Xiang "Ivy" LI

Department of Economics
University of Oregon
Eugene, OR 97403

+1 (217) 904-0644
xli4@uoregon.edu
http://lx0413.github.io

EDUCATION

Ph.D., Economics, University of Oregon, OR, USA *2021 (expected)*

- Dissertation: Essays On High Frequency Macroeconomic Monitoring
- Committee: Jeremy Piger (Chair), George Evans, David Evans, Thien H. Nguyen (Computer Science)
- Fields of Expertise: applied macroeconomics, time-series econometrics, forecasting, textual analysis

M.S., Policy Economics, University of Illinois at Urbana Champaign, IL, USA *2015*

B.S., Economics, University of International Business and Economics, Beijing, China *2013*

- Economics Honors Program (Minor in Japanese)

RESEARCH

Nowcasting Business Phases with High and Mixed Frequency Data (Work in progress)

- Developed a novel real-time dataset of macroeconomic variables at quarterly, monthly, weekly and daily frequencies from April 1962 to May 2020.
- Modeled the economic activity at daily intervals using using a mixed-frequency dynamic factor model and extracted the optimal latent economic activity factor with the Kalman filter and smoother.
- Measured the probability of recessions in real-time using a variety of supervised machine learning classifiers.
- Proposed a procedure to convert probabilities of recessions into a binary variable that defines whether the economy is in an expansion or a recession regime on a daily basis.
- This work elucidated that the use of higher frequency data significantly improves the speed at which expansions and recessions can be identified in U.S. since 1980. As a representative example, during the Covid-19 pandemic, the NBER announced on June 8, 2020, that a new recession started in the U.S. in March 2020, my model identified the start of this recession on March 15, 2020, 85 days ahead of the NBER announcement.

A New High Frequency, News Based, Indicator of Macroeconomic Activity (Work in progress)

- Collected a large sample of lead paragraphs of 410,601 articles published in The Wall Street Journal and The Wall Street Journal Online in the United States from April 2, 1991, to April 30, 2020, that have subjects related to economic activity.
- Proposed a procedure to pre-process the raw text as a manageable high-dimensional numerical array, including tokenization, removing stopwords, stemming, and reversing negation words.
- Applied dictionary methods to develop a weekly and monthly News-Based Sentiment Index (NBSI) regarding economic conditions.

- Assessed the validity of this developed NBSI by tracking a wide range of monthly macroeconomic activity measures and estimated the usefulness of NBSI in identifying U.S. expansions and recessions in real time.

Is the Response of Economic Output to Monetary Policy Asymmetric in China? (Working paper)

- Collected and pre-processed fundamental series that correlate with output and price in China

- Extracted the latent economic activity factor and inflation factor from underlying variables with the first principal component using a dynamic factor model.
- Estimated structural shocks of monetary policy from Choleski decomposition of residuals from a Factor Augmented Vector Autoregression model.
- Measured probabilities of the unobservable states of the economy being in high-growth & low-growth states using a smooth transition logistic function
- Estimating impulse response functions of the economic activity factor and inflation factor using local projections methods, I determined that the monetary policy shock has larger impacts on output growth during low-growth states and that monetary policy shock has larger impacts on aggregate price during high-growth states.

Note: the recent revisions of projects can be found on my website, https://lxo413.github.io/research.html

TEACHING EXPERIENCE

Sole Instructor, University of Oregon

- EC 370 Money and Banking: Summer 2018 (enrolled: 27), Winter 2019 (enrolled: 85), Fall 2019 (enrolled: 77), Spring 2020 (remote, enrolled: 86), Spring 2021 (forthcoming)
- EC 313 Intermediate Macroeconomics: Summer 2019 (enrolled: 20)
  - Delivered lectures, organized lab and group discussion, and created an inclusive environment where students apply quantitative & graphical skills and economics intuition to understand the evolving real-world issues, news, and events.
  - Held office hours, evaluated students' performance, and assisted students outside of class to achieve personal academic goals.
  - Turned in-person teaching into remote teaching efficiently on short notice and without much guidance, amid the Covid-19 pandemic.
  - Organized graduate student grading assignments and exams.

Teaching Assistant, University of Oregon

- EC 320 Introduction to Econometrics: Spring 2019 (enrolled: 16, 31)
- EC 202 Intro to Macroeconomic Analysis: Spring 2017 (enrolled: 31, 45, 45, 45), Winter 2018 (enrolled: 33, 46, 48, 48)
  - Taught students how to use Stata to analyze data and identify causal relationships.
  - Led lab discussion and organized group activities.

Note: student experience survey, instructional quality ratings, student comments, and course materials written by R Markdown can be found on my website, https://lxo413.github.io/teaching.html

AWARDS and RECOGNITION

- Graduate Teaching Fellowship, University of Oregon *2016 - 2021*
- Kleinsorge Summer Research Fellowship, University of Oregon *2020*
- Summer Teaching Fellowship, University of Oregon *2018 - 2019*
- Research Assistant to Jonathan Davis, University of Oregon *2019*

- 3rd place, 3-Minute Thesis competition, Grad Research Forum, University of Oregon *2019*
- Research Assistant to Hong Li, Peking University *2013*
- Meritorious Winner, Interdisciplinary Contest in Modeling, Consortium for Mathematics and Its Applications *2012*
- University Scholarship, University of International Business and Economics *2009 - 2010*
- 1st prize, China National English Contest for College Students *2011*
- 3rd prize, China National English Speaking Competition *2011*

PRESENTATIONS and CONFERENCES

- Presented "Nowcasting Business Cycle Phases with High and Mixed Frequency Data"
  - Economics Club, University of Oregon *2020*
  - Macro Group, University of Oregon *2019*
- Presented a Mini Machine Learning course on textual analysis, University of Oregon *2019*
- Participated Google Earth Engine Workshop, Oregon State University *2018*

PROFESSIONAL EXPERIENCE

Administrative Assistant, Commercial Factoring Expertise Committee of China (CFEC) *2013 - 2014*

- Analyzed data and wrote reports regarding foreign exchange rates, taxation, financing, and legal policy issues that commercial factoring companies in China are facing.
- Cooperated with the Factors Chain International based in Amsterdam to set up education programs in China
- Operated website and independently produced the digital magazine "CFEC Monthly"

TECHNICAL SKILLS

- Programs: R, R Markdown, MATLAB, Python, Git, SQL
- Languages: Mandarin, English

PROFESSIONAL REFERENCES

Jeremy Piger (Chair)
Department Head, Professor of Economics
University of Oregon
(541) 346-6075
jpiger@uoregon.edu

George Evans
John B. Hamacher Professor of Economics
University of Oregon
(541) 346-4662
gevans@uoregon.edu

David Evans
Assistant Professor of Economics
University of Oregon
(541) 346-3431
thien@cs.uoregon.edu

Thien Huu Nguyen
Assistant Professor of Computer Science
University of Oregon
(541) 346-1398
devans@uoregon.edu