Replication package

Christoph Koenig & David Schindler, *Impulse Purchases, Gun Ownership, and Homicides: Evidence from a Firearm Demand Shock*

1 Structure of replication package

./Data/Raw Contains all datasets created by the authors using publicly available data. See below for additional public and restricted data.

./Data/R Contains all R objects (apart from those using restricted data) necessary for replication of the results.

./Export Contains all software-generated figures and tables from the main paper and appendix.

./R This folder contains the two R scripts used for the data construction and analysis. Both were written and executed using R version 3.6.1.

2 Contents of `./Export`

2.1 Figures (.eps)

Number	File name
1	`graph_nics_medium`
2	`map_sample_nvss`
3a	`diffplot_log_bgc_handgun_pc_anydelay_dummy_normal`
3b	`diffplot_log_homicide_pc_anydelay_dummy_normal`
4a	`coefplot_events_qd12_bgc_handgun_pc_anydelay_dummy`
4b	`coefplot_events_qd12_homicide_gun_pc_anydelay_dummy`
5-11	`NICS/graph_nics_state_XX`
12	`map_sample_ucr`
13	`coefplot_events_d12_gunowners_rand_pc_anydelay_dummy`
14	`coefplot_leaveout_d12_bgc_handgun_pc_anydelay_dummy_X_post1`
15	`coefplot_leaveout_d12_bgc_handgun_pc_anydelay_dummy_X_post2`
16	`coefplot_sfl_d12_bgc_handgun_pc_anydelay_dummy_X_post1`
17	`coefplot_sfl_d12_bgc_handgun_pc_sfl_2011_X_post1`

18	coefplot_leaveout_d12_homicide_gun_pc_anydelay_dummy_X_post1
19	coefplot_sfl_d12_homicide_gun_pc_anydelay_dummy_X_post1
20	coefplot_sfl_d12_homicide_gun_pc_sfl_2011_X_post1
21	map_sample_gunshows
22	coefplot_events_qd12_gunshows_pc_anydelay_dummy
23	diffplot_bgc_handgun_pc_anydelay_dummy
24	diffplot_homicide_pc_anydelay_dummy
25	diffplot_d12_bgc_handgun_pc_anydelay_dummy
26	diffplot_d12_homicide_pc_anydelay_dummy
27	coefplot_events_qlog_bgc_handgun_pc_anydelay_dummy
28	diffplot_log_searches_gunstore_anydelay_dummy
29	coefplot_events_qlog_homicide_gun_pc_anydelay_dummy
30	coefplot_events_qd12_homicide_nogun_pc_anydelay_dummy
31	coefplot_events_d12_bgc_handgun_pc_anydelay_dummy
32	coefplot_events_d12_homicide_gun_pc_anydelay_dummy

2.2 Tables (.tex)

Number	**File name**
1	results_weapons_base
2	results_weapons_length
3	results_crime_base
4a	results_crime_sex
4b	results_crime_place
4c	results_crime_circum
5	N/A (Authors' work)
6	N/A (Authors' work)
7	results_weapons_addcontrol
8	results_weapons_rand
9	results_weapons_placebo
10	results_weapons_sample
11	results_weapons_levels
12	results_weapons_weights
13	results_weapons_fed
14	results_weapons_cluster
15	results_crime_addcontrol

16	`results_crime_placebo`
17	`results_crime_sample`
18	`results_crime_levels`
19	`results_crime_weights`
20	`results_crime_fed`
21	`results_crime_cluster`
22	`results_crime_state`
23	`results_crime_violent`
24	`results_crime_gunpref`
25	`results_crime_mortality`
26	`results_gunshows_base`
27	N/A (Authors' work)
28	`results_google_gunstore`
29	`results_weapons_cost`
30	`sumstat`
31	`ttstat`
32	`results_crime_age`
33	`results_crime_race`
34	`results_crime_datasets`
35	`results_weapons_length2`

3 Replicating results

- Open `./R/guns_20210801_analysis.R`
- The script has an extensive preamble which needs to be executed first in order to replicate the results.
- The preamble also loads the objects stored in `./Data/R`
- The R script is written as if the objects `nvss` and `nvss.state`, which contain restricted-use data, were stored in `./Data/R`. Access to this data generally requires approval by the National Center for Health Statistics. See the hyperlink *NVSS Restricted-Use Mortality Data* below for further information on how to obtain this data and `./R/guns_20210801_data.R` on how we used it to constructed `nvss` and `nvss.state`.

- The replication is ordered by main text and appendices and by figures and tables within those.
- Each replication chunk has its own small preamble which needs to be executed first before running `exec.loop()`

4 Contents of `./Data/R` (.RData)

Object	Description
county.controls	County level control variables
google	Weekly state level Google data
google2	Monthly state level Google data
gun.laws	State level variables related to gun legislation
gunshows	Monthly county level gunstore data
gunshows.xy	Spatial points dataframe of gunshow locations
map.counties	Spatial polygon dataframe of U.S. counties
map.country	Spatial polygon dataframe of entire U.S.
map.states	Spatial polygon dataframe of U.S. states
nics	Monthly state level data of NICS background checks
nosfl	List of gun laws in Siegel et al. (2017) excluded from the analyses in Figures 16, 17, 19, and 20
rand	Yearly state level data of RAND gun ownership estimates
sample.drop	State level data containing sample definitions for NICS data
state.controls	State level control variables
ucr	Monthly county level UCR crime data

5 Data construction

- Open `./R/guns_20210801_data.R`
- The Dataverse contains only raw datasets which are created by the authors from publicly available data
- All other datasets are referenced in `./R/guns_20210801_data.R` using the `datapath` variable but paths (and names) generally need to be adapted accordingly by the user
- Guidance on where to obtain the raw data not included in the Dataverse is described under *Raw data sources*

6 Raw data sources

File	Origin (Link)
02565-0001-Data.dta	ICPSR 02565
laws_sources.xlsx	Compiled by authors (sources listed in file)
DATABASE.and_.CODEBOOK.xlsx	Siegel et al. (2017)
brady_2011.xlsx	Brady campaign (via WaybackMachine)
sample_restrictions.xlsx	Compiled by authors
county_changes.xlsx	Census Bureau
POP01.xls	Census Bureau
POP02.xls	Census Bureau
CLF01.xls	Census Bureau
DECENNIALSF12010.P2_data_with_overlays.csv	Census Bureau
DECENNIALSF12010.P12_data_with_overlays.csv	Census Bureau
Poverty-Rates-by-County-1960-2010.xlsm	Census Bureau
table3a.xls	Census Bureau
countypres_2000-2016.csv	MEDSL
alaska_rrh.xlsx	RRH Elections
coincident-revised.xls	FED
0812-ffl-list.txt	ATF (via WaybackMachine)
zcta_county_rel_10.txt	Census Bureau
TL-354-State-Level Estimates of Household Firearm Ownership.xlsx	RAND
Gunshows_raw.csv	Gun Show Monster
POP_PLACES_20160201.txt	USGS
Gunshows_corrections.csv	Compiled by authors
nics.xlsx	NICS
35158-0001-Data.tsv	ICPSR 35158
ori_corrections.csv	Compiled by authors
25101-0001-Data.tsv	ICPSR 25101
27648-0001-Data.tsv	ICPSR 27648
30766-0001-Data.tsv	ICPSR 30766
33526-0001-Data.tsv	ICPSR 33526
34586-0001-Data.tsv	ICPSR 34586

35021-0001-Data.tsv	ICPSR 35021
36122-0001-Data.tsv	ICPSR 36122
36391-0001-Data.tsv	ICPSR 36391
25103-0001-Data.tsv	ICPSR 25103
27650-0001-Data.tsv	ICPSR 27650
30767-0001-Data.tsv	ICPSR 30767
33527-0001-Data.tsv	ICPSR 33527
34588-0001-Data.tsv	ICPSR 34588
35023-0001-Data.tsv	ICPSR 35023
36124-0001-Data.tsv	ICPSR 36124
36393-0001-Data.tsv	ICPSR 36393
nvss_vars.xlsx	Compiled by authors
MULT2007.USPART2	NVSS Restricted-Use Mortality Data
MULT2008.USPART2	NVSS Restricted-Use Mortality Data
MULT2009.USPART2	NVSS Restricted-Use Mortality Data
MULT2010.USPART2	NVSS Restricted-Use Mortality Data
MULT2011.USPART2	NVSS Restricted-Use Mortality Data
MULT2012.USPART2	NVSS Restricted-Use Mortality Data
MULT2013.USPART2	NVSS Restricted-Use Mortality Data
MULT2014.USPART2	NVSS Restricted-Use Mortality Data
nvss_county_20191013.RData	Derivative file from Restricted-Use Mortality Data (see above)
state_gunstore_daily.csv	Scraped from Google Trends and processed in R by authors
state_gunshow_daily.csv	Scraped from Google Trends and processed in R by authors
gz_2010_us_050_00_20m.shp	Census Bureau