To End Mass Incarceration
We Need Big Data

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Growth of imprisonment in the USA

Comparative Cross-National Perspective

Homicide and prison rates in selected countries

The degree of civilization in a society can be judged by entering its prisons
- Fyodor Dostoevsky
Koch and Soros don’t agree on anything ... but they agree it’s time to end mass incarceration.
Criminal justice reform has strong bipartisan support.

*Senate Passes Bipartisan Criminal Justice Bill*

The First Step Act would expand job training and other programming aimed at reducing recidivism rates among federal prisoners. It also expands early-release programs and modifies sentencing laws, including mandatory minimum sentences for nonviolent drug offenders, to more equitably punish drug offenders.
12%
Since 88% of the prison population are in state prisons we should focus on state-level reforms.

Right?
Wrong.
In the United States, decisions about imprisonment take place at the local level of government: Counties and cities.
Solution to mass incarceration resides at the local level

• We need an evidence-based approach to support local CJ reforms
  a) **Descriptive evidence** about the *local processes* that feed the beast
  b) **Causal evidence** to support less punitive and more effective alternatives

• **Existing sources of criminal justice data do not even come close**
  • *We cannot even tell how many Americans have a felony conviction*
  • *Or how many citizens have been killed by the police*

• How do we create powerful data sets for policy relevant research?
Big Data to the Rescue!

• We employ **new methods of data science** to mine records available from a highly decentralized and fragmented system of administrative data sources

• How do we access these records?
  1) Public & available: **Web scraping**
  2) Public but not available: **FOIA + $$$**
  3) Confidential: Data Use Agreements with agencies

• How do we integrate these records?
  • Messy data: No unique identifiers (SS#), only PII (names, DOB)
  • Machine learning based probabilistic matching (entity resolution algorithms)
  • Trained against biometric identifiers (fingerprints): high precision rates (99%)
It’s already happening

Overview

The Criminal Justice Administrative Records System is creating a nationally integrated repository of data following individuals through the criminal justice system, linking with social and economic data.
ARTICLE

The Downstream Consequences of Misdemeanor Pretrial Detention

Paul Heaton, Sandra Mayson & Megan Stevenson

Abstract. In misdemeanor cases, pretrial detention poses a particular problem because it may induce innocent defendants to plead guilty in order to exit jail, potentially creating widespread error in case adjudication. While practitioners have long recognized this possibility, empirical evidence on the downstream impacts of pretrial detention on misdemeanor defendants and their cases remains limited. This Article uses detailed data on hundreds of thousands of misdemeanor cases resolved in Harris County, Texas—the third-largest county in the United States—to measure the effects of pretrial detention on case outcomes and future crime. We find that detained defendants are 25% more likely than similarly situated releasees to plead guilty, are 43% more likely to be sentenced to jail, and receive jail sentences that are more than twice as long on average. Furthermore, those detained pretrial are more likely to commit future crimes, which suggests that detention may have a criminogenic effect. These differences persist even after fully controlling for the initial bail amount, offense, demographic information, and criminal history characteristics. Use of more limited sets of controls, as in prior research, overstates the adverse impacts of detention. A quasi-experimental analysis based on case timing confirms that these differences likely reflect the causal effect of detention. These results raise important constitutional questions and suggest that Harris County could save millions of dollars per year, increase public safety, and reduce wrongful convictions with better pretrial release policy.

C. Data Description

Study data are derived from the court docket sheets maintained by the Harris County District Clerk. These docket sheets include the universe of unsealed criminal cases adjudicated in the county and document considerable detail regarding each case. This Article focuses on 380,689 misdemeanor cases filed between 2008 and 2013. For each case, the docket data include the defendant’s name, address, and demographic information; prior criminal history; and most serious charge. To obtain information about the neighborhood environment for each defendant, the court data were linked by the defendant’s zip code of residence—which was available for 85% of defendants—to zip code-level demographic data from the 2008-2012 American Community Survey. The docket data also report the time of the bail hearing; the bail amount; whether and when bail was posted, the judge and courtroom assignment; motions and other metrics of procedural progress; and the final case outcome, including whether the case was resolved through a plea.
Not an just an academic exercise

Judge in Houston Strikes Down Harris County’s Bail System

By ELI ROSENBERG  APRIL 29, 2017

The Harris County jail, right, and the courthouse in Houston. Activists say the county’s jail system detains about 500 people on misdemeanor charges on an average night. Michael Stravato for The New York Times
Small Steps with Big Data

- **Local environments** provide immediate opportunities for these kinds of research designs.

- Two recent examples from econometric literature:

Thank you

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END
Prison growth & crime decline
County prosecutors (District Attorney’s office) are key players

• Proliferation of felony case filings – the main source of continued increase in imprisonment
  • Crime is down, arrests are down, but felony charges are up

• Why? Huge growth in staffing and disparity in resources between prosecutors and public defenders: plea bargaining → prison

• Political realities and misaligned incentives
  • Prosecutors (DA) are elected by suburbs (affluent whites)
  • Prosecutors impose the law in urban areas (poor minorities)
  • Toughness gets you elected, leniency gets you voted out
  • Counties send convicts to prisons that are paid for by the state