Tara Sullivan

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Links: Website, Github, LinkedIn

Education

University of California, San Diego, La Jolla CA — Sept. 2015 - present
Ph.D. Candidate in Economics — *[Expected: June 2022]*
Primary fields: Macroeconomics, Econometrics
– Completed extensive coursework in causal inference, nonparametric and semiparametric models, and time series analysis
Dissertation: "Group-based beliefs and human capital specialization"
– Explains persistent gender gaps in college major choice using an optimal stopping problem with Bayesian learning
– Data analysis and theoretical modeling programmed in Python; see Github repository (link)

Boston College, Chestnut Hill, MA — Sept. 2008 - May 2012
BA in Economics (Honors), BA in International Relations
Phi beta kappa, magna cum laude, Giffuni prize for best senior thesis in the Economics department

Employment history

University of California, San Diego, La Jolla CA — Oct. 2015 - present
Teaching Assistant
– Extensive experience teaching the critical analysis of statistical models, both from a theoretical and applied perspective
  – Theoretical topics taught: probability and statistics, linear regression, panel data analysis, introductory data analysis, linear programming, data visualization, causal inference
  – Applications taught: economics of discrimination, environmental economics, international economics
– Adept at explaining statistics to a wide variety of audiences, including the basics of probability, statistics, and linear regression to undergraduates; policy-relevant econometrics to Master's students; and measure theory, statistical inference, and computation to first year Economics PhD students
– Managed a teaching staff of 10-12 for a Principals of Macroeconomics, a course with 500 students. Organized transition to online exams in March 2020, and to full online instruction in 2021.
– Recommended as a TA by 95% of students; won 2019 TA Excellence award

Environmental Defense Fund, New York, NY — July 2019 - Sept. 2019
Pre-doctoral Intern, Office of the Chief Economist
– Wrote forthcoming policy report summarizing how spatial general equilibrium models and time series analysis techniques can be used to understand agricultural climate change adaptation.

University of California, San Diego, La Jolla, CA — June 2018 - Nov. 2018
Research Assistant
– Wrote Structural VAR ado files in Stata to estimate impulse response functions that maximize forecast error variance. Required extensive use of Mata and knowledge of MATLAB. Supervisor: Valerie Ramey.
– Analysis of the effectiveness of fixed vs random effects for macroeconomic model identification. Supervisor: David Lagakos.

Federal Reserve Bank of New York, New York, NY — June 2012 - July 2015
Senior Research Analyst, Research Group, Financial Intermediation
– Overhauled system through which the Research, Markets, and Banking Supervision groups access bank holding company regulatory data using SQL, SAS, and Stata.
– Produced quarterly policy reports on banking industry using Stata and VBA.

Technical skills

Programming languages
– Fluent: Python (quantitative example; matplotlib example); Stata (example); LaTeX
– Familiar: Git, SQL, VBA, SAS, MATLAB, Mata, batch script, shell script

Analysis
– Fluent: Statistical inference (hypothesis testing, interval estimation); Point estimation methods (MLE, GMM, Bayes estimators); Linear regression; Instrumental variables; Panel data analysis (unobserved effects models, discrete choice models, and censored and truncated regression models); Time series analysis (reduced form and structural VARs, cointegration, forecast error variance decomposition); Observational causal inference; Nonparametric and semiparametric models (kernel density estimation, bandwidth selection and cross validation, local polynomial regression); Optimal stopping problems
– Familiar: General method of sieves; Neural networks; Bayesian networks; Regression discontinuity design; Potential outcomes models; Markov models; Propensity score matching; Bootstrapping; Synthetic control methods; Principal component analysis; Quantile regression; Numerical linear algebra; Nonlinear systems and numerical optimization