Complaints About Police Misconduct Have Adverse Effects for Black Civilians

Forthcoming in *Political Science Research and Methods*

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Introduction

Replication files and supplementary material for an article titled "Complaints About Police Misconduct Have Adverse Effects for Black Civilians," conditionally accepted at *Political Science Research and Methods*. The files described here can be found in the PSRM Dataverse.

Article abstract

One solution advanced in response to the problem of racial bias in law enforcement is the establishment of civilian oversight agencies (COAs) that receive and investigate civilian complaints about police misconduct. While there is a growing literature on the effectiveness of COAs in reducing racial bias and misconduct, little to no quantitative research explores possible adverse consequences of this accountability mechanism. Utilizing time series analysis of administrative data on aggregate monthly civilian complaint and police behavior in the largest American city, this article offers evidence of racial inequality in police response to civilian complaint. For White civilians, complaint against the police abates subsequent police stops. For Black civilians, complaint is associated with subsequent intensification of police stops. Additional analyses reveal that this surge only follows complaints against White officers, is conditional upon officer knowledge of the complaint, is confined to stops involving greater officer discretion to perform the stop, and is only observed in police precincts with large Black civilian populations.

Replication instructions

This repository contains all necessary R code and data sets to replicate or reproduce all reported statistical analyses presented in the main manuscript and the supplementary appendix. To facilitate a direct comparison with the original results, the repository additionally contains the output generated using each script on the author's system. Before executing the R code, please make sure that all dependencies are installed on your system (see all required packages listed in `00-func.R` and install missing packages via `install.packages()` in R). Please maintain the folder structure described below and set your working directory to the location of the R scripts (`00-func.R`, `01-analyses.R`, `02-appendix-a.R`, etc.). Each script can be executed individually to reproduce a specific set of analyses (see details below) or all of them can be run sequentially according to the file name numbering to reproduce every single step in the analysis sequence (see code below). Alternatively, all scripts can be executed by compiling this R Markdown file.

```
source("01-analyses.R")
source("02-appendix-a.R")
source("03-appendix-b.R")
source("04-appendix-c.R")
source("05-appendix-d.R")
```

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Folder structure & file description

- `00-func.R`: Load required packages and custom functions.
- `01-analyses.R`: Main analyses reported in manuscript.
- `02-appendix-a.R`: Additional robustness checks reported in the appendix.
- `03-appendix-b.R`: Additional robustness checks reported in the appendix.
- `04-appendix-c.R`: Additional robustness checks reported in the appendix.
- `05-appendix-d.R`: Additional robustness checks reported in the appendix.
- `sqf_ccrb.Rdata`: Data files; used as input for `01-analyses.R` and `02-appendix-a.R`, etc.
- `out/`: Folder containing all figures and tables reported in the main text (output generated by running `01-analyses.R`) as well as the appendix (output generated by running `02-appendix-a.R`, etc.). See details below.
  - `fig1_overview.png`: Figure 1. Monthly Stop, Question, Frisk incidents and CCRB complaints in New York City per month.
  - `fig2_main.png`: Figure 2. Association between lagged CCRB complaints and subsequent SQF incidents.
  - `fig3_orace.png`: Figure 3. Association between lagged CCRB complaints by Black civilians and subsequent SQF incidents involving Black suspects by officer race.
  - `fig4_subst.png`: Figure 4. Association between lagged CCRB complaints by Black civilians and subsequent SQF incidents involving Black suspects by CCRB disposition.
  - `fig5_discr.png`: Figure 5. Association between lagged CCRB complaints by Black civilians and subsequent SQF incidents involving Black suspects by documented reason for performing SQF.
  - `fig6_boro.png`: Figure 6. Association between lagged CCRB complaints by Black civilians and subsequent SQF incidents involving Black suspects by borough.
  - `fig7_pctrace.png`: Figure 7. Association between lagged CCRB complaints by Black civilians and subsequent SQF incidents involving Black suspects by police precinct Black population size.
  - `figA1_contemporaneous.png`: Figure A.1: Contemporaneous relationships between monthly change in different types of SQF incidents and monthly change in CCRB complaints.
  - `figA2_residuals.png`: Figure A.2: Time series of vector autoregression residuals for monthly changes in SQF incidents, CCRB complaints, and fingerprintable arrests based on the main models presented in Figure 2 of the main text.
  - `figA3_acf.png`: Figure A.3a: Autocorrelations of vector autoregression residuals for monthly changes in SQF incidents based on the main models presented in Figure 2 of the main text.
  - `figA4_pacf.png`: Figure A.3b: Autocorrelations of vector autoregression residuals for monthly changes in SQF incidents based on the main models presented in Figure 2 of the main text.
  - `figB1_altmatch.png`: Figure B.1: Replication Using Alternative Matching of Complaints.
  - `figB2_lag3.png`: Figure B.2: Replication Using Constant Lag Order of 3.
  - `figB3_lag5.png`: Figure B.3: Replication Using Constant Lag Order of 5.
  - `figB4a_impoview.png`: Figure B.4a: Monthly change in felonies reported to the NYPD over time.
  - `figB4b_impcoefs.png`: Figure B.4b: Replication Controlling for Crime (Reported Felonies).
  - `figB5_endomedia.png`: Figure B.5: Replication Controlling for Endogenous Media Coverage.
  - `figB6_2012.png`: Figure B.6: Replication Using Reduced Data (Prior to 2013).
  - `figB7_force.png`: Figure B.7: Replication Focusing on SQF Incidents Involving Use of Force.
  - `figB8_reverse.png`: Figure B.8: Temporal Placebo Test (Using Leads Instead of Lags).
  - `figC1_racialplacebo.png`: Figure C.1: Racial Placebo Test (Complaints by Whites against White Officers).
  - `figC2a_found.png`: Figure C.2a: Effect of lagged CCRB complaints on subsequent SQF incidents for SQF incidents involving where a contraband/weapon was found vs. not.
  - `figC2b_arrest.png`: Figure C.2b: Effect of lagged CCRB complaints on subsequent SQF incidents for SQF incidents involving arrest vs. no arrest.
  - `figC3_spatialplacebo.png`: Figure C.3: Spatial Placebo Test (in Brooklyn).
  - `figC4_pctincome.png`: Figure C.4: Controlling for Precinct Median Household Income.
  - `results.Rdata`: Model output estimated in `01-analyses.R`, used in `02-appendix-a.R` and `05-appendix-d.R`.

- `tabA1_grang_ccrb.tex`: Table A.1: Granger causality tests of change in SQF incidents predicting subsequent change in CCRB complaints.
- `tabA2_grang_sqf.tex`: Table A.2: Granger causality tests of change in CCRB complaints predicting subsequent change in SQF incidents.
- `tabA3_stationarity.tex`: Table A.3: Tests for unit roots vs. stationarity in monthly SQF incidents, CCRB complaints, and arrest time series.
- `tabA4_stationarity_controls.tex`: Table A.4: Tests for unit roots vs. stationarity in time series used as exogenous control variables.
- `tabA5_gecm.tex`: Table A.5: Test for cointegration based on Generalized Error Correction Models (GECMs).
- `tabD01_total.tex`: Table D.1: Vector autoregression of monthly changes in total SQF incidents, monthly changes in total CCRB complaints, and monthly changes in total arrests.
- `tabD02_white.tex`: Table D.2: Vector autoregression of monthly changes in SQF incidents involving whites, monthly changes in CCRB complaints by whites, and monthly changes in total arrests.
- `tabD03_black.tex`: Table D.3: Vector autoregression of monthly changes in SQF incidents involving blacks, monthly changes in CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD04_hispanic.tex`: Table D.4: Vector autoregression of monthly changes in SQF incidents involving Latinos, monthly changes in CCRB complaints by Latinos, and monthly changes in total arrests.
- `tabD05_orace_po.tex`: Table D.5: Vector autoregression of monthly changes in SQF incidents involving blacks, monthly changes in CCRB complaints by blacks about non-white officers, and monthly changes in total arrest.
- `tabD06_orace_pw.tex`: Table D.6: Vector autoregression of monthly changes in SQF incidents involving blacks, monthly changes in CCRB complaints by blacks about white officers, and monthly changes in total arrests.
- `tabD07_subst1.tex`: Table D.7: Vector autoregression of monthly changes in SQF incidents involving blacks, monthly changes in CCRB complaints by blacks that did not involve officer contact, and monthly changes in total arrests.
- `tabD08_subst2.tex`: Table D.8: Vector autoregression of monthly changes in SQF incidents involving blacks, monthly changes in unsubstantiated CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD09_subst3.tex`: Table D.9: Vector autoregression of monthly changes in SQF incidents involving blacks, monthly changes in substantiated CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD10_invest0.tex`: Table D.10: Vector autoregression of monthly changes in SQF incidents involving blacks without an ongoing investigation, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD11_invest1.tex`: Table D.11: Vector autoregression of monthly changes in SQF incidents involving blacks in the context of an ongoing investigation, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD12_report0.tex`: Table D.12: Vector autoregression of monthly changes in SQF incidents involving blacks without a report by a witness/victim, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD13_report1.tex`: Table D.13: Vector autoregression of monthly changes in SQF incidents involving blacks due to a report by a victim/witness, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD14_proxim0.tex`: Table D.14: Vector autoregression of monthly changes in SQF incidents involving blacks not in the proximity of a scene of offense, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD15_proxim1.tex`: Table D.15: Vector autoregression of monthly changes in SQF incidents involving blacks in the proximity of a scene of offense, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.

- `tabD16_vcrime_cs0.tex`: Table D.16: Vector autoregression of monthly changes in SQF incidents involving blacks where no violent crime was observed, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD17_vcrime_cs1.tex`: Table D.17: Vector autoregression of monthly changes in SQF incidents involving blacks where a violent crime was observed, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD18_sights0.tex`: Table D.18: Vector autoregression of monthly changes in SQF incidents involving blacks without signs or sounds of a criminal activity, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.
- `tabD19_sights1.tex`: Table D.19: Vector autoregression of monthly changes in SQF incidents involving blacks due to signs or sounds of a criminal activity, monthly changes in total CCRB complaints by blacks, and monthly changes in total arrests.

Information About the R Session

```
sessionInfo()
```

```
## R version 4.3.1 (2023-06-16)
## Platform: x86_64-pc-linux-gnu (64-bit)
## Running under: Ubuntu 22.04.3 LTS
##
## Matrix products: default
## BLAS:   /usr/lib/x86_64-linux-gnu/blas/libblas.so.3.10.0
## LAPACK: /usr/lib/x86_64-linux-gnu/lapack/liblapack.so.3.10.0
##
## locale:
##  [1] LC_CTYPE=en_US.UTF-8       LC_NUMERIC=C
##  [3] LC_TIME=en_US.UTF-8        LC_COLLATE=en_US.UTF-8
##  [5] LC_MONETARY=en_US.UTF-8    LC_MESSAGES=en_US.UTF-8
##  [7] LC_PAPER=en_US.UTF-8       LC_NAME=C
##  [9] LC_ADDRESS=C               LC_TELEPHONE=C
## [11] LC_MEASUREMENT=en_US.UTF-8 LC_IDENTIFICATION=C
##
## time zone: Europe/Madrid
## tzcode source: system (glibc)
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
##  [1] Amelia_1.8.1      Rcpp_1.0.10       xtable_1.8-4      lubridate_1.9.2
##  [5] forcats_1.0.0     stringr_1.5.0     dplyr_1.1.2       purrr_1.0.1
##  [9] readr_2.1.4       tibble_3.2.1      ggplot2_3.4.2     tidyverse_2.0.0
## [13] tidyr_1.3.0       gridExtra_2.3     vars_1.5-9        urca_1.3-3
## [17] strucchange_1.5-3 MASS_7.3-60       sandwich_3.0-1    lmtest_0.9-40
## [21] zoo_1.8-12        forecast_8.21     tseries_0.10-49   here_1.0.1
##
## loaded via a namespace (and not attached):
##  [1] gtable_0.3.3      xfun_0.39         lattice_0.21-8    tzdb_0.3.0
##  [5] quadprog_1.5-8    vctrs_0.6.2       tools_4.3.1       generics_0.1.3
##  [9] curl_5.0.0        parallel_4.3.1    fansi_1.0.4       xts_0.13.1
## [13] pkgconfig_2.0.3   lifecycle_1.0.3   farver_2.1.1      compiler_4.3.1
## [17] textshaping_0.3.6 munsell_0.5.0     htmltools_0.5.5   yaml_2.3.7
## [21] pillar_1.9.0      nlme_3.1-162      fracdiff_1.5-2    tidyselect_1.2.0
```

```
## [25] digest_0.6.31     stringi_1.7.12    labeling_0.4.2    rprojroot_2.0.3
## [29] fastmap_1.1.1     grid_4.3.1        colorspace_2.1-0  cli_3.6.1
## [33] magrittr_2.0.3    utf8_1.2.3        foreign_0.8-82    withr_2.5.0
## [37] scales_1.2.1      timechange_0.2.0  TTR_0.24.3        rmarkdown_2.21
## [41] quantmod_0.4.18   nnet_7.3-19       timeDate_3043.102 ragg_1.2.5
## [45] hms_1.1.3         evaluate_0.20     knitr_1.42        rlang_1.1.1
## [49] glue_1.6.2        rstudioapi_0.14   R6_2.5.1          systemfonts_1.0.4
```