that a new recession had started in the United States since March 2020, my model identified this recession on March 22, 2020, 78 days ahead of the NBER announcement.

A New High Frequency, News Based, Indicator of Macroeconomic Activity

- *Objective*: I want to extract information encoded in the news articles to identify the U.S expansions and recessions faster.
- *Method*: I compiled 410,601 economic news articles and pre-processed the raw text using textual analysis techniques, including tokenization, removing stopwords, stemming, and reversing negation words. I applied dictionary methods to develop a high-frequency News-Based Sentiment Index to proxy for aggregate economic conditions in the United States post 1991.
- *Result*: With the news-based sentiment index incorporated, my model identified the Great Recession even earlier, on December 2, 2007; in addition, my model identified the Covid-19 recession 71 days ahead of the NBER announcement.

Is the Response of Economic Output to Monetary Policy Asymmetric in China?

- *Objective*: I want to study the impact of monetary policy on output growth in high-growth vs. low-growth periods in China.
- *Method*: I pre-processed data by removing effects of the Lunar New Year, adjusting for seasonality, handling missing values and outliers by an iterative expectation-maximization algorithm, and removing a local mean using a biweight kernel. I measured Chinese economic activity using dynamic factors and identified monetary policy shocks using a factor-augmented vector autoregression. I used a smooth increasing function to measure probabilities of the economy in high- and low-growth states.
- *Result*: Using local projection methods, I found that monetary policy had larger impacts on output in low-growth states.

Note: see the personal website, `https://lx0413.github.io/research.html`, for data visualization, detailed results, and the most recent version of my research.

TEACHING EXPERIENCE

Visiting Professor of Economics — Lewis & Clark College, Portland, OR, USA

- Money and Banking: Fall 2023
- Statistics (in R): Fall 2023, Spring 2024
- Intermediate Macroeconomics: Fall 2023, Spring 2024

Assistant Professor of Economics — Butler University, Indianapolis, IN, USA

- Money and Banking: Fall 2021, Spring 2022
- Intermediate Macroeconomics: Spring 2022

Sole Instructor — University of Oregon, Eugene, OR, USA

- Money and Banking: Summer 2018, Winter 2019, Fall 2019, Spring 2020, Spring 2021
- Intermediate Macroeconomics: Summer 2019

Lab Teaching Assistant — University of Oregon, Eugene, OR, USA

- Introduction to Econometrics: Spring 2019 (in Stata), Fall 2020 (in R)
- Intro to Macroeconomic Analysis: Spring 2017, Winter 2018

Note: see the personal website, `https://lx0413.github.io/teaching.html`, for instructional quality ratings and student comments.

AWARDS and RECOGNITION

- Graduate Teaching Fellowship, University of Oregon 2016-21
- Kleinsorge Summer Research Fellowship, University of Oregon 2020
- Summer Teaching Fellowship, University of Oregon 2018-19
- Research Assistant to Jonathan Davis, University of Oregon 2019
- 3rd place, 3-Minute Thesis competition, University of Oregon 2019
- Research Assistant to Hong Li, Peking University 2013
- Meritorious Winner, Interdisciplinary Contest in Modeling, Consortium for Mathematics and Its Application 2012
- University Scholarship, University of International Business and Economics 2009-10

PRESENTATIONS and CONFERENCES

- Indianapolis Scientech Club 2021
- Western Economic Association International Annual Conference 2021
- The Chinese Economists Society 2021 Annual Conference 2021
- Economics Club, University of Oregon 2020
- Macro Group, University of Oregon 2019-20
- Mini Machine Learning course, University of Oregon 2019
- Google Earth Engine Workshop, Oregon State University 2018