

Education

- 2018-2023 **Fordham University**, *Ph.D., Economics (Econometrics & Quantitative Economics)*, New York, NY, USA.
Graduate Student Council President, GSAS Graduate Fellowship
◦ *Dissertation*: "Essays on Empirical Macroeconomics and Expectations"
Advisor: Professor Arunima Sinha, Economics
- 2021 **Columbia University**, *Ph.D. Student Transfer Program, Department of Economics*, New York, NY, USA.
- 2016-2018 **Montclair State University**, *B.A., Economics*, Montclair, NJ, USA.
Convocation Speaker, Omicron Delta Epsilon, magna cum laude

Personal

- Languages Spanish (native), English (fluent)
- Citizenship El Salvador, United States (Permanent Residency)
- Technical R, MATLAB, Dynare, Python, HTML, \LaTeX , Tableau, VBA, Markdown, SQL
- Interests Expectations Modeling, Machine Learning, Macroeconomics, Econometrics

Working Papers

- 2023 **Household Sentiment Analysis through a Hierarchical Bayesian Latent Class Model.**
Abstract: This paper employs Latent Dirichlet Analysis for Survey Data (LDA-S) to identify and classify households into distinct belief types based on their responses in the Survey of Consumer Expectations (SCE). I uncover three belief types – inconsistent/uncertain, pessimistic, and optimistic – characterized by unique patterns of expectations about macroeconomic and personal financial conditions. By incorporating these belief types into a model predicting inflation expectations, I demonstrate a significant improvement in the model's explanatory power. As different belief types are shown to have a statistically significant impact on respondents' 12-month inflation expectations, it becomes crucial for central banks to consider the type of information households are consuming and tailor their communication accordingly. Moreover, this research highlights the potential of using latent class analysis techniques to extract valuable information from survey data, which can be applied in various economic contexts.
- 2022 **Credit Market Expectations and the Business Cycle: Evidence from a Textual Analysis Approach.**
Abstract: This paper studies the interplay between errors in credit spread expectations and macroeconomic indicators between 1948 and 2022. I approach this by deriving a proxy for credit market sentiment using textual analysis on Wall Street Journal title pages that aid me in filling in historical credit spread expectations from 1919 onward, using the Survey of Professional Forecasters as my training data. After validating my textual analysis approach, I find that one-standard deviation jumps in credit spread forecast errors are associated with predicted declines in economic activity, at most with a 3% decline in GDP growth during the sample period. This finding supports the behavioral models highlighting the importance of sentiment in the credit market as a key driver in cycles in the macroeconomy.
- 2022 **Monetary Policy Announcements and Household Expectations of the Future.**
Abstract: This paper analyzes the impact of various measures of monetary policy announcements on household expectations between 2013 and 2021. I approach this through an event study and a local projections methodology that exploits the microdata found in the Survey of Consumer Expectations as well as the timing of the FOMC meeting announcements in this time period. Across the different measures of monetary policy, I find that, on average, a lack of a tightening announcement decreases household expectations of the one-year ahead path for interest rates on savings accounts by 3.1%, while tightening announcements increase one year inflation expectations by up to 3.6% and decrease their one-year ahead home price growth between 1.4 - 2.0%. This finding is corroborated by the local projections in a one year ahead time horizon and emphasizes the need for the central bank to improve on the timing of its communication strategy. Expectations of other variables such as household spending and various commodity prices are scarcely affected, results which stand in contrast to the literature in laboratory settings which find strong effects on information treatments about policy changes.

Works in Progress

- 2023 **Predicting Global Chewing Tobacco Use Prevalence: A Comparative Analysis of Machine Learning Models**

- 2022 **Foreign Interest Rates shocks and Shadow Short Rates in a Small Open Economy** (with Guillermo Carlomagno and David Coble)
- 2020 **A Myopic Friction in US Business Cycles**
- 2019 **Mental Illness Effects on Earnings Mobility, Evidence from the NCS-2**

Higher Education Experience

- 2021-2023 **Fordham's Graduate Student Council, President (2022)/Vice President (2021),** New York, NY, USA.
 - Developed the vision and budget strategy for the Graduate Student Council which represents the student body for the Graduate School of Arts and Sciences. This includes professional development event planning, managing a \$600,000 budget, and leading a Council of 17 department representatives
 - Automated administrative procedures for the Graduate Student Support Grant, the Excellence in Graduate Teaching Award, GSAS Reimbursement Process, and Budgetary Tracking for departmental development fund allocation
 - Served on the Presidential Student Advisory Council and the GSAS Council, further advising the Academic Affairs and Curriculum Revision Committees; hosted various alumni and industry partner panels and presentations
- 2018-2021 **Fordham University, Graduate Assistant to Economics Department Chair,** New York, NY, USA.
 - Spearheaded over 13 seminar events, 8 white papers for department circulation, and online development including writing web-page content, over 15 diversity, equity, and inclusion (DEI) resources, and 6 alumni newsletters
- 2019- **Warren County Community College, Business Advisory Board Member,** Warren, NJ, USA.
 - Collaborate with senior administration to improve course evaluations and curriculum development for Associate's level programs

Professional Experience

- 2022 **KPMG, Economic & Valuation Services Summer Associate,** New York, NY, USA.
- 2021-2022 **Central Bank of Chile, Visiting Researcher, Monetary Policy Division,** Santiago, Chile.
- 2021 **REEF Technology, Economist/Data Consultant,** Miami, FL, USA.
- 2019 **DiMassimo Goldstein, PhD Intern, Predictive Analytics,** New York, NY, USA.
- 2018 - 2019 **United Nations Association of El Salvador, Advisor, Sustainable Development,** New York, NY, USA.
- 2017 - 2018 **TIAA, Research Consultant for Macro & Country Risk & Summer Risk Analyst,** New York, NY, USA.

Awards and Other

- Nov. 2020 Participant (500 selected worldwide), The Economy of Francesco
- Summer 2020 GSAS Summer Graduate Assistant, Fordham University
- Spring 2019 Christina Seix Dow Fellowship, Fordham University
- 2016 - 2018 Continuing Honors Full Scholarship, Montclair State University
- 2016 - 2018 Dean's List, Feliciano School of Business, Montclair State University
- 2014 Hispanic Recognition Program Scholar, College Board National Recognition Program

References

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