Stefan Faridani

School of Economics
Georgia Institute of Technology

CONTACT INFORMATION

School of Economics
Georgia Institute of Technology
221 Bobby Dodd Way NW
Atlanta, GA 30332

Email: sfaridani6@gatech.edu
Website: https://www.stefanfaridani.com/

APPOINTMENTS

Assistant Professor of Economics, Georgia Institute of Technology

EDUCATION

PhD in Economics, University of California San Diego, conferred May 2024

Committee: Graham Elliott (Chair), Paul Niehaus, Xinwei Ma, Kaspar Wuthrich, Gareth Nellis

Bachelor of Arts, Economics and Applied Mathematics, Macalester College, Summa cum laude, 2017

FIELDS OF INTEREST

Econometrics (primary), Development (secondary)

RELEVANT POSITIONS HELD

Graduate Student Researcher, Professor Paul Niehaus, 2021-2023

Research Assistant, Professor Nava Ashraf, 2017-2018

WORKING PAPERS

"Testing for Underpowered Literatures", 2024 (**Job Market Paper**)

How many experiments would have come to different conclusions had they been run on larger samples? I show how to estimate the expected number of statistically significant results that a set of experiments would have reported had their sample sizes all been counterfactually increased by a chosen factor. The estimator is consistent and asymptotically normal. Unlike existing methods, this one requires no assumptions about the distribution of true effects of the interventions being studied other than continuity. This method includes an adjustment for publication bias in the reported t-scores. An application to randomized controlled trials published in top economics journals finds that doubling every experiment's sample size would only increase mean power of two-sided t-tests by 7.2 percentage points. This effect is small and is comparable to the effect for systematic multi-site replication projects in laboratory psychology where previous studies enabled accurate power calculations ex ante. These effects are both smaller than for non-RCTs published in top economics journals. The application concludes that the power gains from increasing RCT sample sizes in economics would be relatively small on average.

"Linear Estimation of Average Global Effects" with Paul Niehaus, 2024

We study the problem of estimating the average causal effect of treating every member of a population, as opposed to none, using an experiment that treats only some. This is the policy-relevant estimand when deciding whether to scale up an intervention based on the results of an RCT but differs from the usual average treatment effect in the presence of spillovers. We focus on settings where spillovers decay in magnitude with distance but have global support. Our first result provides the fastest rate at which any experimental design paired with any linear estimator can converge to this estimand. While the optimal rate is straightforward to achieve with IPW estimators, applied researchers almost exclusively use a different approach in practice: they regress each unit's outcome on the fraction of its nearby neighbors who received treatment. We show that this linear regression converges to an undesirable weighted

average of spillover effects. We derive a refined regression that removes the unwanted weighting and converges at the optimal rate. We justify the prevalence of regression-based strategies in practice by showing that linear regressions converge at a faster rate than IPW when treatment clusters are small. We apply our methods to an experimental evaluation of a large-scale cash transfer in rural Kenya and estimate an impact on annual household consumption expenditure that (we argue) is more robust, interpretable, and precise than the total effect reported by Egger et al. (2022). We also study the problem of bandwidth selection and find that a simple rule of thumb outperforms a minimax selection rule in practice.

RESEARCH IN PROGRESS

"Social Effects, Spillovers, and Scale-up of Teacher Training: an RCT" (with Moustafa El-Kashlan and Vesall Nourani)

While nearly half of Ugandan schoolchildren enter secondary school, fewer than 10% complete it. Low teaching quality may be a factor. We study the effects and spillovers of training secondary school teachers in rural Uganda with an RCT. Teachers were randomly assigned to an innovative training program run by Kimanya-Ngeyo in November 2021 and training is ongoing in three waves. Our RCT design allows us to study teacher-to-teacher spillovers over time by randomly assigning half of treated schools to treat teachers in "cliques", where treated teachers know each other well vs. the other half of treated schools who were assigned to treat teachers in "anti-cliques", where treated teachers do not know each other well. Midline data was collected from teachers and their students in August 2023. Endline data will be collected at the end of 2024.

"A Spectral Test for Distinguishing P-Hacking from Publication Bias"

TEACHING EXPERIENCE

Introduction to Data Science for Economics, Georgia Tech, Fall 2024
Teaching Assistant for Prob. & Stats for Data Science, Prof. Arya Mazumdar, Fall 2023
Teaching Assistant for Econometrics A, Prof. Augusto Nieto-Barthaburu, Summer I 2023
Teaching Assistant for Econometrics C, Prof. Yixiao Sun,, Spring 2021
Teaching Assistant for Econometrics C, Prof. Kaspar Wuthrich, Winter 2021
Teaching Assistant for Financial Accounting, Dr. Steven Levkoff, Fall 2020
Teaching Assistant for Econometrics C, Dr. Mun Pyung O, Sprint 2020
Teaching Assistant for Microeconomics C, Prof. Songzi Du, Fall 2019
Supplemental Instruction Leader, Prof. Mario Solis-Garcia, Fall 2016

FELLOWSHIPS, GRANTS, HONORS, AND AWARDS

Clive Granger Research Fellowship for most promising graduate student research, 2022
Zhao Family Econometrics Summer Research Fellowship, 2022
UCSD CPHIL Fellowship, 2022
UCSD Summer Graduate Student Research Grant, 2019, 2020
UCSD Regents Fellowship, 2018
Phi Beta Kappa, 2017
Elaine Gartner Pilon Award, 2017
John M. Dozier Prize in Economics, 2016
Doug Riley Family Scholarship, 2014
Dewitt Wallace Distinguished Scholarship, 2012

Stefan Faridani
Georgia Institute of Technology

PROFESSIONAL ACTIVITIES

Conference Presentations

CEPR Development Symposium at London School of Economics (Sept 2024)
Microeconometrics Class of 2024 Conference at Northwestern University (Sept 2024)
Urban Economics Association Annual Meeting at Georgetown University (Sept 2024)
Berkeley Initiative for Transparency in the Social Sciences Annual Meeting (March 2024)

Non-Conference Presentations

Georgia Institute of Technology (Sept 2024)
Texas A&M (Feb 2024)
Louisiana State University (Feb 2024)
UC San Diego (Sept 2023)

Referee Service

Economic Development and Cultural Change (2024)
Journal of Public Economics (2023)

OTHER INFORMATION

Citizenship: USA
Languages: English
Software: R, MATLAB, STATA, LaTeX,