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Fall 2022

Replication Assignment

# Abstract

In this paper, I replicate the analysis of Green and Winik in their 2010 study, “Using random judge assignment to estimate the effects of incarceration and probation on recidivism among drug offenders”. Green and Winik analyze a natural experiment in which 1003 defendants charged with drug-related offenses are assigned to nine judicial calendars, each correlated with a single judge of the DC Superior Court, between June 1, 2002 and May 9, 2003. They argue that judges’ sentencing behaviors varied sufficiently such that random assignment to their court calendars serves as an instrumental variable to measure the causal impact of one month of incarceration on recidivism rates.

I additionally consider Roodman’s replication analysis in his paper, “The impacts of incarceration on crime,” in which he explores, among other areas, measures of weak instruments and the effect of the definition of the follow-up interval on the estimated impact of incarceration.

Finally, I examine the distributions…

# Data and Measures

*Data.* Green and Winik compile the data from public lockup lists and case file records from the DC Superior court, supplemented by the Court’s public electronic case management database. They restrict observations to defendants charged with at least one felony drug offense or non-drug-related misdemeanors (e.g. panhandling or public intoxication) between June 1, 2002 and May 9, 2003. In order to avoid exposure to multiple treatments (i.e. multiple judges), they additionally exclude a small number of instances when a defendant was sentenced or disposed for multiple cases simultaneously.

*Sentencing*. Green and Winik measure sentences using continuous and binary variables. Possible sentences within the data include incarceration (*incarc* in months), probation (*probat* in months), or both. While probation may be sentenced independently of incarceration, frequently, a pre-defined portion of the defendant’s incarceration is indefinitely suspended (*suspend* in months) to be imposed if the defendant fails to comply with the conditions of their probation. Green and Winik estimate a defendant’s time imprisoned (*toserve* in months) as the difference between *incarc* and *probat*.

Dictionary table?

*Recidivism*. Green and Winik track recidivism as a binary indicator of rearrest (*laterarr*) within four years from the defendant’s initial disposition in the data. For robustness, they additionally code binaries that describe types of arrests and convictions. Green and Winik note that starting the follow-up period on the date of disposition confounds the effects on recidivism of deterrence and incapacitation. However, they argue that this effect should be small given that 97.8% of the defendants had at least one year to recidivate upon release within the timeframe of the study. Roodman examines the sensitivity of the results to the definition of the follow-up period as four years by repeating the analysis while varying the follow-up interval from 2 days to 4 years from the initial date of disposition, which will be discussed below.

Covariates.