

Adam M. Rosenberg

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Education

Ph.D. in Economics, Stanford University 2019–present
Expected completion: June 2025
Dissertation: *Essays on markets for consumer firearms*
Committee: Liran Einav (primary), Matthew Gentzkow, Ignacio Cuesta

B.A. in Economics, Middlebury College 2012–2016
Minors: Mathematics and Spanish
With highest honors, *summa cum laude*

Research and Teaching Fields

Industrial Organization, Public Economics

Research Papers

[Regulating Firearm Markets: Evidence from California](#) (link active 11/1/2024)

Job Market Paper

Abstract: This paper studies the relationships between consumer demand and public health in firearm markets, and their roles in determining the impacts of firearm regulation. My analysis utilizes 20 years of administrative data from California, recording all licit handgun purchases in the state, the consumer and retailer in each transaction, and the universe of fatality incidents. Isolating variation from the entry timing of firearm retailers in local markets, the presence of an additional firearm retailer increases handgun purchases by 20 percent. The consumers marginal to retailer entry are both repeat and first-time handgun purchasers, and these marginal handgun owners increase both homicide and suicide fatalities. To study the trade-off between consumer surplus and public health, I develop and estimate a model of consumer handgun purchase and its impact on fatalities. My estimates imply that handgun owners are adversely selected—those with a higher willingness to pay for a handgun also generate more expected fatalities—such that the expected public health costs of handgun ownership outweigh the private benefits of handgun purchase. Using the model to simulate counterfactual policies, California’s 2024 sales tax on firearm purchase approximately maximizes tax revenues, but is too low when accounting for consumer surplus and public health. By targeting high taxes to areas where adverse selection is most severe, the welfare gains from statewide taxation could be achieved with greater consumer surplus through high rates around San Francisco and Los Angeles, while leaving the rest of the state at the status quo.

[The U.S. Consumer Firearms Industry: Welfare and Policy Implications](#) (link active 11/1/2024)
(with Luis Armona)

Abstract: This paper studies the role of market structure and regulation in determining market surplus and social welfare from the consumer firearms industry in the United States. We construct a dataset combining the prices and characteristics of firearms available to consumers, microdata on firearm transactions from Massachusetts, and aggregate purchase quantities from other states. We account for price endogeneity by constructing a cost-shock instrument based on heterogeneous exposure to aggregate shocks in the costs of commodity metals, and estimate an own-price elasticity of -2.5 for the average firearm model. Utilizing this data and variation, we estimate a model of national supply and demand for consumer firearms. Although firearm manufacturers suppress quantity by pricing significantly

above marginal cost, a calibrated measure of public health costs implies that the equilibrium firearm purchase quantity is still inefficiently high. We estimate that uniform increases to firearm taxes distribute welfare gains in a manner that is likely politically infeasible, causing particular harm to consumers in Republican-leaning areas. In contrast, targeting taxes on handguns alone can increase social welfare without harming consumer surplus.

Local Gun-Use Regulation and Firearm Mortality: Evidence from Deer Hunting Season

Abstract: This paper studies gun-use regulation and firearm mortality. I gather historical schedules of deer hunting season in North Carolina and Virginia and pair them with morgue records at county-day frequency. Hunters increase firearm use during deer season and sharply decrease use at season's end. The end of deer season in these states reduces firearm homicide fatalities by 45 percent of its daily average: 1 homicide every 3 years. Deer season homicides spill over onto women, who rarely hunt, but do not affect non-firearm fatalities. Public policies that encourage safer gun-use, even among lawful firearm owners, can decrease firearm injuries.

Handgun Acquisition in California during the Pandemic: Patterns by Demographics and Prior Ownership (with David Studdert, Matthew Miller, Sonja Swanson, Yifan Zhang, and Sarah Hirsch)

Abstract: This paper studies patterns of firearm acquisition during the COVID-19 pandemic. We construct individual-level histories of handgun acquisitions from administrative microdata on all licit handgun transfers in California 01/1996–09/2021. Our analysis contrasts trends in pandemic-era handgun acquisition between repeat and first-time acquirers, across demographic groups, and to the pre-pandemic period. Handgun acquisitions increased by 150% at the onset of the pandemic, then decreased to pre-pandemic rates after 18 months. First-time acquirers procured handguns at more than 100% of their pre-pandemic rate for 7 consecutive months. Racial/ethnic minorities and women sustained the largest percentage increases in first-time handgun acquisitions, while White men owned handguns at the highest rate before and after the pandemic. The COVID-19 pandemic created one of the strongest, most sustained increases in aggregate demand for firearms in the U.S. However, the size of the pre-pandemic stock, the dominance of usual gun buyers, and the trend towards pre-pandemic rates of handgun acquisition after the initial demand increase suggests that neither the overall distribution of firearm ownership nor population-level health risks are likely to alter meaningfully as a result.

The Frontier Origins of U.S. Gun Culture

Abstract: This paper studies the transmission of a county's historical exposure to the U.S. frontier into contemporary preferences for consumer firearms. Counties with an additional decade on the frontier between 1790 and 1890 have 1.2 percent higher rates of firearm ownership than their less-exposed counterparts today. This is a large transmission of a county's historical conditions: each decade on the frontier is equivalent to one-tenth of the gap in contemporary firearm ownership between Illinois and Texas. In response to nationwide shocks to the consumer firearms market, greater frontier exposure increases firearm purchasing and intensifies preferences for firearm regulation. The debate around contemporary firearm regulation should account for heterogeneity in its historical antecedents.

Work in Progress

Externalities, Market Power, and Product Innovation: Evidence from the U.S. Auto Industry
(with Harsh Gupta and Tess Snyder)

The History of Product Characteristics in the Firearms Industry: Demand, Innovation, and Externalities
(with Harsh Gupta)

Firearm Mortality among New and Longstanding Firearm Owners in California during the Pandemic
(with David Studdert, Matthew Miller, Sonja Swanson, Yifan Zhang, and Sarah Hirsch)

Publications

Measuring the Market for Legal Firearms

(with Luis Armona) *AEA: Papers & Proceedings* 114: 52–57. 2024

Nutrition-sensitive agricultural interventions, agricultural diversity, food access and child dietary diversity: Evidence from rural Zambia

(with John Maluccio, Jody Harris, Marjolein Mwanamwenge, Phuong H. Nguyen, Gelson Tembo, and Rahul Rawat) *Food Policy* 80: 10–23. October 2018 (lead article)

Fellowships and Awards

2024–2025	B.F. Haley and E.S. Shaw Fellowship for Economics
2024	Arnold Ventures Grant: Causal Inference and Criminal Justice
2023	George P. Shultz Dissertation Fund
2022	Stanford Law and Economics Summer Fellowship
2022	Stanford Graduate Research Opportunity Fund
2016	Christian A. Johnson Prize (highest undergraduate economics gpa)
2015	Hoskin Senior Research Grant
2014	Jones Enrichment Summer Fellowships

Invited Presentations

2024	ASSA Meetings; NBER Economics of Firearm Markets, Crime, and Gun Violence
2022	National Research Conference for the Prevention of Firearm-Related Harms

Research Positions

2024	Fellow (Malcom Weiner Center for Social Policy at Harvard Kennedy School)
2022–2023	Research Assistant supporting David Studdert (Stanford)
2020–2021	Research Assistant supporting Ignacio Cuesta (Stanford)
2016–2018	Predoctoral Fellow supporting Matthew Gentzkow and Jesse Shapiro (Stanford)
2017	Consultant with Paul Milgrom (Auctionomics)
2016	Consultant with Phuong Nguyen (International Food Policy Research Institute)
2015	Research Assistant supporting John Maluccio (Middlebury)
2015	Research Assistant supporting Rahul Rawat and Jody Harris (Middlebury)

Teaching

2021, 2022	Introduction to Financial Decision Making (head TA, outstanding TA award 2022)
2022	Economic Policy Seminar (undergraduate capstone)
2021	Imperfect Competition
2015	Intermediate Microeconomics

Referee Service

Journal of Public Economics, Epidemiology, Journal of Quantitative Criminology

Personal

Citizenship	USA
Language	English (native), Spanish (proficient)