

## Paul Le Tran

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### Education

2020–Present; **PhD, Economics**, The University of Texas at Austin (UT Austin).

2017; **BA, Mathematics**, Pomona College.

2017; **BA, Mathematical Economics**, Pomona College.

### Teaching history

Fall 2021; **ECO304K: Introduction to Microeconomics** (Synchronous Massive Online Course), Profs. Acchiardo and Mateer, UT Austin.

Fall 2020, Spring 2021; **ECO304L: Introduction to Macroeconomics**, Profs. Sadler and Acchiardo, UT Austin.

### Employment history

2018–2020; **Senior Research Assistant**, Board of Governors of the Federal Reserve System.

- [Bash, FAME, SAS] Assisted group of economists tasked with assembling staff's forecasts for U.S. business fixed investment (BFI) ahead of each Federal Open Market Committee (FOMC) meeting.
- [FAME] Compiled an internal memo consisting of BFI and business sentiment survey metrics across private sectors and Federal Reserve regional banks, used by Chairman Powell in his June 2019 press conference.
- [Bash, FAME, (P)SQL, SAS] Calculated relationship between industry-level capital expenditure growth rates from Compustat with metrics of trade exposure and uncertainty with China and other countries. Metrics were published in an internal cross-division FRB memo.
- [FAME] Implemented tighter incorporation of business sentiment, profit expectations, trade exposure, and uncertainty metrics into models that forecast BFI.
- [Stata] Calculated trade exposures of industries – categorised by the U.S. Census Bureau's Manufacturers' Shipments, Inventories, and Orders release – of final and input goods to China, Europe, and other regions for the purposes of understanding the effects of COVID-19 on supply chains.

2017–2018; **Research Assistant**, Board of Governors of the Federal Reserve System.

- [FAME, R] Excelled in high-pressure role supporting a group of economists charged with assembling the staff's GDP forecast ahead of each FOMC meeting.
- [FAME, R] Developed programmes used by FRB staff that expanded the FRB's forecasting apparatus to directly account for measurement error's role in published statistics when determining the true, underlying cyclical position of the economy.
- [FAME] Created new exhibits highlighting the estimates of the cyclical position of the economy through variables such as GDP, potential output, output gap, & measurement error in the *Tealbook A: "Economic and Financial Conditions: Current Situation and Outlook"* and the *Greenbooks: "Current Economic and Financial Condition"*.

## Ongoing research projects

2019–Present; *“How useful is the Evercore ISI Capital Goods Companies Survey in Forecasting Orders and Shipments of Capital Goods?”*, with Eugenio Pinto.

- Created two VAR models for in-sample and out-of-sample forecasting, with the base model consisting of only total shipments and total new orders, whilst the alternative model included the weekly-frequency business sentiment survey index from Evercore-ISI.
- Found our alternative model to perform better at forecasting investment at business cycle turning points, and had smaller forecast errors at most time horizons.

2018–Present; *“The Story Chain Index: High-frequency Record Updates Linkage Across Time with No Metadata”*, with Andrew C. Chang and Sarah Adler.

- Developed algorithm that performs general semantic text matching to link high-frequency records across time, in situations where the contents of records are updated, but no meta data to link the records exist.
- General semantic text algorithm created from string similarities derived from Levenshtein and Jaquard string distances and record timestamps.
- Programmed framework that filtered and chronologically nearly ten million U.S.-centric news item from the linked Thomson Reuters News Archive (TRNA) at the daily frequency.
- Constructed a daily flexible news coverage frequency index for any given number of news topics from the linked TRNA.

## Honours and awards

2017; **Distinction in Economics Senior Exercise**, Pomona College.

2014–2015; **Pomona College Scholar**, Pomona College.

## Grants

2020–2022; **Full PhD Tuition Waiver**, UT Austin, \$28,381.

2016; **Harry G. Steele Scholarship**, Pomona College, \$4,000.

2013; **Flextronics Texas Scholarship**, Pomona College, \$1,000.

## Miscellaneous information

- **Programming:** Matlab, Python, Bash, SAS, FAME, (P)SQL, R, Stata, EViews,  $\text{\LaTeX}$ .
- **Web Development:** HTML, CSS, JavaScript.
- **Applications:** Emacs, Sublime Text, Git, RStudio, Tableau, Microsoft Office.
- **Operating Systems:** Unix, Linux, Windows.
- **Languages:** Vietnamese (mother tongue), English (mother tongue level), Ancient Greek (basic reading and writing level).

## Publications

### B.A. theses

1. Choe, Derrick and Paul L Tran (2017). "*An Extension to the Profits Theory of Investment: Less Competition, More Growth? [Stata]*". BA, Mathematical Economics thesis. Pomona College.
2. Tran, Paul L (2017). "*Mathematically Modelling the Dynamics of Tuberculosis*". BA, Mathematics thesis. Pomona College.

### FEDS Notes under review

1. Pinto, Eugenio and Paul L Tran (2020). "*How Useful is the Evercore ISI Capital Goods Companies Survey in Forecasting Orders and Shipments of Capital Goods?*" FEDS Notes. Washington: Board of Governors of the Federal Reserve System.