

# Rayyan Saad Mobarak

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## EDUCATION

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Macalester College, St. Paul, MN

B.A. May 2021

Major(s): Economics; Applied Mathematics & Statistics

Honors: Kofi Annan International Scholarship

Relevant Coursework: Intermediate Microeconomic Analysis, Introduction to Econometrics, Microeconometrics, Macroeconomic Modeling, Applied Multivariable Calculus III, Differential Equations, Linear Algebra, Probability, Real Analysis, Topology

## PEER-REVIEWED PUBLICATIONS

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Katherine L. Milkman, Linnea Gandhi, Sean F. Ellis, Heather N. Graci, Dena M. Gromet, **Rayyan S. Mobarak**, Allison M. Bутtenheim, Angela L. Duckworth, Devin Pope, Ala Stanford, Richard Thaler & Kevin G. Volpp. "A citywide experiment testing the impact of geographically targeted, high-pay-off vaccine lotteries." *Nature Human Behaviour* (2022): 1-10

## WORKING PAPERS

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Kai Ruggeri, Friederike Stock, Alex S. Haslam, Valerio Capraro, Paulo Boggio, Naomi Ellemers, Aleksandra Cichocka, ... **Rayyan Mobarak**, et al. "Evaluating Expectations from Social and Behavioral Science About COVID-19 and Lessons for the Next Pandemic." *PsyArXiv* (2022).

## SELECTED WORKS IN PROGRESS

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Katherine L. Milkman, Dena M. Gromet, Sean F. Ellis, **Rayyan S. Mobarak**, Heather N. Graci, Angela L. Duckworth, Nina Mazar, Daniel Mochon, Avni Shah, Laura Goodyear, Matthew Hilchey, Dilip Soman. "Nudging Savings: A Large Field Experiment Among Bank Customers."

Katherine L. Milkman, Sean F. Ellis, **Rayyan S. Mobarak**, Kevin G. Volpp, Dena M. Gromet, Joseph S. Kay, Rob Kuan, Angela L. Duckworth, Neil A. Lewis Jr, John A. List, Mitesh S. Patel. "Large-Scale Randomized Trials Testing Which Strategies Increase COVID-19 and Flu Vaccinations."

## RESEARCH ASSISTANTSHIP EXPERIENCE

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The Wharton School, University of Pennsylvania

Jun 2021 - Present

*Pre-Doctoral Fellow, Behavior Change for Good Initiative*

- Coauthor, alongside a multidisciplinary team of scientists, three papers that implement and analyze:
  - A city-wide geographically-targeted lottery, incentivizing adult first-dose COVID-19 vaccination rates
  - An RCT nudging customers of a large U.S. bank to increase savings account transfers, and
  - An RCT incentivizing and nudging eligible individuals to take the COVID-19 booster
- Collect, clean, manage, and summarize large administrative datasets
- Conduct regression analysis, matching, randomization inference, spatial analysis, and hypothesis tests
- Visualize data and estimates using histograms, maps, coefficients, and event-study plots
- Lead journal submissions, and incorporate and respond to referee comments
- Support team with survey design, grant applications, literature reviews, power calculations, and presentations

## University of Minnesota

Oct 2019 – Aug 2020

### *Research Assistant, Department of Applied Economics*

- Assisted Professor Paul Glewwe with two papers:
  - An RCT impacting teaching and learning outcomes through teacher training programs within Nepal, and
  - A study of factors behind the strong academic performance of 15-year-olds in Vietnam
- Calculated summary statistics, created visualizations, and formatted tables of regression output
- Conducted literature reviews and proofread reports

## **INDEPENDENT RESEARCH EXPERIENCE**

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### **Macalester College**

Jan – May 2021

#### *Macroeconomic Modeling Capstone*

- Simulated the effects of enacting the carbon tax policies of The Green New Deal on the U.S. economy
- Implemented the real business cycle DSGE model to characterize and solve equilibrium conditions
- Plotted impulse response functions to correlate macroeconomic outcomes and business cycle facts

### **Macalester College**

Sep – Dec 2020

#### *International Economic Development Capstone*

- Extended the results of an RCT nudging voting participation of immigrants in France
- Estimated heterogeneous treatment effects by gender using two-stage least squares models
- Investigated if the intervention made women feel more important than men in voting participation

### **Macalester College**

Sep – Dec 2019

#### *Introduction to Econometrics Term Paper*

- Examined the effects of U.S. minimum age laws for E-cigarettes on combustible cigarette consumption
- Collected and cleaned a state-year dataset using data from the CDC and BLS
- Performed panel data analysis, employing difference-in-differences and event-study models

## **TEACHING EXPERIENCE**

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### **Pathways to Doctoral and Research Careers**

Jan – May 2021

#### *Mentor and Panelist*

- Mentor undergraduates, providing advice on attaining and excelling at Pre-Doctoral fellowships in economics
- Conduct Stata coding sessions, teaching students how to work through econometric tests
- Serve on a panel with Pre-Doctoral candidates and managers, answering live questions from participants

### **Macalester College**

Sep 2020 – May 2021

#### *Teaching Assistant, Introduction to Econometrics*

- Aid with homework, test preparation, and Stata programming within weekly sessions
- Grade homework assignments and provide constructive feedback
- Assist students' term papers with topic ideas, identification strategies, and data management

## **GRANTS**

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### **Macalester Summer Internship Grant (\$2500)**

Jun 2020

## **TECHNICAL SKILLS**

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*Languages:* Stata (advanced), R (intermediate), Python (intermediate), SAS (beginner)

*Other:* LaTeX, Qualtrics, HTML & CSS