Supplemental Appendix

Stop and Frisk Around the Country

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DATA CONSTRUCTION

We supplement our stop and frisk records with contextual data on crime, demographics, police resources, weather, and public sentiment. For cities reporting to the Uniform Crime Report (UCR) in 2023, we use UCR data on yearly incidents by crime type. We chose this year to be sufficiently long after the onset of COVID-19 that the data were less likely to be affected by the pandemic. As Los Angeles, Oakland, San Francisco, and San Jose did not report in 2023, we obtained crime incident data directly from their police department websites and city databases.[11]

Demographic and income data are drawn from the 2019 through 2023 American Community Survey Single-Year Estimates.[12] Police budget data come from each city's 2022 fiscal year plan,[13] while staffing levels are taken from the 2023 UCR.[14] Miles traveled data was obtained from the Bureau of Transportation Statistics. Precipitation data comes from Smith (2024), which temporally and spatially aggregates raw data from the PRISM Climate Group at Oregon State University.[15]

To measure public perception of police in each city, we analyze Twitter data from the Internal Wharton Research Data Services (iWRDS) historical tweet database. iWRDS captures approximately 1% of total Twitter volume. Our sample includes all tweets from January to November 2022 containing the words "police," "cops," or "law enforcement" with location data originating from cities in our study.[16] We classify sentiment using a RoBERTa-base model trained on approximately 58 million tweets and fine-tuned for sentiment analysis with the TweetEval benchmark (Barbieri et al., 2020). For each city, we compute the ratio of tweets classified as positive to those classified as negative.

[11] Los Angeles: https://data.lacity.org/, Oakland: https://data.oaklandca.gov, San Francisco: https://www.sanfranciscopolice.org/stay-safe/crime-data/crime-dashboard, San Jose: https://www.sjpd.org/records/crime-stats-maps/police-dashboards.

[12] https://www.census.gov/data/developers/data-sets/acs-1year.html.

[13] Retrieved from https://costofpolice.org/.

[14] Retrieved from https://cde.ucr.cjis.gov/LATEST/webapp//pages/home.

[15] Available at https://www.aaronsmithagecon.com/ag-data.

[16] Collection was halted due to changes in the Twitter API.

APPENDIX TABLES

Table B1—: Summary Statistics for Pedestrian Stops

	Daily Stops		Daily Frisks		Frisk Rate		HR Guns		HR Overall	
City	2019	2023	2019	2023	2019	2023	2019	2023	2019	2023
Austin	66.46	26.08	8.80	3.13	0.13	0.12	—	—	0.34	0.28
Chicago	88.09	32.43	22.14	11.51	0.25	0.35	0.03	0.08	0.13	0.23
Cincinnati	26.52	17.70	11.74	4.96	0.44	0.28	—	—	0.43	0.31
Los Angeles	137.62	84.95	71.24	46.40	0.52	0.55	0.03	0.06	0.36	0.39
Milwaukee	26.18	3.08	10.30	1.50	0.39	0.49	0.03	0.02	0.22	0.18
New York City	4.65	5.68	3.19	4.40	0.69	0.78	0.05	0.09	0.23	0.25
Oakland	72.90	83.84	50.01	48.92	0.69	0.58	0.02	0.07	0.14	0.37
Philadelphia	120.05	21.76	18.34	14.32	0.15	0.66	0.02	0.07	0.12	0.21
San Diego	195.41	74.56	56.88	28.42	0.29	0.38	0.01	0.02	0.23	0.25
San Francisco	121.81	24.86	46.41	12.21	0.38	0.49	0.02	0.08	0.49	0.74
San Jose	47.28	18.96	22.11	7.32	0.47	0.39	0.01	0.03	0.48	0.58
Seattle	29.88	14.71	6.98	4.41	0.23	0.30	0.04	0.06	0.25	0.25
D.C.	311.84	105.55	63.28	25.10	0.20	0.24	0.03	0.09	0.11	0.18
Mean	96.05	39.55	30.11	16.35	0.37	0.43	0.03	0.06	0.27	0.32
SD	81.20	33.24	23.01	15.50	0.18	0.18	0.01	0.03	0.13	0.16
CV	0.85	0.84	0.76	0.95	0.48	0.41	0.44	0.41	0.48	0.49

Daily Stops and Frisks are reported per million residents. "Frisk Rate" is the proportion of stops that involved a frisk. "HR Gun" and "HR Overall" are hit rates, defined as the proportion of frisks resulting in the discovery of a firearm or any contraband, respectively. CV = Std Dev / Mean.

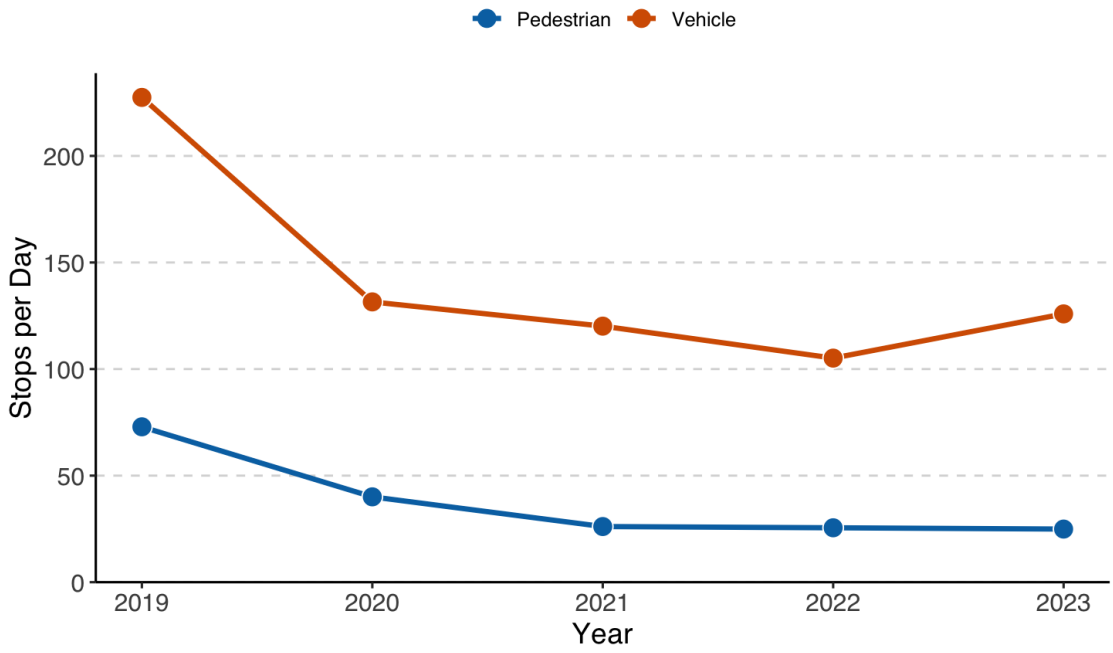
Table B2—: Summary Statistics for Vehicle Stops

	Daily Stops		Daily Searches		Search Rate		HR Guns		HR Overall	
City	2019	2023	2019	2023	2019	2023	2019	2023	2019	2023
Austin	395.76	99.08	9.30	4.54	0.02	0.05	—	—	0.22	0.19
Chicago	64.09	46.45	35.30	26.68	0.55	0.57	0.01	0.02	0.23	0.64
Cincinnati	279.18	178.68	78.21	23.73	0.28	0.13	—	—	0.59	0.55
Dallas	196.54	319.83	7.44	23.20	0.04	0.07	—	—	0.26	0.40
Fort Worth	82.84	77.12	1.69	1.50	0.02	0.02	—	—	0.25	0.21
Houston	388.84	375.17	19.78	12.01	0.05	0.03	—	—	0.31	0.40
Los Angeles	373.48	166.11	52.15	24.88	0.14	0.15	0.02	0.05	0.21	0.27
Milwaukee	229.63	131.02	12.69	6.11	0.06	0.05	—	—	0.29	0.37
Oakland	82.10	68.38	26.64	3.82	0.32	0.06	0.03	0.07	0.20	0.44
Philadelphia	846.41	239.13	78.10	25.98	0.09	0.11	0.03	0.07	0.14	0.17
San Diego	158.86	119.70	17.77	12.22	0.11	0.10	0.02	0.04	0.24	0.28
San Francisco	225.26	33.20	15.46	1.38	0.07	0.04	0.03	0.06	0.40	0.61
San Jose	71.21	63.76	14.40	11.82	0.20	0.19	0.01	0.02	0.37	0.26
D.C.	234.36	160.95	1.55	0.58	0.01	< 0.01	0.04	0.17	0.12	0.30
Mean	259.18	148.47	26.46	12.75	0.14	0.11	0.02	0.06	0.27	0.36
SD	197.53	98.67	24.71	9.79	0.15	0.14	0.01	0.05	0.11	0.15
CV	0.76	0.66	0.93	0.77	1.05	1.22	0.42	0.75	0.42	0.40

Daily Stops and Searches are reported per million residents. Search Rate is the proportion of stops that involved a search or a frisk. "HR Gun" and "HR Overall" are hit rates, defined as the proportion of searches and frisks resulting in the discovery of a firearm or any contraband, respectively. CV = Std Dev / Mean. CV = Std Dev / Mean.

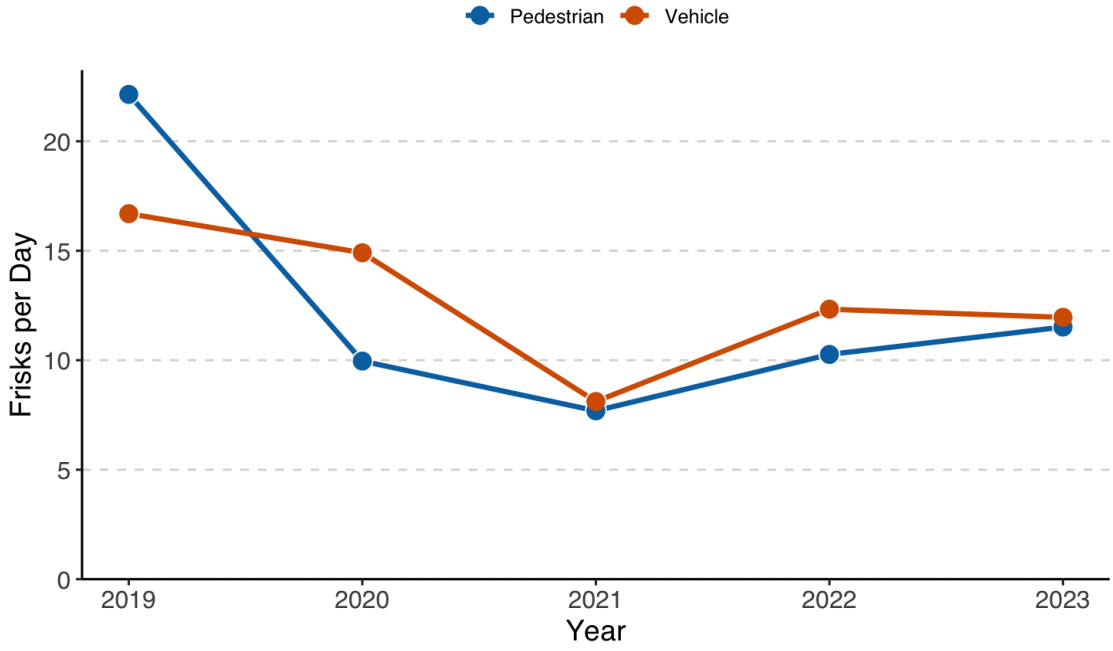
APPENDIX FIGURES

Figure C1. : Median Daily Stops for Pedestrian and Vehicle Stops, 2019–2023



Stops are daily per million residents.

Figure C2. : Median Daily Searches for Pedestrians and Vehicles, 2019–2023



Searches are daily per million residents.

Figure C3. : Mean Gun Hit Rates for Pedestrian and Vehicle Stops, 2019–2023

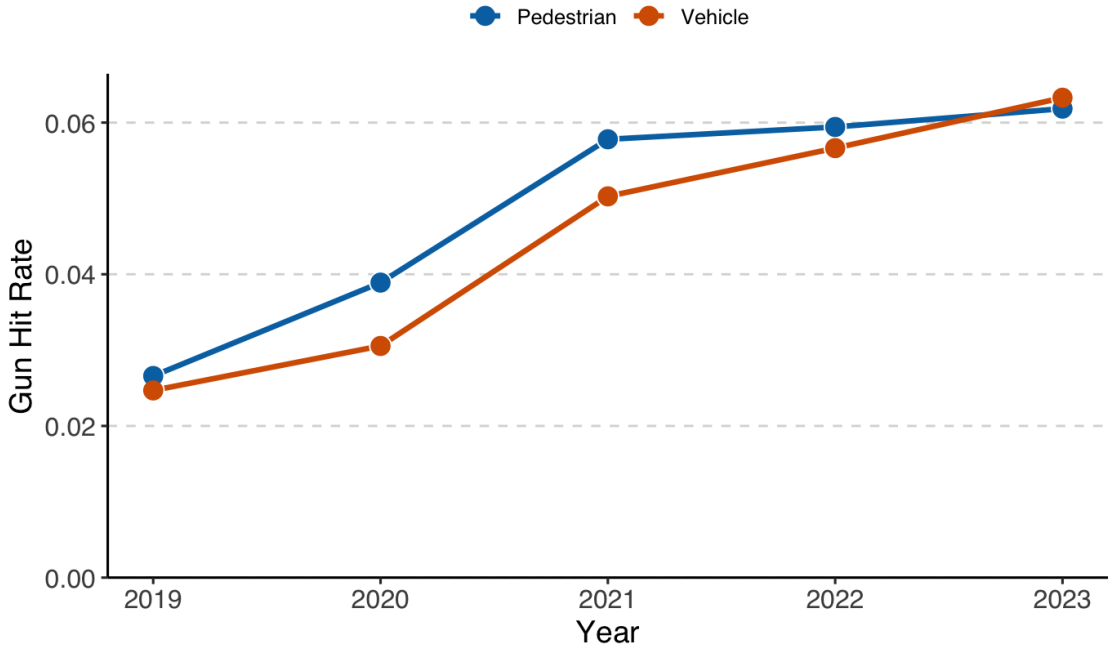


Figure C4. : Mean Contraband Hit Rates for Pedestrian and Vehicle Stops, 2019–2023