

# AFRAS SIAL

## Curriculum Vitae

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Berkeley, CA 94705

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### EDUCATION

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**University of California, Berkeley**

Ph.D., Economics

In progress

**Georgetown University**

Bachelor of Science, International Economics (with Honors), *Summa Cum Laude*

2019

### RELEVANT RESEARCH EXPERIENCE

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**University of California, Berkeley**

*Graduate Student Researcher for Prof. Ben Handel*

2022

- Refined and extended simulations of a vertical merger in the pharmaceutical supply chain, and adapted and implemented a new procedure for estimating mean drug rebates—a key parameter necessary for realistically modeling the effects of mergers on consumer surplus.

**University of Pennsylvania**

*Research Coordinator for Profs. Benjamin Lockwood (Wharton) and Dmitry Taubinsky (UC Berkeley)*

2019 – 2021

- Performed regression analysis and other estimation procedures on experimental and quasi-experimental data in Stata, performed simulations in MATLAB on questions about optimal income taxation and optimal policies addressing limited self-control, scraped sites for data with Python, implemented online experiments in Qualtrics, conducted literature reviews, proofread drafts, and more.

**Georgetown University**

*Research Assistant for Prof. Charlotte Cavaillé*

2018 – 2019

- Collected data on social attitudes and redistributive preferences, conducted literature reviews, audited survey designs, created data visualizations, and processed and matched spatial data in R Studio.

**Georgetown University**

*Research Assistant for Prof. Pedro Gete*

2017 – 2018

- Collected and cleaned large datasets and reviewed literature on the credit and housing markets. Produced data visualizations of event studies and performed regression analysis on panel data in Stata.

### PUBLICATION

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“Designing, not Checking, for Policy Robustness: An Example with Optimal Taxation” with Benjamin Lockwood and Matthew Weinzierl (*Tax Policy and the Economy*, 2021, 35, pp. 1-54)

Abstract: Economists typically check the robustness of their results by comparing them across plausible ranges of parameter values and model structures. A preferable approach to robustness—for the purposes of policymaking and evaluation—is to design policy that takes these ranges into account. We modify the standard optimal income tax model to include the policymaker’s subjective uncertainty over parameter values, and we characterize robust optimal policy as that which maximizes expected social welfare. After calibrating uncertainty over the elasticity of taxable income from past empirical work and novel survey data on economists’ beliefs, we compare the implied robust optimal marginal tax rates to the alternative benchmark policy based on the best point estimates of relevant parameters. Our results suggest that robust optimal marginal tax rates are typically more progressive than in benchmark analyses, raising top marginal tax rates by between 5 and 7 percentage points, and generating modest expected welfare gains.

## WORKING PAPERS

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**“What Drives Demand for State-Run Lotteries? Evidence and Welfare Implications”** with Benjamin B. Lockwood (✉) Hunt Allcott (✉) and Dmitry Taubinsky (Revise and resubmit at *The Review of Economic Studies*)

Abstract: We use natural experiments embedded in state-run lotteries and a new nationally representative survey to provide reduced-form and structural estimates of risk preferences and behavioral biases in lottery demand. We find that sales respond more to the expected value of the jackpot than to price, but are unresponsive to variation in the second prize—a pattern that is consistent with probability weighting but is inconsistent with standard parameterizations. In the survey, we find that lottery spending decreases modestly with income and is strongly associated with measures of innumeracy, poor statistical reasoning, and other proxies for behavioral bias. These bias proxies decline with income and statistically account for 43 percent of lottery purchases, suggesting that at least some of lottery demand is due to behavioral bias, not just anticipatory utility or entertainment value. We use these empirical moments to estimate a model of socially optimal lottery design. In the model, current multi-state lottery designs increase welfare but may harm heavy spenders.

**“Biased Memory and Perceptions of Self-Control”** with Justin Sydnor and Dmitry Taubinsky

Abstract: Using data from a field experiment on exercise, we analyze the relationship between imperfect memory and people’s awareness of their limited self-control. We find that people overestimate past gym attendance, and that larger overestimation of past attendance is associated with (i) more overestimation of future attendance, (ii) a lower willingness to pay to motivate higher future gym attendance, and (iii) a smaller gap between goal and forecasted attendance. We organize these facts with a structural model of quasi-hyperbolic discounting and naivete, estimating that people with more biased memories are more naive about their time inconsistency, but not more time-inconsistent.

## WORK IN PROGRESS

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“Ideology and Moral Hazard” with Na’ama Shenhav and Dmitry Taubinsky

- Using large-scale online experiments and surveys, we study the extent to which differences in behavioral responses to taxation are driven by political ideology and perceived social norms around labor supply responses. Initial pilots show that (i) Republicans believe taxes are more distortionary, (ii) Republicans’ beliefs about the behavior of Democrats drive this belief, and (iii) beliefs about the behavior of one’s co-partisans are highly predictive of own behavior.

## ACKNOWLEDGEMENTS OF RESEARCH ASSISTANCE

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Allcott, Hunt, Joshua Kim, Dmitry Taubinsky, and Jonathan Zinman, “Are High-Interest Loans Predatory? Theory and Evidence from Payday Lending,” Forthcoming at the *Review of Economic Studies*, 2021.

Anagol, Santosh, Allan Davids, Benjamin B. Lockwood, and Tarun Ramadorai, “Do Firms Have a Preference for Paying Exactly Zero Tax?,” Unpublished, 2021.

Butera, Luigi, Robert Metcalfe, William Morrison, and Dmitry Taubinsky, “Measuring the Welfare Effects of Shame and Pride,” Forthcoming at the *American Economic Review*, 2021.

Carrera, Mariana, Heather Royer, Mark Stehr, Justin Sydnor, and Dmitry Taubinsky, “Who Chooses Commitment? Evidence and Welfare Implications,” Forthcoming at the *Review of Economic Studies*, 2021.

Dillon-Merrill, Robin, Lei Ge, and Pedro Gete, “Natural Disasters and Housing Markets: The Tenure Choice Channel,” Working Paper, 2018.

Ferey, Antoine, Benjamin B. Lockwood, and Dmitry Taubinsky, “Sufficient Statistics for Nonlinear Tax Systems with Preference Heterogeneity,” Unpublished, 2021.

Strack, Philipp, and Dmitry Taubinsky, “Dynamic Preference “Reversals” and Time Inconsistency,” *NBER Working Paper 28961*, 2021.

Morrison, William, and Dmitry Taubinsky, “Rules of Thumb and Attention Elasticities: Evidence from Under-and Overreaction to Taxes,” Forthcoming at the *Review of Economic Studies*, 2021.

## PRESENTATIONS AND CONFERENCES

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Participant at Tax Policy and the Economy Conference, National Bureau of Economic Research. September 2020. Virtual.

“Fair Play? State-run Lotteries and Income Concentration in the United States.” Presenter at Carroll Round XVIII International Economics Conference, Georgetown University. April 2019.

“The Startup Sector: Support Systems in the U.S. and Khyber Pakhtunkhwa.” Presenter at Kohat University of Science and Technology. May 2017. Virtual: Kohat, Pakistan.

## COURSE PROJECTS

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“Lynching Shocks and Agricultural Productivity in the American South, 1909-1939,” *Economic History* course

- Leveraged cluster-lasso, a machine-learning method, to predict lynching events from a large vector of covariates in order to decompose them into (i) a predictable component and (ii) a shock. Used the orthogonal shocks to identify the effects of lynchings on cotton farmer productivity. Found evidence that shocks are associated with subsequently lower levels of productivity in counties in which the agricultural workforce is more heavily Black. The association is stronger in counties where workers tend to be in more dependent work arrangements with White landowners, and during the years of the Great Depression. Also found evidence of a positive association between lynching shocks and Black out-migration, as well as average manufacturing wages in a county.

“Fair Play? State-run Lotteries and Income Concentration in the United States,” *Senior Honors Thesis*

- Used an instrumental variables approach to find evidence against the claim that state-run lotteries increase income inequality, also finding evidence that they lead to increases in education spending and decreases in regressive sales taxation.

“Does It Get Better with Age? Demands for Equality of Opportunity Programs for Children in an Aging U.S. Population,” *Political Economy of Inequality and Redistribution* course

- Used age-period-cohort and logistic regression analysis to find that the elderly tend to have lower support for three equality of opportunity programs, consistent with a simple model of redistributive preferences across age groups.

## TEACHING EXPERIENCE

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**Intermediate Microeconomics** 2022  
*Graduate Student Instructor, University of California, Berkeley*

**Departmental Tutor** 2021 – 2022  
*Microeconomics, University of California, Berkeley*

**GitHub Tutorial** 2021  
*Two-session tutorial for professors at Monash University*

**Stata Tutor** 2019  
*Private Tutor*

**Map of the Modern World** 2018 – 2019  
*Teaching Assistant for Prof. Mark Giordano, Georgetown University*

## OTHER RESEARCH EXPERIENCE

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**U.S. Consulate General Peshawar** 2016 – 2017  
*Student Foreign Service Intern, Startups Connex Project*

- Conducted research on the startup landscape in Khyber Pakhtunkhwa. Interviewed leaders in the startup sector and connected them to U.S. government and local resources.

**University of Utah** 2016  
*Student Researcher, Policy Innovation Lab*

- Drafted case studies on place-based initiatives for official project proposal. Attended Pay-for-Success Institute and researched social intervention monitoring and evaluation systems.

<b>Center for Civic Innovation</b> <i>Research Intern</i>	2016
<ul style="list-style-type: none"> <li>Reviewed literature on participatory budgeting initiatives and researched access to finance for social entrepreneurs. Analyzed co-working cost packages across the U.S. and provided recommendations based on findings.</li> </ul>	
<b>Georgetown University</b> <i>Student Researcher, Beeck Center for Social Impact &amp; Innovation</i>	2015 – 2016
<ul style="list-style-type: none"> <li>Researched early childhood development program evaluations, public-private partnerships in infrastructure construction, and the state of impact investing education.</li> </ul>	
<b>Salt Lake City Council</b> <i>Policy Research Intern</i>	2015
<ul style="list-style-type: none"> <li>Researched campaign finance reform, contacting municipalities and organizations to determine best practices, while compiling and analyzing historical municipal campaign finance data.</li> </ul>	

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## COMMUNITY SERVICE AND VOLUNTEER EXPERIENCE

<b>Graduate Economics Association</b> <i>Co-chair</i>	2022 – Present
<b>Berkeley Economists for Equity</b> <i>Underrepresented Minorities in Economics Mentor, Faculty Recruitment and High School Outreach Volunteer</i>	2021 – Present
<b>Predoctoral Research in Economics Workshop</b> <i>Panelist and Small Group Mentor</i>	2021
<b>Hoya Taxa Volunteer Income Tax Assistance</b> <i>IRS-Certified Tax Preparer and On-Campus Clinic Co-founder</i>	2017 – 2019
<b>Georgetown University Muslim Students Association</b> <i>Director of Communications</i>	2017 – 2018
<b>Drew Elementary School</b> <i>DC Reads Youth Literacy Tutor</i>	2016
<b>Muslim Public Affairs Council</b> <i>Policy Research Volunteer</i>	2016

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## HONORS, SCHOLARSHIPS, AND FELLOWSHIPS

Berkeley Economics Departmental Fellowship	2021 – 2022
Phi Beta Kappa	2019
Student Coalition for Social Impact Delegate	2019
Critical Language Scholarship, Urdu	2017
Winter Student Program in Islamic Studies Scholarship	2017
Lannan Center for Poetics and Social Practice Fellowship	2016 – 2017
Compass Fellowship	2015 – 2016
GU Impacts Fellowship	2016

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## SKILLS

**Technical:** Stata, MATLAB, Python, R, LaTeX, LyX, Qualtrics (with custom HTML, CSS, and JavaScript), Prolific, GitHub, and Bloomberg Terminal

**Language:** Native English, Intermediate Urdu, Intermediate French, Beginner Classical Arabic