Adam R. **Rohde**

Los Angeles, California

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Core Competencies

Research Expertise Causal Inference; Sample Selection; Quasi-Experiments; Instrumental Variables; Sensitivity Analysis

Professional Expertise Econometrics; Statistical Computing; Applied Research; Data Exploration, Cleaning, Manipulation, and Analysis

Programming Languages R, Python, SAS, Stata, Practical Experience with SQL, LaTeX

Education

University of California, Los Angeles

PhD, Statistics; Field: Causal Inference; C.Phil. as of 6/10/2022; GPA: 3.96 *2019 - 2023*

- Courses: Statistical Programming; Statistical Modeling and Learning; Methods in Machine Learning; Optimization; Natural Language Processing; Causal Inference; Monte Carlo Methods; Advanced Modeling and Inference; Hierarchical Linear Models; Computer Intensive Methods; Cognitive AI
- TA for STATS 256 (Causal Inference) and STATS 420 (Causal Inference in Social Science Practice)

Boston College

Bachelors of Arts, Mathematics and Economics; GPA: 3.70 *2009 - 2013*

- Giffuni Prize for outstanding Honors Thesis in Economics; Honors in Economics; Undergraduate Research Fellow; Led Fed Challenge Team

Professional Experience

Twitter: ML Ethics, Transparency, and Accountability (META) *Los Angeles, CA*

Engineering Intern *Summer 2022*

- Designed and carried out causal study of algorithmic amplification experienced by US Twitter users for content generated by US national legislators. Paper and results are forthcoming.

Charles River Associates: Antitrust and Competition Economics Practice *Oakland, CA & Boston, MA*

Consulting Associate *(2015-2019)*; Associate *(2014-2015)*; Analyst *(2013-2014)*; Analyst Intern *(2012-2013)* *2012 - 2019*

- Designed and conducted empirical analyses of market dynamics related to mergers, acquisitions, and antitrust litigations. Explored, cleaned, manipulated, and analyzed large datasets (e.g., claims data, prescription data, sales data) to understand competition, pricing, and client operations.
- Led a team of 3 analysts and coordinated with another consulting firm and 5 of the largest national health insurers in an antitrust litigation brought against a hospital system. Analyzed terabytes of health insurance claims data in modeling patient willingness to pay, prices, and demand.
- Directed a team of 3 analysts and coordinated with clients in an antitrust litigation seeking up to $100M in damages between 3 of the largest national health insurers and a group of ambulatory surgical centers. Analysis led to a favorable settlement. Modeled price; analyzed market definition and dynamics.
- Coordinated team of 4 analysts related to the $1.9B successful acquisition by CVS of Target's 1,660 pharmacies. Analyses showed little danger to consumers. Programmatically analyzed local geographic markets; conducted event study related to newly opened locations.
- Created a capacity closure model used to evaluate the potential competitive effects of a merger in the wallboard industry. The merger created a global wood products company with sales over $1.6B. Model is now standard practice when assessing a company's ability to raise prices post-merger.
- Worked on numerous pre-deal mergers and acquisitions, analyzing the potential competitive effects of the proposed deals.
    - Designed statistical models of price correlation, co-integration, and arbitrage related to the global fertilizer market.
    - Estimated models using customer-to-store drive times at the census-block level to evaluate the potential diversion of supermarket customers.
    - Preformed event-study regression analysis of the impact of a merger in the pay-day credit market on hundreds of individual lending branches.
    - Conducted regression analyses of the determinants of prices in the national industrial water pipe market.
- Led corporate recruiting for the Antitrust and Competition Economics Practice in 2015.
- Led Green Office Initiative (a sustainability project) for the Boston Office of CRA in 2013 and 2014.
- Served as "SAS Expert" by assisting colleagues with difficult tasks and problems.
- Mentored four Analysts and Associates. Coached programming, data analysis, presentation skills, and career development.
- Promoted from Analyst to Associate and from Associate to Consulting Associate on accelerated schedule.

Research

Dissertation: Sample Selection and the Internal Validity of Causal Effect Estimates *Los Angeles, CA*

Advisor: Chad Hazlett *2020-2023*

- Researchers, policy makers, and business decision makers often seek to understand the effect of a treatment on an outcome within a sample that has been drawn in some selective way from a larger population. Such selective sampling can bias our estimate of the causal effect even for the units in the sample. We employ formal tools from the theory of causal inference to more fully and rigorously characterize the (i) the settings in which selective sampling does and does not bias the "internal effect estimate", and (ii) the conditions under which this bias can theoretically be corrected, and how to do so. These results are collectively conveyed through graphical criterion that investigators can apply on their own to examine the threats to bias and opportunities for correction given a graphical causal model. In addition, we incorporate these graphical tools into common observational and quasi-experimental research designs such as instrumental variables. We also develop sensitivity analyses focused on how sample selection can violate important causal assumptions and change the inferences we are able to make. See drafts on personal website: [Link].

Previous Research, Side Projects, Etc.

with various co-authors

- Stanford CISIL Data Challenge 2022: Studied causal relationship between King County Metro Transit fare reinstatement on October 1, 2020 and ridership overall and by socio-economic group. Used an interrupted time series design and a variety of estimation strategies.
- Murphy, R., Rohde, A. Rational Bias in Inflation Expectations. Eastern Econ J 44, 153–171 (2018). [Link]
- A variety of additional projects can be found on my personal website: [Link]