LUKE B. MILLER

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EDUCATION

Ph.D. in Economics, *Georgetown University*, Washington, DC 2019 – 2026
Committee: Laurent Bouton, Juan Felipe Riaño, John Rust

M.A. in Economics, *Ohio University*, Athens, OH 2019 – 2020
B.A. in Physics, *DePauw University*, Greencastle, IN 2010 – 2014

RESEARCH FIELDS

Primary: Political Economy, Applied Microeconomics
Secondary: Econometrics, Public Economics

JOB MARKET PAPER

Motivated or Mobilized? Competitiveness, Campaign Effort, and Turnout in U.S. Elections
[Job Market Paper]

Voter turnout is substantially higher in battleground than in non-battleground states during U.S. presidential elections. It is unclear whether this gap reflects an organic response to closer contests or a manufactured outcome of campaign activity. Existing research treats these channels separately, overlooking the feedback whereby campaign effort shapes voter preferences, alters electoral competitiveness, and in turn affects participation. I develop and estimate a unified structural model in which turnout, competitiveness, and strategic effort are jointly determined in equilibrium. The model is estimated using county-level data from the 2008–2020 presidential elections. Validation exercises show the model's predicted competitiveness effects match reduced-form estimates and that its implied effort allocations align closely with observed advertising patterns. The results indicate that higher competitiveness and strategic effort together fully explain the 6.1 percentage point turnout gap between battleground and non-battleground states, with roughly one-third attributable to competitiveness itself and two-thirds to candidate effort. I use the model to assess the efficiency of this mobilization, finding a marginal cost of about $250 per additional voter, though average costs are much smaller at around $150 per vote. As an application, I simulate a public financing reform that caps campaign budgets, finding that tighter spending limits increase competitiveness but reduce overall turnout.

OTHER RESEARCH PAPERS

Why People Vote: Comparing Models of Voter Turnout *with Maxime Cugnon de Sévricourt.*

This paper compares the performance of several leading theoretical models of voter turnout in fitting election results for U.S. House elections and U.S. state special elections. We show a model of turnout where individuals are divided into two sides, vote for the candidate that maximizes their utility while taking into account how their vote impacts the outcome of the election, and face heterogeneous voting costs, outperforms other models. We also consider models whereby leaders make strategic decisions to mobilize or persuade voters to turnout, and where individuals vote according to the social norms of their group.

Tempting FAIT: Flexible Average Inflation Targeting and the Post-COVID U.S. Inflation Surge
with Roberto Duncan and Enrique Martínez-García. Dallas Fed Working Paper No. 2511.

In August 2020, the Federal Reserve replaced Flexible Inflation Targeting (FIT) with Flexible Average Inflation Targeting (FAIT), introducing make-up strategies that allow inflation to temporarily exceed the 2% target. Using a synthetic control approach, we estimate that FAIT raised CPI inflation by about 1 percentage point and core CPI inflation by 0.5 percentage points, suggesting a moderate impact net of food and energy and a largely temporary effect. Short- to medium-term inflation expectations increased by approximately 0.8 percentage points, while long-term expectations remained anchored. The effects of FAIT on economic activity were, if anything, minimal. Our results are robust across multiple specifications, including alternative price indices, synthetic control estimators, control groups, and adjustments for global supply chain pressures, economic activity, fiscal policy, commodity prices, interest rates, and monetary aggregates. These outcomes are consistent with a steeper-than-expected post-pandemic Phillips curve in a New Keynesian framework.

Research Experience

Research Assistant for Prof. Juan Felipe Riaño, Georgetown University 2024–Present
Developing a dynamic structural model of local government resource allocation in Tanzania's post-independence period.

Research Assistant for Prof. Laurent Bouton, Georgetown University 2022–Present
Constructed database of $\sim$500 proposed redistricting plans and developed ML models to predict precinct turnout ($R^2 = 0.75$). Designed algorithm to detect partisan bias. Linked 8M+ donor records to property data via fuzzy matching; built APIs and web scrapers to integrate campaign finance, property, and election datasets.

Research Assistant for Prof. Roberto Duncan, Ohio University 2019–2020
Implemented synthetic control methods to estimate the effect of inflation targeting, identifying significant stabilization in $\sim$50% of adopting countries.

Teaching Experience

Lead Instructor, Ph.D. Math Camp, Georgetown University 2023–2025
Designed syllabus and taught linear algebra, calculus, optimization, and dynamic programming.

Lead Instructor, Statistics for Economics, Georgetown University 2023
Developed curriculum and taught introductory statistics for economics undergraduates.

Teaching Assistant, Georgetown University 2021–2025
Courses: Intermediate Microeconomics, Statistics for Economics, Introduction to Econometrics, Analytical Tools for Political Economy, Development Impact Evaluation.

Awards, Fellowships, and Grants

Sixth Year Funding Competition, Georgetown University 2025
Ph.D. Economics Summer Fellowship, Georgetown University 2024
Graduate School Assistantship, Georgetown University 2021–2025

Graduate School Fellowship, Georgetown University 2020–2021
Graduate Assistantship, Ohio University 2019–2020

Professional Activities and Service

Student Manager, Economics Department Research Computing Cluster 2025–Present
Co-chair, Georgetown Economics Graduate Student Organization 2023–2024

Presentations

Economics Graduate Student Conference at Washington University in St. Louis (upcoming) 2025
DMV PhD Conference on Political Economy & Development (upcoming) 2025
Georgetown Applied Microeconomics Seminar 2024, 2025
Georgetown Back to School Conference 2024
Ohio University Economics Seminar 2024

Technical Skills

Python (scientific computing, ML), R, Stata, SQL, LaTeX, Git, HPC/SLURM

References

Laurent Bouton — Professor of Economics, Georgetown University
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Juan Felipe Riaño — Professor of Economics, Georgetown University
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John Rust — Professor Emeritus of Economics, Georgetown University
jr1393@georgetown.edu