Toshio Ferrazares

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EDUCATION

UC Santa Barbara
Ph.D. Economics, 2025 (expected)
Field(s): *Labor Economics*, *Public Economics*

San Diego State University
M.A., Economics, 2019
B.A., Economics, Minor in Mathematics, 2017

JOB MARKET PAPER

"Shift Structure and Cognitive Depletion: Evidence from Police Officers".

- Awarded "Best Paper Award" at Southern California Applied Economics Conference

PUBLICATIONS

"Monitoring Police with Body-Worn Cameras: Evidence from Chicago", *Journal of Urban Economics*, 2024.

- Awarded "Best Second Year Paper Award" at UC Santa Barbara Economics

WORK-IN-PROGRESS

1. "The Unintended Consequences of Policing Technology: Evidence from ShotSpotter", with Michael Topper, Under Review at the *Journal of Human Resources*.
   - Media Coverage: The Economist, The Chicago Tribune, Stateline
2. "Have U.S. Gun Buyback Programs Misfired?" with Joseph J. Sabia and D. Mark Anderson, Revisions Requested at *Journal of Policy Analysis and Management*. NBER Working Paper #28763.
   - Media Coverage: NBC Philadelphia, CNN, Houston Chronicle, Virginia Public Radio, Reason, CATO Institute, Stateline
3. "Drinking Water Contaminants and Infant Health", with Katherine Grooms, Heather Royer, and Kevin Schnepel.
4. "Extended Shifts and Productivity: Evidence from 12-Hour Shifts", with Michael Topper.
5. "The Stock and Flow of Police Officers in the US", with Michael Topper.

REFERENCES

Professor Heather Royer
UC Santa Barbara
Committee Chair
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Professor Peter Kuhn
UC Santa Barbara
Committee Member
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Professor Kevin Schnepel
Simon Fraser University
Committee Member
kevin_schnepel@sfu.ca

Placement Director
Professor Daniel Martin
UC Santa Barbara
danielmartin@ucsb.edu

HONORS AND AWARDS

2024	Dissertation Summer Fellowship (UCSB)
2023	Gretler Research Quarter Fellowship (UCSB)
2021	Best 2nd Year Paper Award (UCSB)
2019	M.C. Madhavan Prize for Outstanding Student (SDSU)
2017, 2018	McCuen Fellowship (SDSU)
2017, 2018	Center for Public Economics Scholarship (SDSU)
2017, 2018	The Weintraub Paper Award (SDSU)

EMPLOYMENT AND EXPERIENCE

2021-Present	Research Assistant, Professor Heather Royer
2017-2019	Research Assistant, Professor Joseph Sabia

2025-	Teaching Assistant, Introduction to Econometrics
2023-24	Teaching Assistant, Labor Economics, Personnel Economics II
2022-23	Teaching Assistant, Data Wrangling for Economists
2020-2021	Teaching Assistant, Intro to Macroeconomics
2019-2020	Teaching Assistant, Intro to Microeconomics
2019-Present	Doctoral Affiliate, Center for Health Economics and Policy Studies

Technical Expertise: R, Stata, Python, ArcGIS, MATLAB

Referee Service: *Journal of Labor Economics*

SEMINARS AND CONFERENCES

Texas Economics of Crime Workshop (TxECW), 2025
Southern California Applied Economics Conference (UC Irvine), 2024
↪*Best Paper Award* for *Shift Structure and Cognitive Depletion: Evidence from Police Officers*
All California Labor Economics Conference (UC Los Angeles), 2024
WEAI Graduate Student Workshop, 2024
Western Economic Association International, 2023
All California Labor Economics Conference (UC Santa Barbara), 2023
Eastern Economics Association, 2019
Western Economic Association International, 2019
Association for Public Policy Analysis and Management, 2019
Eastern Economics Association, 2018

Abstracts

"Shift Structure and Cognitive Depletion: Evidence from Police Officers", Job Market Paper.

> Decision-making, risk-taking, and situational awareness are all important factors for effective and equitable policing. However, these factors can also be affected by fatigue, overwork, and cognitive stress, which can accumulate as police officers continue to work. This paper studies how working consecutive days affects police officer outcomes and activity using rich data from the Chicago Police Department. To overcome the endogenous selection of working days, I take advantage of a unique shift structure where working days are predetermined and based on fixed groupings. This is combined with a two-way fixed effects design that leverages within-officer variation across different working days. I find that as officers work more consecutive days, they use more force, make more judgement-based discretionary arrests, and are more likely to be injured. These increases occur despite a decline in proactive policing activities. Officers make fewer arrests, conduct fewer stops, issue fewer citations and tickets, and spend less time actively patrolling as their workdays accumulate. The divergence between use-of-force and policing activity is not driven by changes in arrest types, shift assignments, or officer roles, instead, officers are changing their behavior as they work more days.

"Monitoring Police with Body-Worn Cameras: Evidence from Chicago", *Journal of Urban Economics*, 2024.

> Using data from the Chicago Police Department on complaints filed by civilians and reports of force filed by officers, this paper estimates the effect of body-worn cameras (BWCs) of officer and civilian behavior. Using a two-way fixed effects design, I find BWCs are associated with a 29% reduction in use-of-force complaints, driven by white officer-black civilian complaints. Additionally, I find a 34% reduction in officers reporting striking civilians and a large though less significant reduction in officer firearm usage, potential mechanisms for the reduction in complaints. Importantly, I find no change in officer injury or force from civilians. However, I find evidence of de-policing as officers make fewer drug-related arrests following BWC adoption.

"The Unintended Consequences of Policing Technology: Evidence from ShotSpotter", with Michael Topper, *Under Review at The Journal of Human Resources.*

> Technology is integral to police departments, automating officer tasks, but inherently changing their time allocation. We investigate this by studying ShotSpotter, a technology that automates gunfire detection. Following a detection, officers are dispatched to the scene, thereby reallocating their time. We leverage this shock to officers' time allocation using the rollout of ShotSpotter across Chicago police districts to study the effects on 911 call response. We find substantial consequences, officers are dispatched to calls slower (23%), arrive on-scene later (13%), and the probability of arrest is decreased 9%. Consequently, police departments must evaluate their resource capacities prior to implementing technologies.

"Have U.S. Gun Buyback Programs Misfired?" with Joseph J. Sabia and D. Mark Anderson, Revisions Requested at *Journal of Policy Analysis and Management.* NBER Working Paper #28763.

> Gun buyback programs (GBPs), which use public funds to purchase civilians' privately-owned firearms, aim to reduce gun violence. However, next to nothing is known about their effects on firearm-related crime or deaths. Using data from the National Incident Based Reporting System, we find no evidence that GBPs reduce gun crime. Given our estimated null findings, with 95 percent confidence, we can rule out decreases in firearm-related crime of greater than 1.1 percent during the year following a buyback. Using data from the National Vital Statistics System, we also find no evidence that GBPs reduce suicides or homicides where a firearm was involved. These results call into question the efficacy of city gun buyback programs in their current form.