README for "Inside the Box: Safety, Health, and Isolation in Prison"

Overview

The code in this replication package constructs tables and figures from a variety of analysis datasets provided in Stata and R.

Data Availability and Provenance Statements

- ☐This paper does not involve analysis of external data (i.e., no data are used or the only data are generated by the authors via simulation in their code).

Statement about Rights

- ☒ I certify that the author(s) of the manuscript have legitimate access to and permission to use the data used in this manuscript.

License for Data

The data are licensed under a Creative Commons license. See LICENSE.txt for details.

Summary of Availability

- ☐All data **are** publicly available.
- ☒Some data **cannot be made** publicly available.
- ☐**No data can be made** publicly available.

Details on each Data Source

Sourcebook of Criminal Justice Statistics Online Data

- Data on U.S. imprisonment were downloaded from Sourcebook of Criminal Justice Statistics Online **(University of Albany, 2012)**, Table 6.28.2012. Data can be downloaded from https://www.albany.edu/sourcebook/pdf/t6282012.pdf. A copy of the data is provided as part of this archive. The data are in the public domain.

Datafile: mass incarceration.xlsx

Bureau of Justice Statistics Report Data

- Data on Bureau of Justice Statistics report were downloaded from Ann Carson (2020), Prisoners in 2019 (NCJ 255115). A copy of the data is provided as part of this archive. The data are in the public domain.

Datafile: mass incarceration.xlsx

Jail Inmates in 2018

- Data on annual jail counts were downloaded from Zhen Zeng (2020), Jail Inmates in 2018 (NCJ 253044). Data can be downloaded from

https://www.bjs.gov/content/pub/pdf/ji18.pdf. A copy of the data is provided as part of this archive. The data are in the public domain.

Datafile: mass incarceration.xlsx

U.S. Bureau of Economic Analysis, Population FRED Data

- Data on U.S. population were downloaded from FRED, Federal Reserve Bank of St. Louis (U.S. Bureau of Economic Analysis, 2021). Data can be downloaded from https://fred.stlouisfed.org/series/B230RC0A052NBEA. A copy of the data is provided as part of this archive. The data are in the public domain.

Datafile: mass incarceration.xlsx

World Prison Population List

- Data on U.S. population were downloaded from Institute for Criminal Policy Research (2021). Data can be downloaded from https://www.prisonstudies.org/world-prison-brief-data. A copy of the data is provided as part of this archive. The data are in the public domain.

Datafile: mass incarceration.xlsx

Western, B. and Pettit, B Data

- Data on cumulative risk figures were taken from Western and Pettit (2010), Incarceration & social inequality. Daedalus, 139(3), pp. 8-19. A copy of the data is provided as part of this archive.

Datafile: mass incarceration.xlsx

Survey of Prison Inmates Data

- Data on self-reported program participation were downloaded from the Surveys of Inmates of State Correctional Facilities (1986, 1991, 1997, 2004) - see Bureau of Justice Statistics (1994, 2004a, 2004b, 2006, 2019).

Datafile: - spi86to16.dta - spi_violence.dta

Prison homicide data

- Data on Prison homicide were downloaded from the BJS publication by E. Ann Carson, Mary P. Cowhig (2020), Mortality in State And Federal Prisons, 2001-2016 Statistical Tables (NCJ 251920). Data can be downloaded from https://www.bjs.gov/content/pub/pdf/msfp0116st.pdf A copy of the data is provided as part of this archive. The data are in the public domain.

Datafiles: - msfp0116stt02data.csv - msfp0116stt09data.csv

National Center for Health Statistics Data

- Data on General population data on firearm and non-firearm homicide victimization were downloaded from the National Center for Health Statistics (NCHS, 2021) at the Centers for Disease Control and Prevention (CDC). Data can be downloaded from the

CDC Wonder data extraction tool (https://www.cdc.gov/nchs/fastats/homicide.htm). A copy of the data is provided as part of this archive. The data are in the public domain.

- Datafiles: - Underlying Cause of Death, 1999-2019 homicide gun.txt - Underlying Cause of Death, 1999-2019 homicide.txt

COVID Prison Project

- National time series and state-level COVID-19 case rates in prison were supplied from the Covid Prison Project (https://covidprisonproject.com) by Lauren Brinkely-Rubinstein (UNC Chapel Hill) and Kathryn Nowotny (University of Miami). A copy of the data is provided as part of this archive.

(PROVIDE CORRECT CITATION)

Datafiles: - COVID-19 Cases in State and Federal Prison Systems.csv - covidts01.csv

COVID Tracking Project Data

- Data on COVID-19 case rates for each state were downloaded from The Covid Tracking Project (https://covidtracking.com). A copy of the data is provided as part of this archive. State population data were obtained from U.S. Census Bureau estimates for 2020 (https://www.census.gov/programs-surveys/popest/technical-documentation/research/evaluation-estimates/2020-evaluation-estimates/2010s-state-total.html)

Datafiles - all-states-history.csv - statepop.csv

Pennsylvania Department of Corrections Data

- The data for Pennsylvania state prisons are confidential, but may be obtained with Data Use Agreements with the Pennsylvania Department of Corrections. The data were obtained under Harvard University IRB Protocol # IRB16-1848. Researchers interested in access to the data may contact Bret Bucklen at kbucklen@pa.gov, also see https://www.cor.pa.gov/About%20Us/Statistics/Pages/default.aspx. It can take time to negotiate data use agreements and gain access to the data. The author will assist with any reasonable replication attempts for two years following publication.

Dataset list

Data File	Source	Notes	Provided
mass incarceration.xlsx	Sourcebook of Criminal Justice Statistics, Bureau of Justice Statistics Report, Jail Inmates in 2018, U.S. Population FRED Data, World Prison Population Data, and Western B. and Pettit B data	Combines multiple data sources, serves as input for Figure 1	Yes

spi86to16.dta	Survey of Prison Inmates Data	Input for Figure 2	Yes
spi_violence.dta	Survey of Prison Inmates Data	Used for analyzing Table 1	Yes
msfp0116stt02data.csv, msfp0116stt09data.csv	Prison Homicide Data	Used for analyzing Table 1	Yes
Underlying Cause of Death, 1999-2019 homicide.txt, Underlying Cause of Death, 1999-2019 homicide gun.txt	National Center for Health Statistics Data on Homicide	Used for analyzing Table 1	Yes
all-states-history.csv	COVID Prison Project / COVID Tracking Project Data	Input for Figure 4	Yes
statepop.csv	COVID Prison Project / COVID Tracking Project Data	Input for Figure 4	Yes
COVID-19 Cases in State and Federal Prison Systems.csv	COVID Prison Project / COVID Tracking Project Data	Input for Figure 4	Yes
covidts01.csv	COVID Prison Project / COVID Tracking Project Data	Input for Figure 3	Yes
analysis_data_finalv11.dta	Pennsylvania Inmate Data 2007-2016	Input for Figure 5	Confidential

Computational requirements

Software Requirements

- Stata (code was last run with version 14.2)
- R 4.0.0

Memory and Runtime Requirements

Summary

Approximate time needed to reproduce the analyses on a standard 2021 desktop machine:

- ☒ <10 minutes
- ☐10-60 minutes
- ☐1-8 hours
- ☐8-24 hours

- ☐1-3 days
- ☐3-14 days
- ☐> 14 days
- ☐Not feasible to run on a desktop machine, as described below.

Details

The code was last run on a **4-core Intel-based laptop with MacOS version 11.6**.

Description of programs/code -

- There is one Stata do file and three R scripts provided.
- Run `figure01.R` to construct Figure 1, Figure 2, Figure 5, and Table 2
- Run `violence01.do` and `violence01.R` to create tabulations analyzed in Table 1
- Run `covid01.R` to construct Figure 3 and Figure 4

License for Code

The code is licensed under a BSD 3-Clause license. See LICENSE.txt for details.

Instructions to Replicators

1. Edit directory path for figure01.R and then run code.
2. Edit directory path for violence01.do and then run code.
3. Edit directory path for violence01.R and then run code.
4. Edit directory path for covid01.R and then run code.

Details

- mass incarceration.xlsx: spreadsheet with data for Figure 1
- spi86to16.dta: Stata dataset with extracts of Survey of Inmates of State Correctional Facilities reported in Figure 2
- figure01.R: R script creating Figure 1, Figure 2, Figure 5, and Table 2
- msfp0116stt02data.csv: prison mortality data analyzed in Table 1
- msfp0116stt09data.csv: prison mortality data analyzed in Table 1
- spi_violence.dta: Survey of Prison Inmates (2016) analyzed in Table 1
- ncvs2016.dta: extract of National Crime Victimization Survey (2016) analyzed in Table 1

- Underlying Cause of Death, 1999-2019 homicide gun.txt: analyzed in Table 1
- Underlying Cause of Death, 1999-2019 homicide.txt: analyzed in Table 1
- violence01.do: Stata do file creating tabulations analyzed for Table 1
- violence01.R: R script creating infraction and victimization rates reported in Table 1
- covidts01.csv: national COVID-19 case rate time series for Figure 4
- COVID-19 Cases in State and Federal Prison Systems.csv: state COVID-19 case rates reported in Figure 4
- statepop.csv: 2020 state population data for Figure 3
- covid01.R: R script to construct Figure 3 and Figure 4

List of tables and programs

The provided code reproduces:

- ☐All numbers provided in text in the paper
- ☒All tables and figures in the paper
- ☐Selected tables and figures in the paper, as explained and justified below.

Table #	Program	Output File
Table 1	violence01.do, violence01.R	Not indicated
Table 2	figure01.R	Not indicated
Figure #	**Program**	**Output File**
Figure 1	figure01.R	ts01.pdf
Figure 2	figure01.R	programs.pdf
Figure 3	covid01.R	covidts.pdf
Figure 4	covid01.R	covidcr.pdf
Figure 5	figure01.R	density01r.pdf

References

- Bureau of Justice Statistics. 1994. Survey of Inmates of State Correctional Facilities, 1986. Inter- University Consortium for Political and Social Research, Ann Arbor, MI. ICPSR8711. https://doi. org/10.3886/ICPSR08711.v2.

- Bureau of Justice Statistics. 2004a. Survey of Inmates of State Correctional Facilities, 1991. Inter-University Consortium for Political and Social Research, Ann Arbor, MI. ICPSR6068. https://doi. org/10.3886/ICPSR06068.v1.
- Bureau of Justice Statistics. 2004b. Survey of Inmates of State and Federal Correctional Facilities, 1997. Inter-University Consortium for Political and Social Research, Ann Arbor, MI. ICPSR2598. https:// doi.org/10.3886/ICPSR02598.v1.
- Bureau of Justice Statistics. 2006. Survey of Inmates of State and Federal Correctional Facilities, 1997. Inter-University Consortium for Political and Social Research, Ann Arbor, MI. ICPSR2598. https:// doi.org/10.3886/ICPSR02598.v1.
- Bureau of Justice Statistics. 2019. Survey of Inmates of State and Federal Correctional Facilities, 2004. Inter-University Consortium for Political and Social Research, Ann Arbor, MI. ICPSR4572. https://doi.org/10.3886/ICPSR04572.v6.
- Bureau of Justice Statistics. 2020. National Crime Victimization Survey, 2016. Inter-University Consortium for Political and Social Research, Ann Arbor, MI. ICPSR37296 https://doi.org/10.3886/ICPSR37296.v2.
- Bureau of Justice Statistics. 2021. Survey of Prison Inmates, United States, 2016. Inter-University Consortium for Political and Social Research, Ann Arbor, MI. ICPSR4572. https://doi.org/10.3886/ ICPSR37692.v4.
- Carson, E. Ann (2020, October). Prisoners in 2019. Bureau of Justice Statistics. https://bjs.ojp.gov/content/pub/pdf/p19.pdf, accessed on October 11, 2021.
- Carson, E. Ann, and Mary P. Cowhig. 2020. Mortality in State and Federal Prisons, 2001–2016 – Statistical Tables. Washington, DC: US Department of Justice.
- COVID Prison Project (2020). COVID-19 in Correctional Facilities. Commissioned by the Committee on Best Practices for Implementing Decarceration as a Strategy for Mitigating the Spread of COVID-19 in Correctional Facilities. The National Academies of Sciences, Engineering, and Medicine, Washington, DC.
- COVID Tracking Project (2021). The COVID Tracking Project: All States (https://covidtracking.com), Accessed September 8, 2020.
- Institute for Crime & Justice Policy Research. 2021. World Prison Brief, World Prison Population List, https://www.prisonstudies.org/world-prison-brief-data, accessed January 30, 2021.
- National Center for Health Statistics. 2021. Underlying Cause of Death. Public-use data file and documentation. https://www.cdc.gov/nchs/fastats/homicide.htm. Downloaded on April 2, 2021
- Pennsylvania Department of Corrections. 2018. Inmate Data 2007-2016 [confidential datafile]. Obtained by Data Use Agreement on 2019-08-01

- U.S. Bureau of Economic Analysis, Population [B230RC0A052NBEA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/B230RC0A052NBEA, accessed on April 2, 2021
- U.S. Census Bureau Annual Estimates of the Resident Population for the United States, Regions, States, the District of Columbia, and Puerto Rico: April 1, 2010 to July 1, 2019; April 1, 2020; and July 1, 2020 (NST-EST2020); https://www.census.gov/programs-surveys/popest/technical-documentation/research/evaluation-estimates/2020-evaluation-estimates/2010s-state-total.html, accessed on January 22, 2021
- University at Albany, Hindelang Criminal Justice Research Center, Sourcebook of Criminal Justice Statistics. Table 6.28.2012. Available: (https://www.albany.edu/sourcebook/pdf/t6282012.pdf) [Accessed April 2, 2021].
- University at Albany, Hindelang Criminal Justice Research Center, Sourcebook of Criminal Justice Statistics. Table Table 6.1.2011. Available: (https://www.albany.edu/sourcebook/pdf/t612011.pdf) [Accessed April 2, 2021].
- Western, B. and Pettit, B., 2010. Incarceration & social inequality. Daedalus, 139(3), pp. 8-19.
- Zeng, Z. (2020, March). Jail Inmates in 2018. Bureau of Justice Statistics. Retrieved October 11, 2021, from https://bjs.ojp.gov/content/pub/pdf/ji18.pdf.