Emre Enes Yavuz

Northwestern | Department of Economics

About Me

PhD candidate in economics with a strong background in applied economics and casual interference.
Over 5 years experience in coding with Python (pandas, statsmodels, scipy, numpy, matplotlib) and R (tidyverse).
Worked in teams on multiple projects contributing to the research question, econometric analysis, and coding.
Interacted with people from other disciplines, e.g. engineering, and biomedical sciences, in data science workshops.

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Education

Ph.D., Economics, Northwestern University, *Evanston*, June 2023 (Anticipated)
Research Fields: Applied Macroeconomics, Applied Microeconomics and Economic History.
MA, Economics and Finance, CEMFI, *Madrid*, 2017
BA & BS, Economics & Mathematics (double major), Boğaziçi University, *Istanbul*, 2015 *with honor*

Projects

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

- Parents invest time and money to produce skills for their children, and childhood skills have long-term consequences in many adulthood outcomes, such as education and income.
- However, little is known about what skill formation function looks like, and the literature relies on restrictive functional form assumptions such as CES that can affect the results.
- I provide a new estimation without restrictive assumptions and find different results with significant implications.
  - *Result I:* Possible to recover any missing skill investment at an earlier age by investing for children now, i.e. investments over different ages are substitutes.
  - Policy affecting parental inputs can achieve both efficiency and equality by focusing on more disadvantaged children with low skills, even at later ages.
  - *Result II:* More educated parents are more productive at a given level of investment, but their returns are decreasing faster (more concavity) compared to low-educated parents.
- Rising income inequality also leads to inequality in skill inputs across families, which can be alarming for mobility in income across generations by making the parental background more critical.
- My estimation results suggest that even if high-income parents increase skill investment a lot, their children will benefit little because of low returns, but the opposite is true for low-income parents.
- So more inequality would not lead to less mobility, and I show this is the case in the data for the last decades.

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 RNNs 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.

Skills

Python (*numpy, scipy, pandas, scikit-learn, matplotlib*), R (*tidyverse, ggplot2*), SQL, Git, Fortran, Linux.