To End Mass Incarceration We Need Big Data

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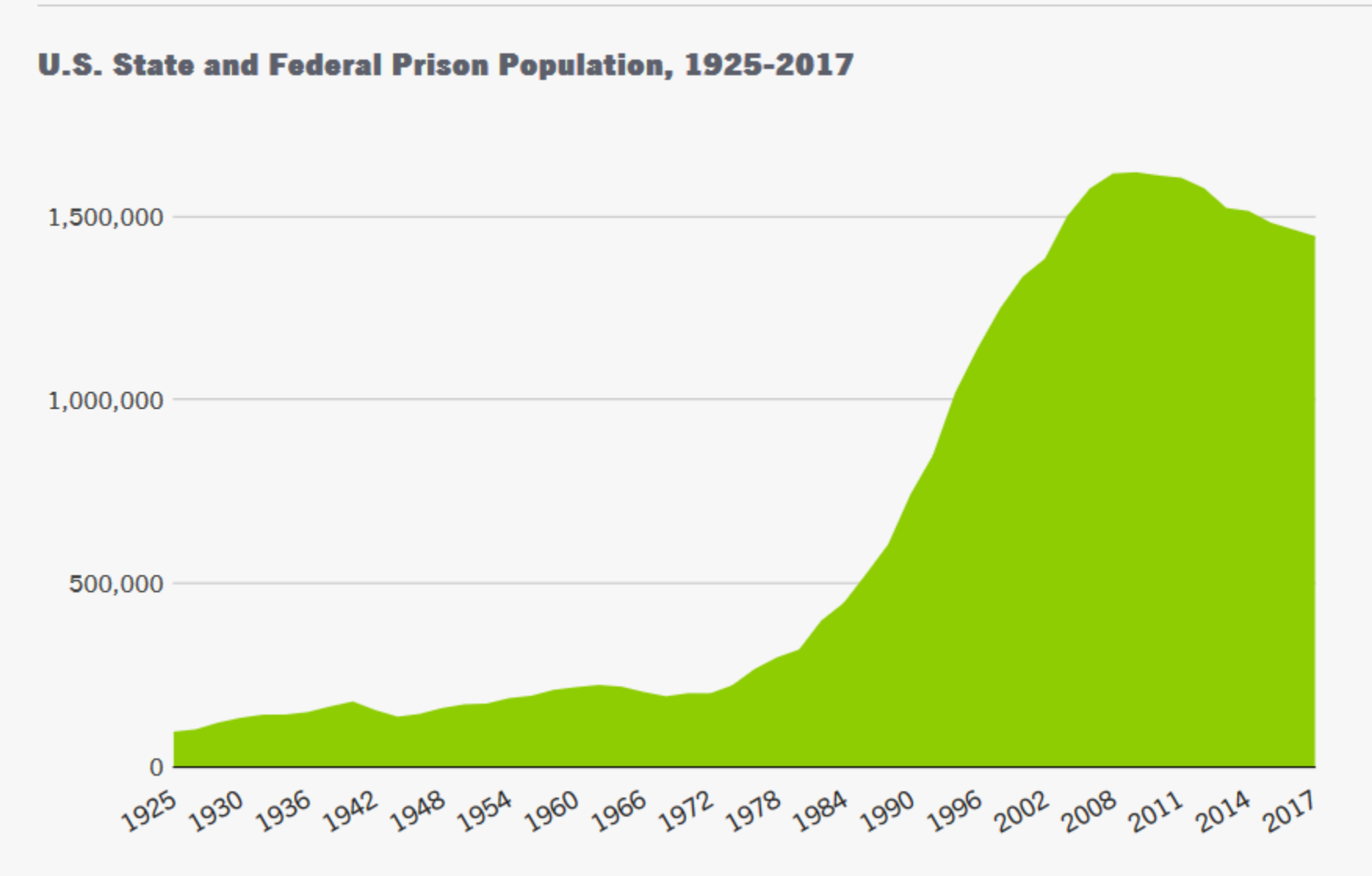
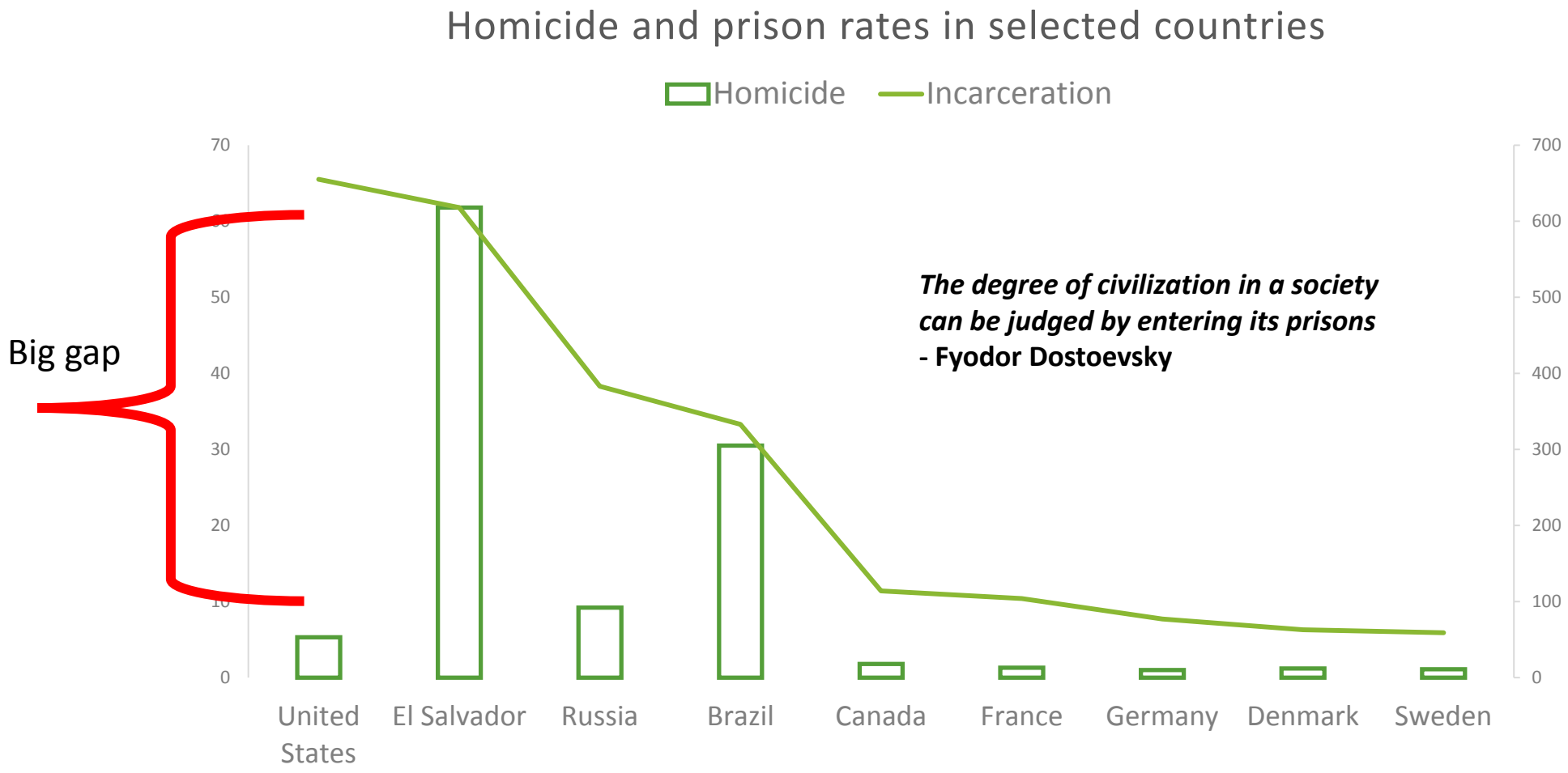
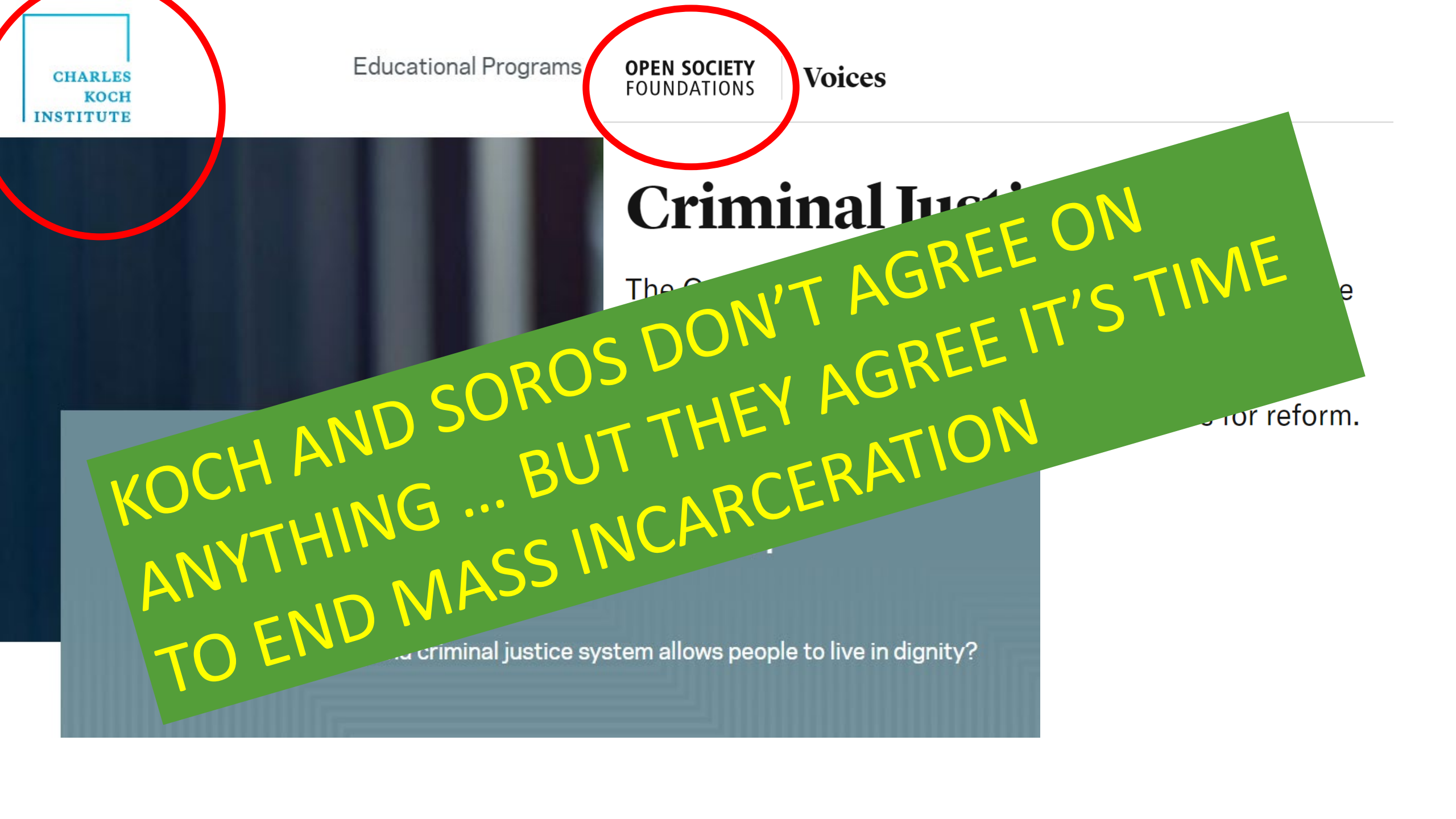
Growth of imprisonment in the USA



Comparative Cross-National Perspective

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criminal justice system allows people to live in dignity?
KOCH AND SOROS DON'T AGREE ON ANYTHING … BUT THEY AGREE IT'S TIME TO END MASS INCARCERATION

Criminal justice reform has strong bipartisa

Senate Passes Bipartisan Criminal Justice Bill

Senators Cory Booker ( ), left, and Charles E. Grassley of Iowa, who were central to the bill's passa ter the vote on Tuesday. Sarah Silbiger/The New York Times

SHARE OF PRISONERS IN FEDERAL FACILITIES?

ingly approved on
nges in a generation to the tough-
ncing laws that ballooned the federal
and created a criminal justice system that many
tives and liberals view as costly and unfair.

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.

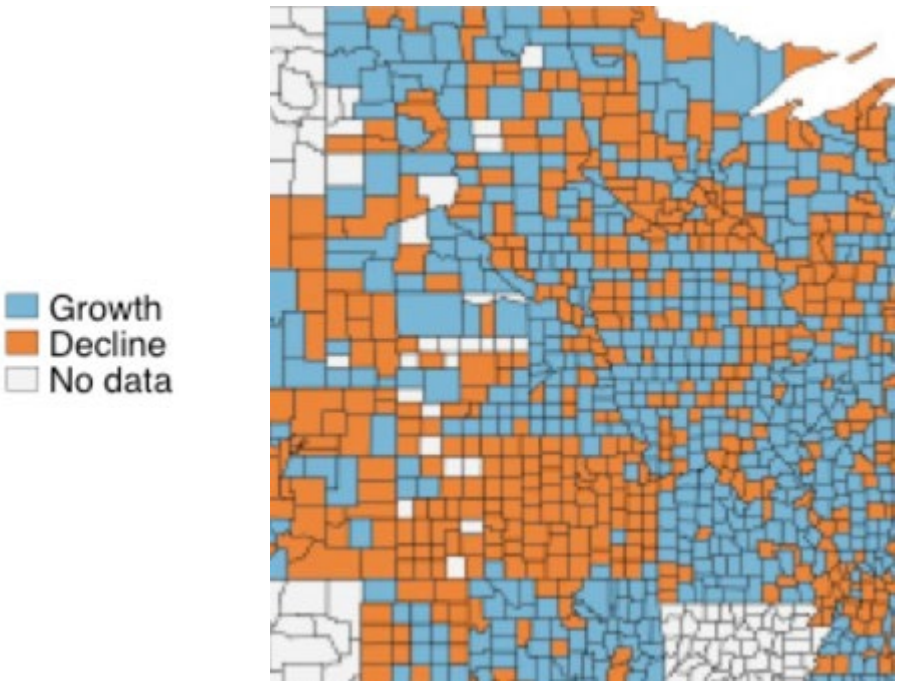
12%

Since 88% of the prison population are in state prisons we should focus on **state-level reforms.**

Right?

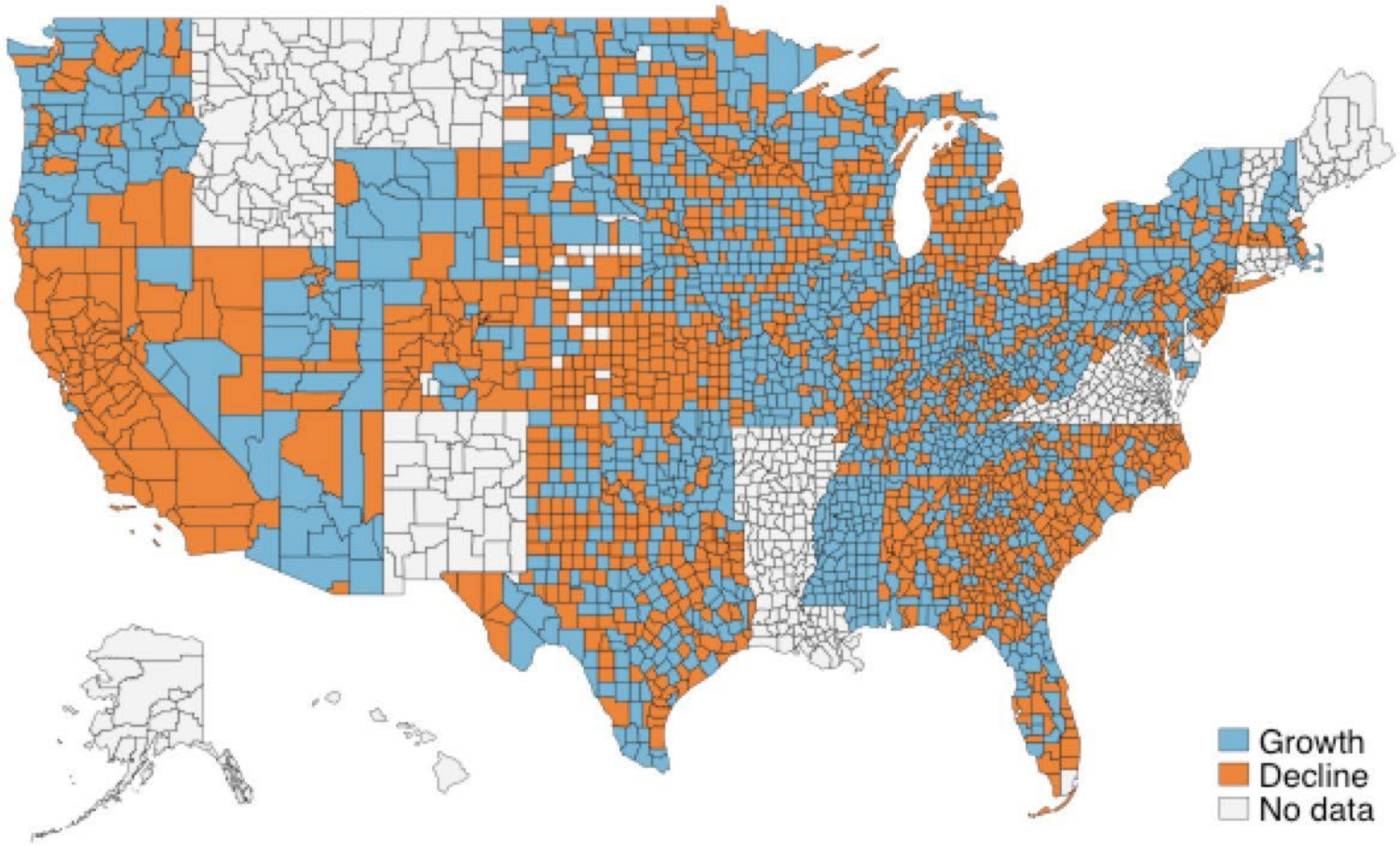
Wrong.

In the United States, **decisions about imprisonment take place at the local level** of government: Counties and cities



County-level growth/decline
in prison sentences, 2010-14

State Prisons, County Prisoners



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

CJARS Criminal Justice Administrative Records System

OVERVIEW PROJECT STAFF BOARD OF DIRECTORS FAQ

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.

Stanford Law Review

Volume 69 March 2017

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.

A research study using administrative microdata from Harris County, TX

C. Data Description

Study data are derived from the court docket sheets maintained by the Harris County District Clerk.[108] 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.[109] 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
  1) Mueller-Smith, M. (2019): **The Criminal and Labor Market Impacts of Incarceration**, Revise and Resubmit at the *American Economic Review*.

     Harris county arrest & jail, Texas state prison & convictions, TX state unemployment and welfare assistance

  2) Palmer, C., Phillips, D. C., & Sullivan, J. X. (2019**). Does emergency financial assistance reduce crime?**. *Journal of Public Economics*, *169*, 34-51.

     Chicago Homelessness Prevention Call Center & CPD arrests

Let’s Do This: Detroit & Wayne County

AI, BIG DATA, & ANALYTICS GROUP

CITY OF Detroit

OPEN DATA PORTAL

DATA DRIVEN DETROIT

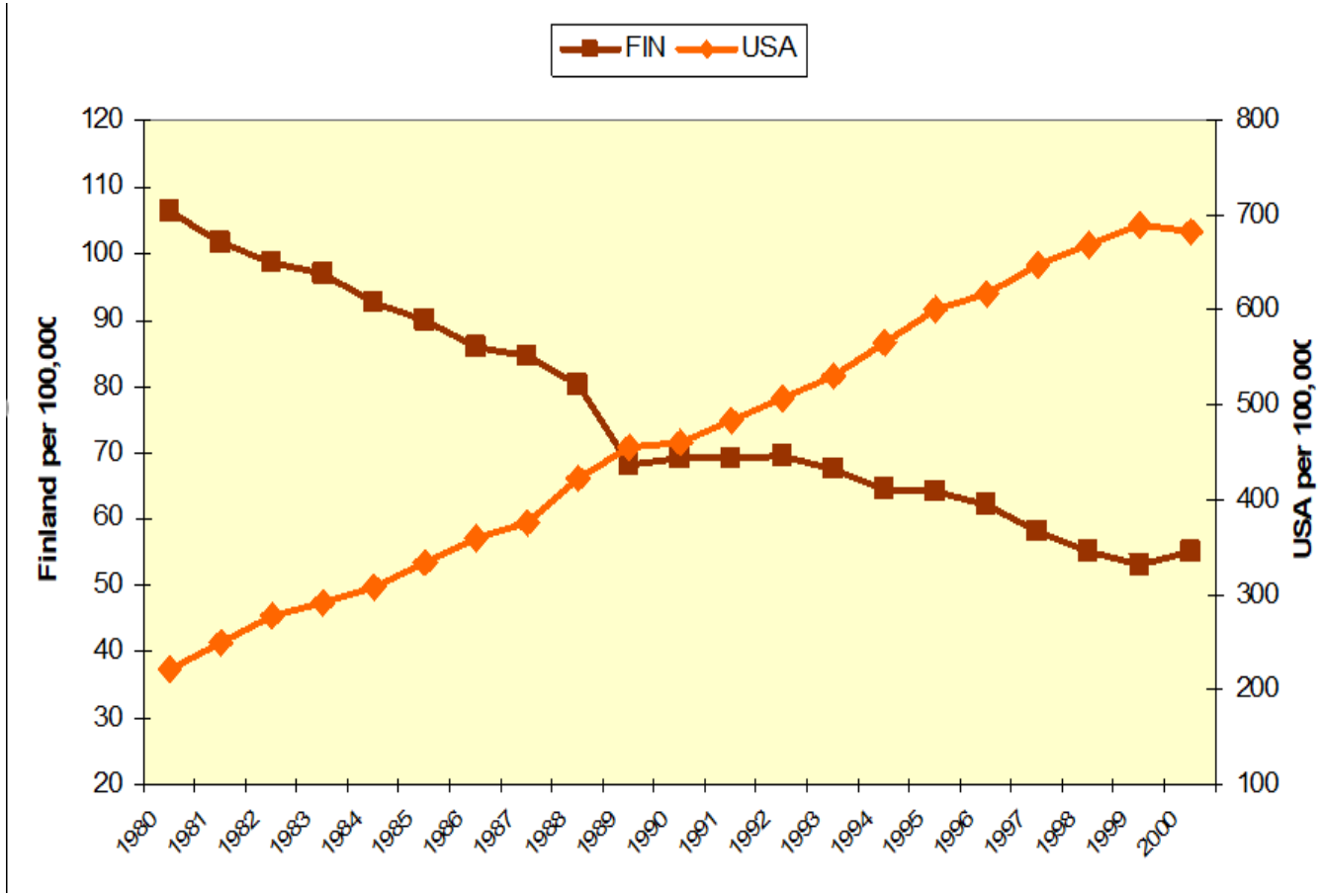
The Justice Lab

CJARS Criminal Justice Administrative Records System

M | CHILD & ADOLESCENT DATA LAB

Thank you

jukka@wayne.edu



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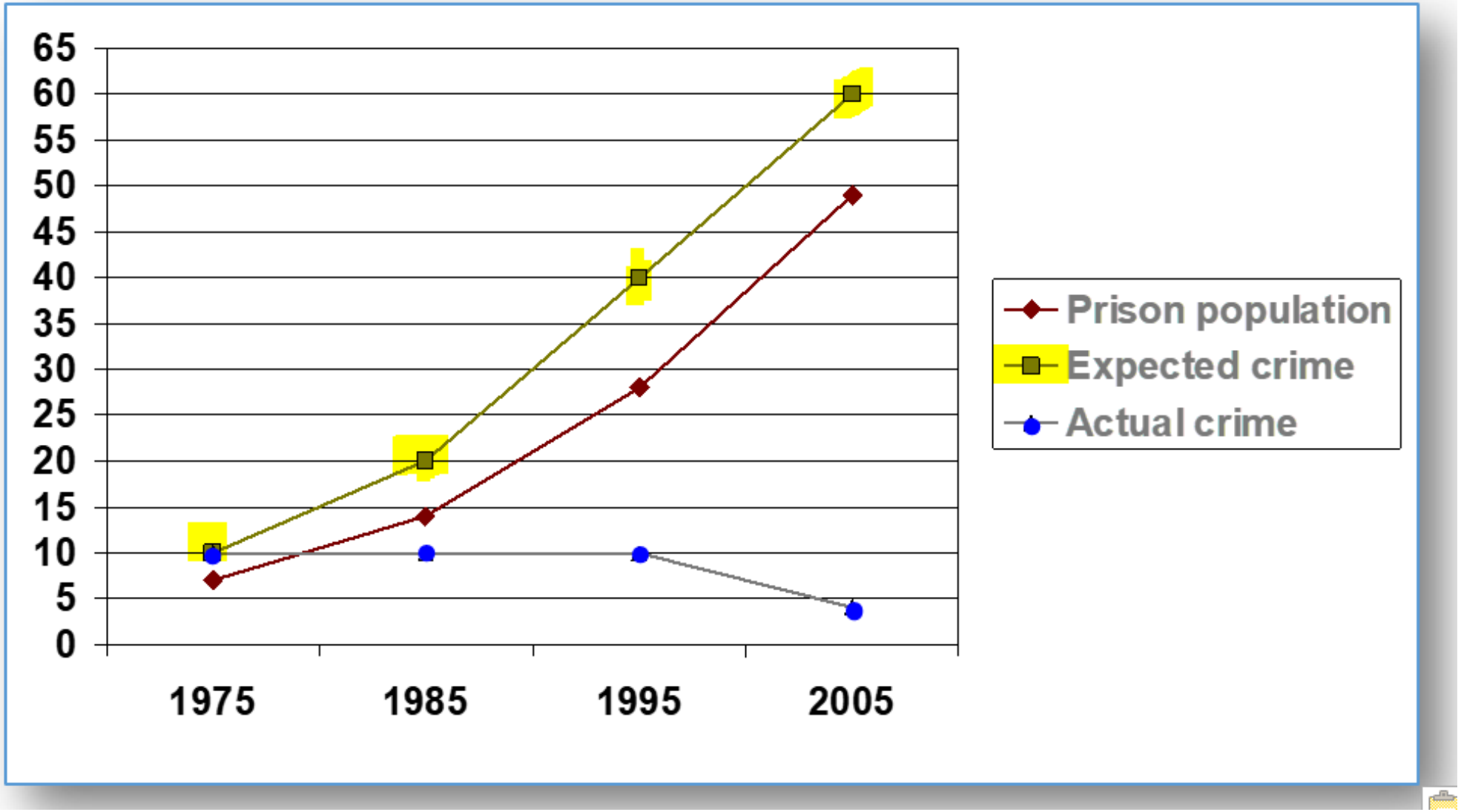
Prison growth & crime decline



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