Emre Enes Yavuz

About Me

PhD candidate in economics with a strong background in econometrics and casual inference.
Over 5 years experience in Python (pandas, numpy, scipy, statsmodels, scikit-learn) and R (tidyverse).
Worked in teams on multiple projects contributing to the research question, econometric analysis, and coding.

Contact Info

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Education

Ph.D., Economics, Northwestern University, *Evanston*, June 2023 (Anticipated)
Econometrics, Time Series, Applied Macroeconomics, Industrial Organizations, Deep Learning

MA, Economics and Finance, CEMFI, *Madrid*, 2017
Microeconometrics, Statistics, Quantitative Macroeconomics, Empirical Industrial Organizations

BA & BS, Economics & Mathematics (double major), Boğaziçi University, *Istanbul*, 2015 *with honor*

Projects

Childhood Skill Formation and Intergenerational Earnings Mobility Trends, [Job Market Paper]

- Childhood skills are produced with parental investment, i.e., time and expenditure, and have long-term consequences in adulthood.
- I provide a new estimation without restrictive assumptions and find new results with significant implications.
  - *Result I:* Possible to recover any missing parental investment at an earlier age by investing for children now, i.e., investments at different ages are substitutes.
  - *Result II:* Return on parental investment gets quickly low for more educated parents as they invest more.
- More inequality in parental investment does not lead to less mobility in income distribution across generations since children of high-income parents benefit little from a large increase in parental investment because of low returns.
- I use Stochastic EM Algorithm with quantile regressions to estimate the complex empirical model.

Taxes and Transfers with Nonlinear Wage Dynamics, *with* Nezih Guner.

- Estimate a nonlinear and nonnormal wage process to capture rich productivity dynamics.
- Study implications for insurance mechanisms (progressive taxation and transfers) in a lifecycle model.
- *Result*: Insurance mechanisms are less valuable for poor but more valuable for rich people.

Invention and Technological Leadership during the Industrial Revolution,
with Carl Hallmann and Lukas Rosenberger.

- First empirical cross-country (France and Britain) evidence on innovation during the Industrial Revolution.
- Use historical patent data and generate additional data/variables using following tools;
  - Machine Learning to predict nationality from names, OCR with Python to digitize more data,
- *Result I*: France was as innovative as Britain and even more advanced in some sectors.
- *Result II*: Causal effect of technology transfer from Britain to France is local to more related sectors.

Are Recurrent Neural Networks (RNN) Useful for Macroeconomic Forecasting?
with Carl Hallmann and Federico Puglisi.

- Compare performance of RNN with Bayesian VAR in predicting macro variables e.g. GDP, inflation, Fed rate.
- RNNs performs similar to Bayesian VAR, but adding autocoder with more info improves the performance.

Other

Bring Your Own Data Working Groups, Fall 2020 - Spring 2022

- Weekly meetings with researchers from different disciplines e.g. engineering, biomedical and social sciences.
- Researchers make a presentation about progress of their data-oriented project and exchange feedback.

Experience

Teaching Assistant, Northwestern University, 2018 - 2021.

- Prepare and teach weekly practice sessions, held office hours.

PhD Dissertation Internship, Federal Reserve Bank of St. Louis, 2022 Summer.

- Presented my research in a workshop and interacted with economists of research department.

Research Assistant, Prof. Walker Hanlon, Northwestern University, 2021 Winter.

- Geocoded historical patent data, developed and estimated an empirical model for inventor mobility.

Research Assistant, Prof. Marti Mestierí, Federal Reserve Bank of Chicago, 2020 Winter.

- Constructed a price distribution allowed to build an endogenous growth model with nonhomothetic preferences.

Research Assistant, Prof. Monica Martinez-Bravo, CEMFI, 2016 Summer.

- Collected data on Indonesian mayors and did regression analysis.

Skills

Python (pandas, numpy, scipy, statsmodels, matplotlib) and R (tidyverse).
Time Series, Forecasting, Recurrent Neural Networks, Econometrics, Causal inference.