



Location, Location, Location: What the NCRP tells us about where prisoners serve their sentence, where they're from, and where they reoffend

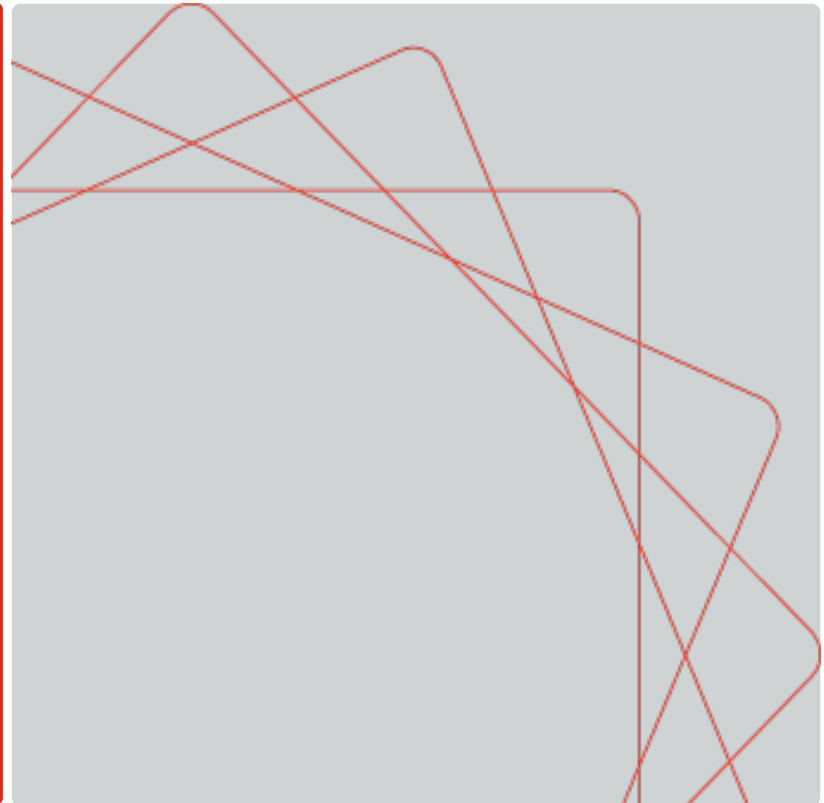
**Seventh Annual Institutional Corrections Research
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(NCRP) Data Providers Meeting**

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Melissa Nadel, PhD
Walter Campbell, PhD

Disclaimer: The analyses and conclusions presented here are those of the author and do not necessarily represent the views and opinions of the Bureau of Justice Statistics or the U.S. Department of Justice.



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Overview



- Regional Variation in Neighborhood Imprisonment Rates
- Interstate Variation in Distance from Home
- Out-of-State Recidivistic Event's Impact on Measures of Recidivism



Regional Variation in Neighborhood Imprisonment Rates

Regional Variation in Imprisonment



- Due to a shared cultural approach to crime, Sunbelt states tend to imprison at a higher rate
- Established through:
 - Historical analyses
 - State and regional-level analyses
- Variation at other levels of aggregation has not been explored

(Clear, 2007; M. C. Campbell et al., 2015; M. C. Campbell & Schoenfeld, 2013; Eason, Zucker, & Wildeman, 2017; Lynch, 2011; Page, 2011; Strom, 2017; Wooldredge, 2007)

Neighborhood Imprisonment and Concentrated Disadvantage



- Neighborhood imprisonment rates vary widely
- Concentrated disadvantage predicts imprisonment:
 - Association between disadvantage on crime
 - Association between imprisonment on disadvantage
 - Differential enforcement by disadvantage
- Concentrated disadvantage varies by region

(Clear, 2007; Coulton, Chow, Wang, & Su, 1996; Dochuk, 2012; Sampson, Raudenbush, & Earls, 1997; Smith, 1986; Strom, 2017; Wooldredge, 2007)

Research Questions



- R1: Do neighborhood imprisonment rates vary by region?

- R2: Does the relationship between concentrated disadvantage and imprisonment vary by region?

Data and Methods



- NCRP last known address data from 12 states
- Supplement with data from:
 - American Community Survey (ACS) 2015 5-Year Estimates
 - FBI Unified Crime Reporting (UCR) County-Level arrest data from 2010 to 2014
 - Rural-Urban Continuum Codes (RUCC) for U.S. counties in 2013
- Outcome: number of overall, violent, property, and drug imprisonments
- Random intercept and slope negative binomial regression models
 - Level 1: Tracts, Level 2: Counties
 - Controls for a vector of tract and county covariates, fixed effect for state, exposure term for the total adult population with a tract



Findings: Imprisonment

Negative Binomial Models for Concentrated Disadvantage with State Fixed Effects for Tract Prison Admission Rates

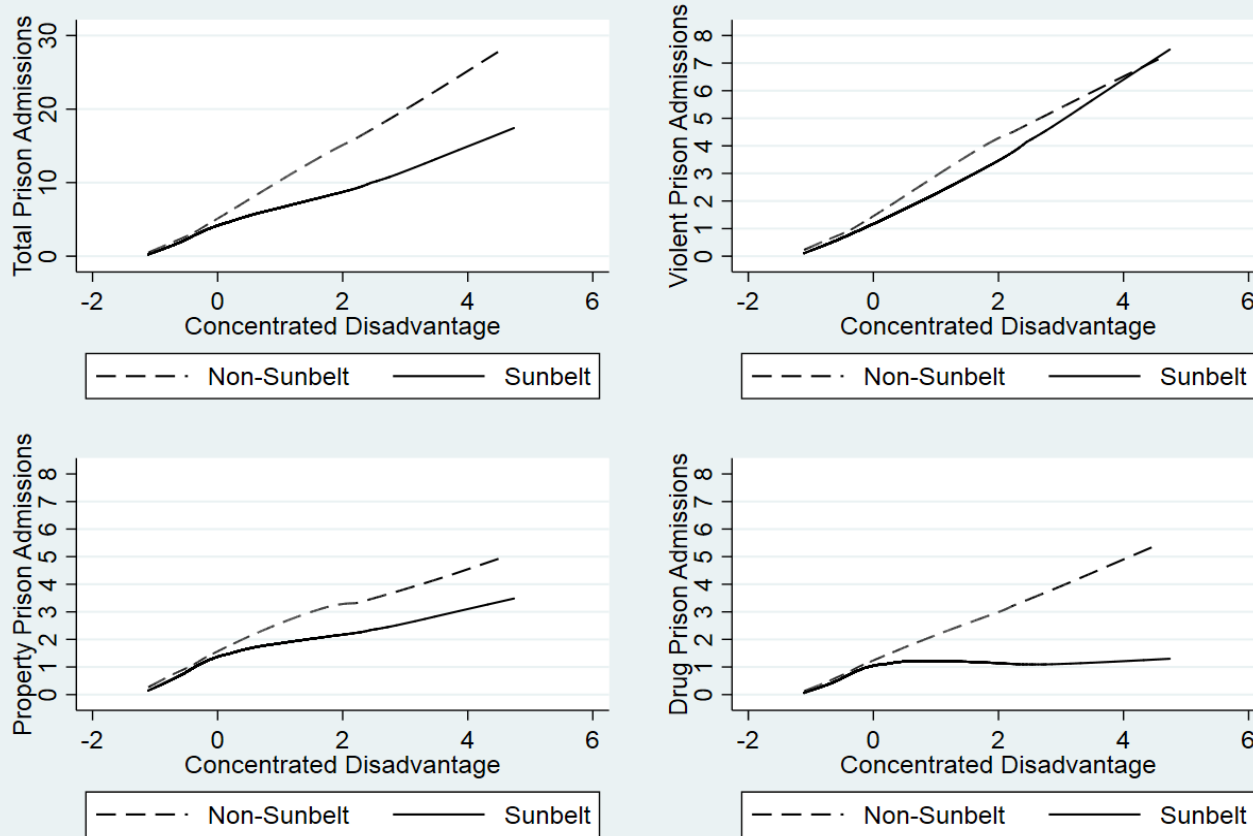
	All Admissions	Admissions for Violent Crime	Admissions for Property Crime	Admissions for Drug Crime
(n=22,053)	IRR (SE)	IRR (SE)	IRR (SE)	IRR (SE)
Tract Variables				
Concentrated Disadvantage	1.98 (0.07)***	1.72 (0.06)***	1.89 (0.07)***	2.01 (0.06)***
Residential Instability	1.13 (0.02)***	1.12 (0.02)***	1.13 (0.02)***	1.11 (0.02)***
Percent Black	1.01 (0.00)***	1.01 (0.00)***	1.01 (0.00)***	1.01 (0.00)***
Percent Hispanic	1.01 (0.00)***	1.01 (0.00)***	1.01 (0.00)***	1.01 (0.00)***
Racial/Ethnic Heterogeneity	1.64 (0.09)***	1.60 (0.08)***	1.48 (0.08)***	1.43 (0.09)***
Percent Foreign Born	0.98 (0.00)***	0.98 (0.00)***	0.98 (0.00)***	0.98 (0.00)***
Percent Young Males	0.98 (0.00)***	0.98 (0.00)***	0.98 (0.00)***	0.98 (0.00)***
County Variables				
Sunbelt Region	0.40 (0.03)***	0.27 (0.03)***	0.59 (0.07)***	1.70 (0.34)**
Concentrated Disadvantage	1.10 (0.12)	1.10 (0.11)	1.26 (0.14)*	1.05 (0.14)
Residential Instability	1.38 (0.09)***	1.37 (0.09)***	1.25 (0.09)**	1.39 (0.11)***
Percent Black	0.98 (0.00)***	0.98 (0.00)***	0.98 (0.00)***	0.97 (0.00)***
Percent Hispanic	1.00 (0.00)	1.00 (0.00)	0.99 (0.00)	1.00 (0.00)
Racial/Ethnic Heterogeneity	0.81 (0.15)	0.91 (0.16)	0.79 (0.14)	0.87 (0.19)
Percent Foreign Born	0.97 (0.01)***	0.98 (0.01)***	0.98 (0.00)***	0.98 (0.01)**
Percent Young Males	0.96 (0.01)**	0.95 (0.01)***	0.98 (0.00)***	0.95 (0.01)**
Nonmetro Counties	1.07 (0.04)+	1.04 (0.04)	1.02 (0.04)	1.20 (0.05)***
Decreasing Property or Violent Crime	0.95 (0.04)	0.95 (0.04)	0.94 (0.04)	0.94 (0.05)
Average Total Crime Rate (2010-2014)	1.07 (0.02)***	1.03 (0.02)+	1.09 (0.02)***	1.06 (0.02)*

+ p<.10, * p<.05, ** p<.01, *** p<.001

Findings: Concentrated Disadvantage and Imprisonment



Figure 2. Model Predicted Number of Prison Admissions by Region



Conclusions/Implications



- Imprisonments are concentrated within fewer neighborhoods and more powerfully driven by disadvantage in non-Sunbelt states
- Impact of a region's statewide approach to crime may not be reflected at more micro levels
- Current understandings of the effect of prison on a neighborhood may be limited



Interstate Variation in Distance from Home

Importance of Distance



- Distance reduces frequency and likelihood of in-person visitation

- Visitation:
 - Reduces prison misconduct
 - May reduce recidivism
 - Improves various aspects of reentry
 - Access to resources
 - Controlling effects
 - Emotional support
 - Cognitive change

(Berg & Huebner, 2011; Clear, 2007; Cochran, Mears, Bales, & Stewart, 2016; Cochran, Barnes, Mears, & Bales, 2018; De Claire & Dixon, 2017; Duwe & Clark, 2011; Lindsey, Mears, Cochran, Bales, & Stults, 2017; Nelson, Dees, Allen, 1999 Wakefield & Wildeman, 2014)

Limitations of Current Distance Research



- Distance measures are limited
 - Centroid of the county of conviction, not exact address
 - No sense of travel time or mode

- Studies focus on a single state
 - Range of distances will vary widely by states
 - Location of prisons will vary by state
 - Locations of population centers will vary by state
 - Placement within facilities will vary by state

Research Questions



- R1: How does travel distance and time vary by state?
- R2: How does access to public transportation vary by state?
- R3: How do correlates of access to public transportation vary by state?

Data and Methods

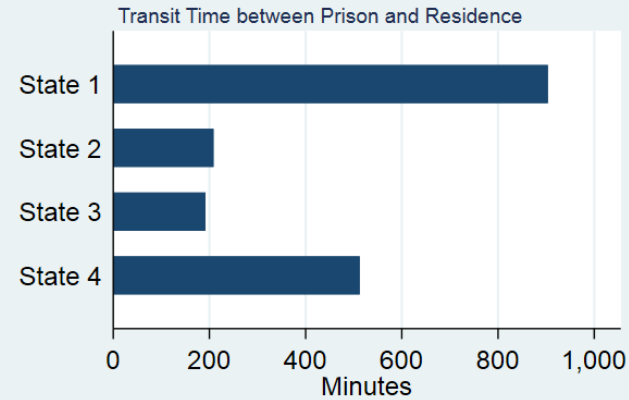
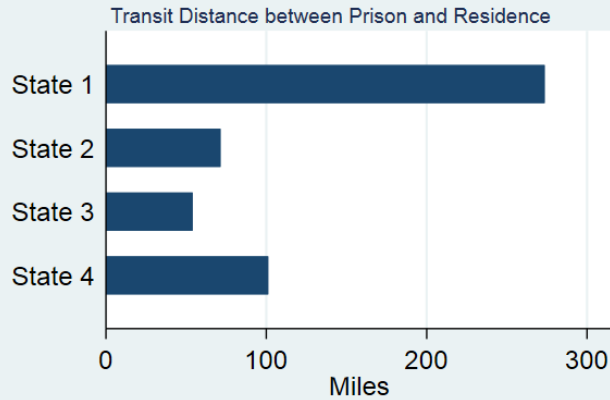
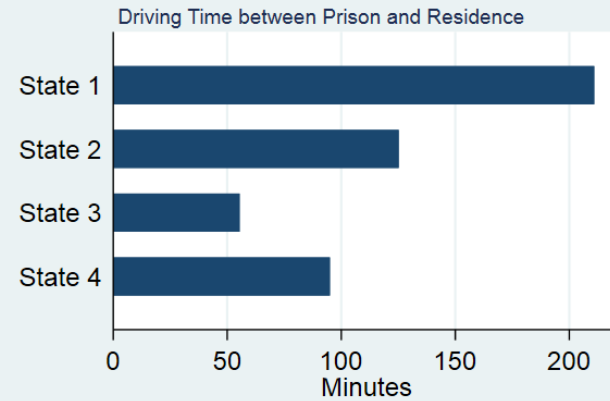
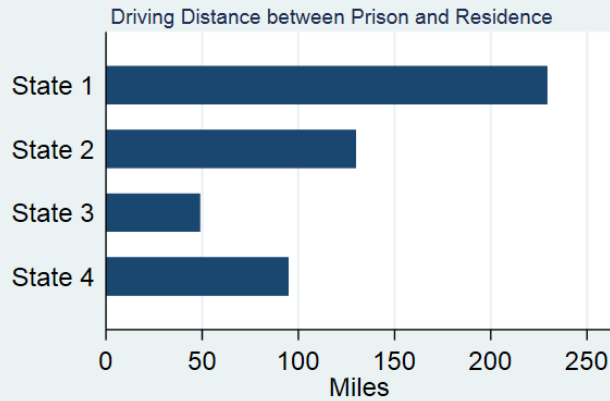


- NCRP last known address data from 4 states with facility information at the end of each calendar year
- Distance and time calculated using Google's Distance Matrix API
- Outcomes: Driving and public transportation distance in miles, driving and public transportation time in minutes, public transportation access
- Independent Variables: age; gender; race/ethnicity; offense type; sentence length; admission type

Findings: Variations in Distance and Time



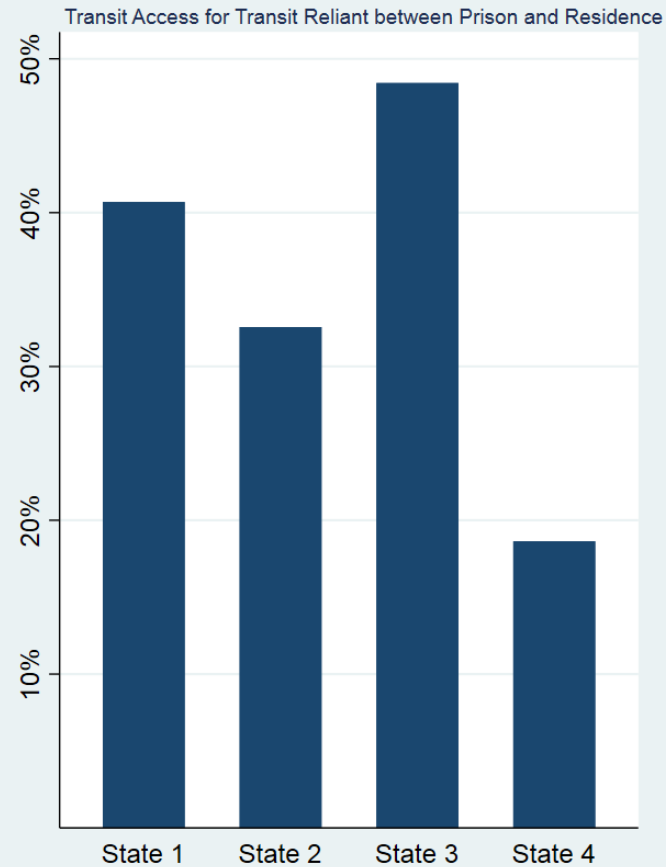
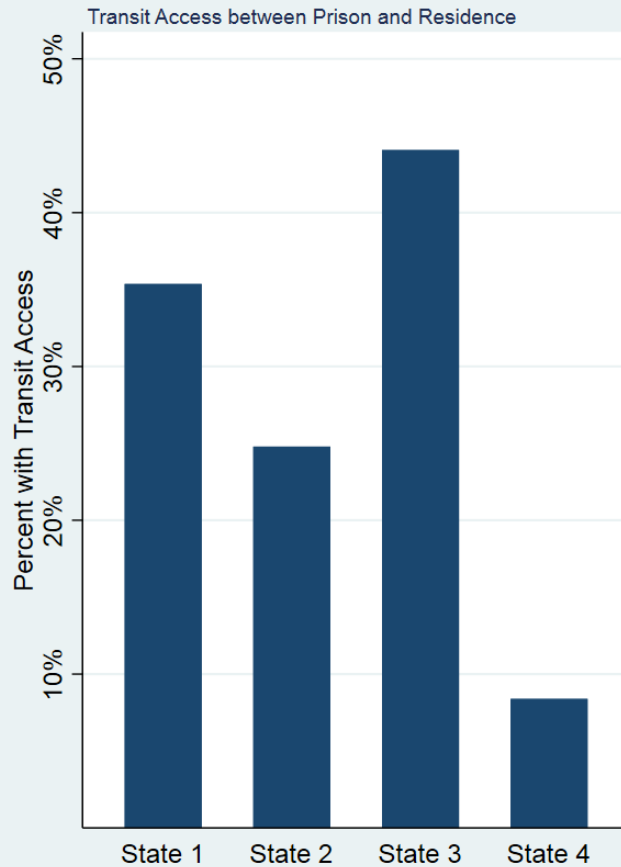
Distance by State



Findings: Variations in Public Transportation Access



Transit Availability by State



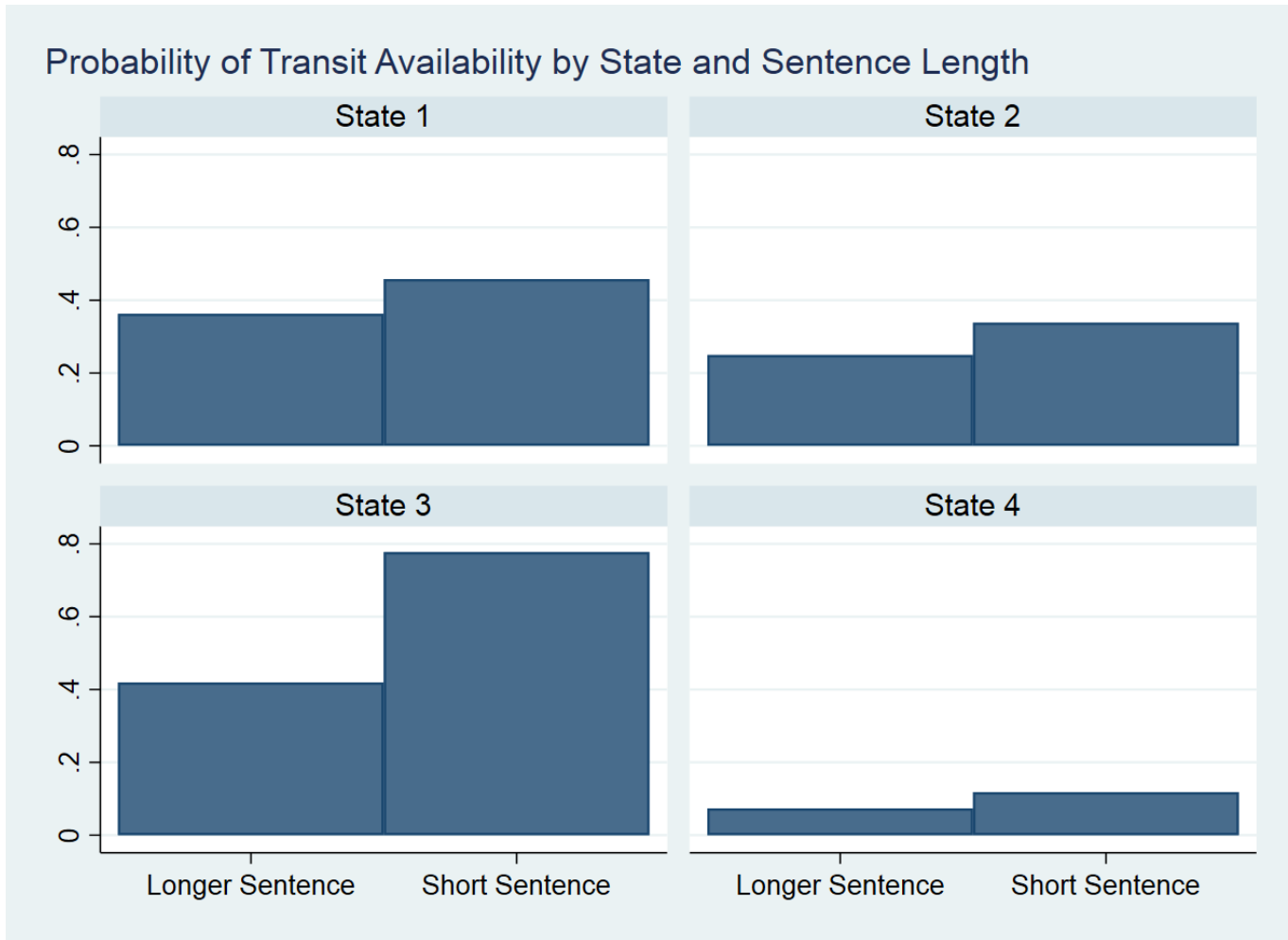
Findings: Public Transportation Access and Gender



Probability of Transit Availability by State and Gender



Findings: Public Transportation Access and Sentence Length



Conclusions/Implications



- Inmates are, on average, far from their former residence and few have public transportation access between the two locations

- Distance, time, and transit access varies by state

- The factors associated with transit access vary by state

- Next Steps:
 - Explore whether factors are linked to facility or home address
 - Examine the impact of distance on recidivism and how it varies by state



Estimating Intra- and Inter-State Recidivism using the NCRP

Background



- Recidivism as an important benchmark for corrections
- Success of programs and policies often defined by reductions in recidivism
- Recidivism typically only includes in-state re-offending
 - Misses recidivism that occurs out-of-state
- This limitation means we could be underestimating recidivism rates

Intra- vs. Inter-State Recidivism



- Intra-State Recidivism:
 - Recidivism that occurs in the same state where an inmate is released
- Inter-State Recidivism:
 - Recidivism that occurs either within the same state or in a different state from where the inmate was released
- Majority of research uses an intra-state rate
- Previous BJS recidivism studies linked NCRP to RAP sheets provided by FBI
 - (Durose, Cooper, & Snyder, 2014, 2015; Alper et al., 2018)

Current Study



- RQ1: What is the average interstate recidivism rate as defined by a return to prison?
- RQ2: Is the interstate recidivism rate substantively different than the corresponding intrastate recidivism rate?
- RQ3: Does the relative difference between the interstate and intrastate recidivism rate vary across states?

Data and Methods



- National Corrections Reporting Program
 - Matched with identifiers (PIK IDs) from the U.S. Census Bureau's Center for Economic Studies
- Data limited to states with at least 30% PIK rate (N = 36)
 - These states account for approximately 90% of releases
- All releases from prison in 2012 (N ≈ 417,050)
- Analysis: Survival Analysis
 - Kaplan-Meier failure estimate at 1-, 2-, and 3-years after release

Intra- and Inter-state Recidivism Rates



Intra-state Recidivism Rate

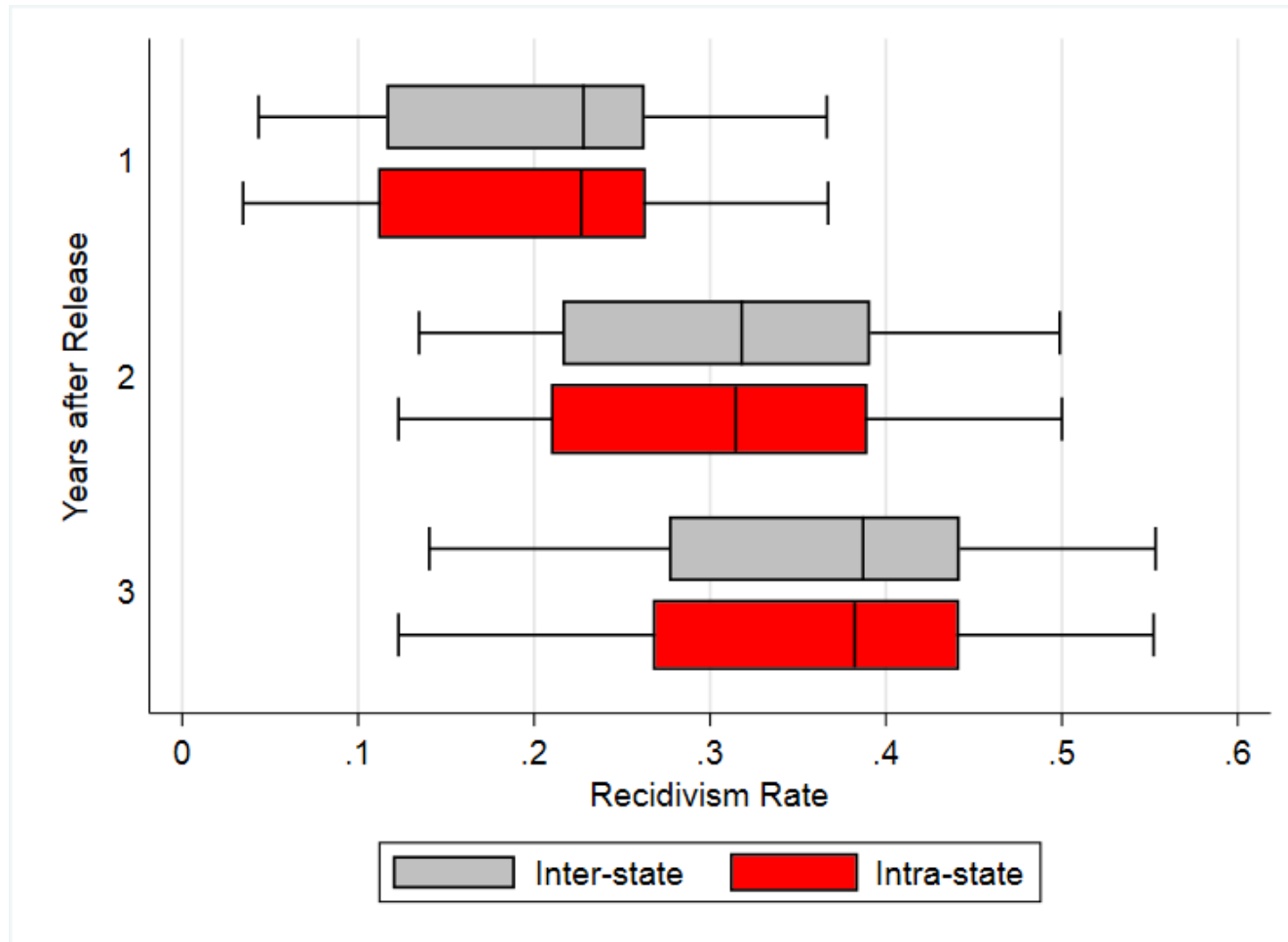
Years after Release	Mean	SD	Min	Max
1	.2025	.09	.0346	.3672
2	.3097	.10	.1229	.5000
3	.3669	.10	.1229	.5522

Inter-state Recidivism Rate

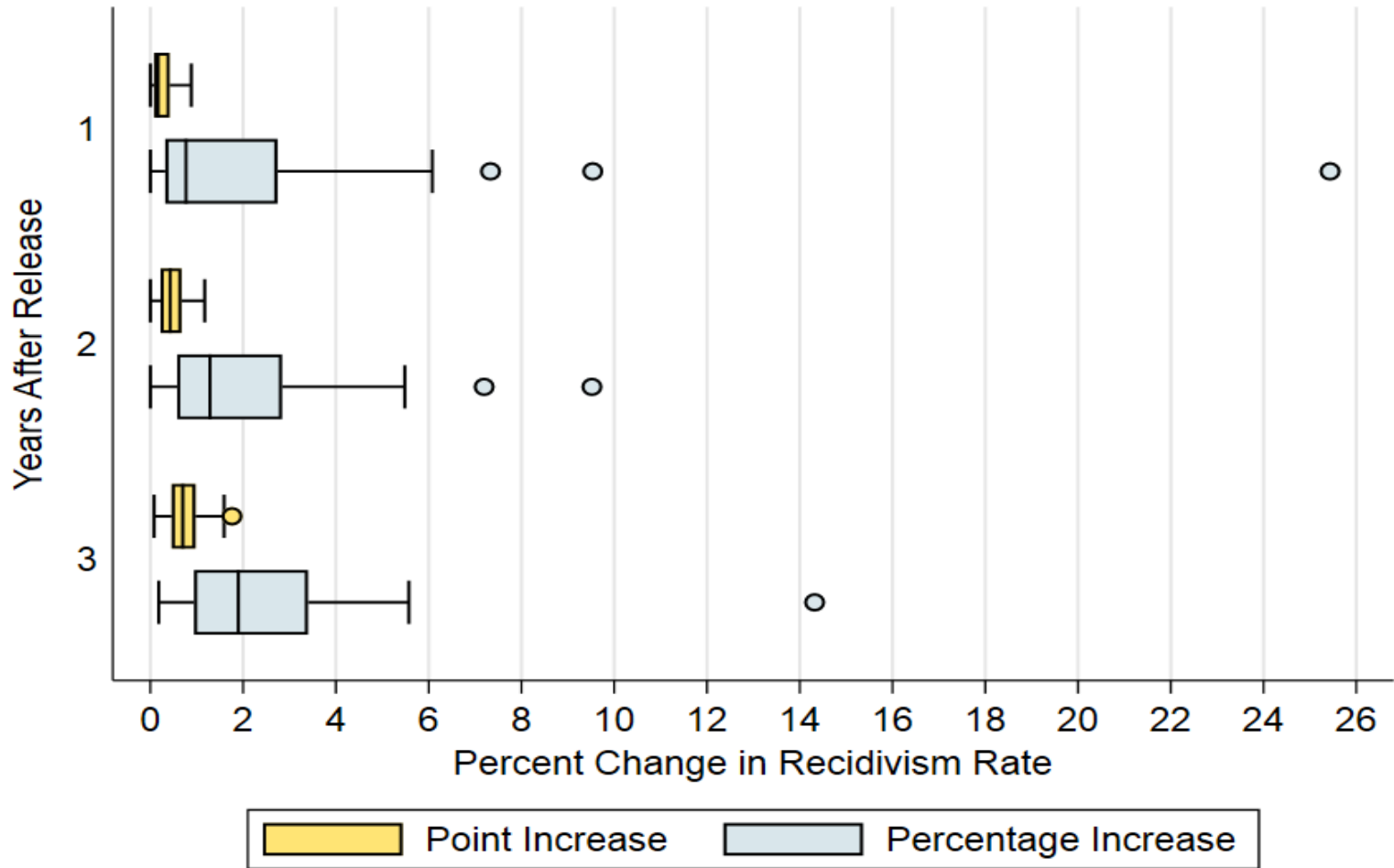
Years after Release	Mean	SD	Min	Max
1	.2047	.09	.0434	.3664
2	.3142	.10	.1346	.4988
3	.3743	.10	.1405	.5533



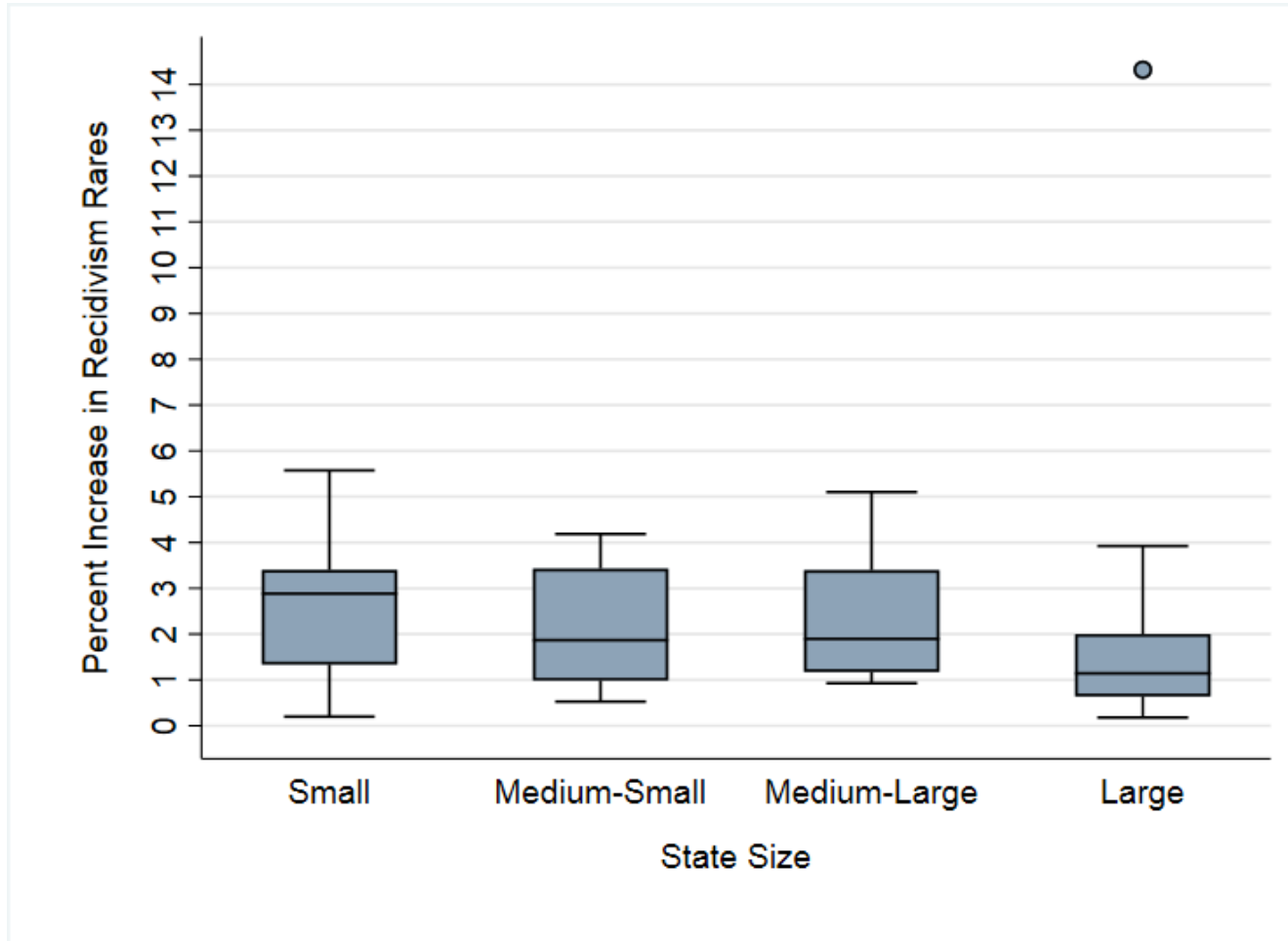
Inter-state v Intra-state Recidivism



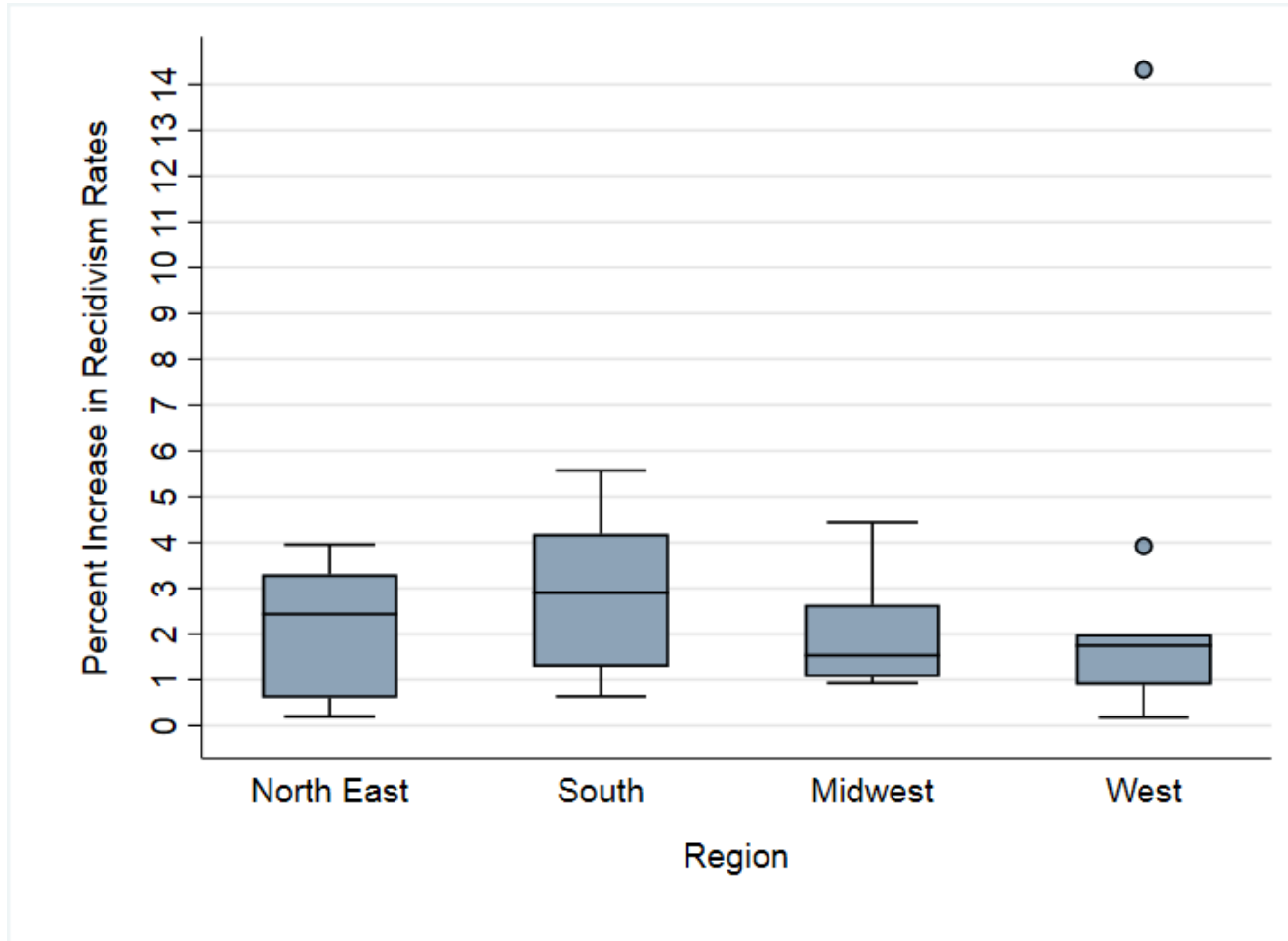
Differences in Recidivism Rates (Point vs. Percentage Increase)



Percent Change in Recidivism Rates by State Size



Percent Change in Recidivism Rates by Region



Implications



- No substantive difference in overall inter-state and intra-state recidivism rates
- Substantial variation across states
- Importance of inter-state recidivism varies by state
- Variation may be associated with state characteristics

Limitations and Future Research



- Limitations:
 - Does not include all 50 states
 - Recidivism as return to prison only
- Future Research:
 - What are the characteristics of states with a higher rates of out-of-state recidivism?
 - Region, State Size, Policy Differences, etc.
 - Is out-of-state recidivism more likely to occur in contiguous states?
 - What are the characteristics of out-of-state offenders?

Contacts



- Danielle Kaeble, Statistician, Bureau of Justice Statistics
Email: Danielle.Kaeble@usdoj.gov
- Tom Rich, Project Director, Abt Associates
Email: Tom_Rich@abtassoc.com
- Melissa Nadel, Senior Analyst, Abt Associates
Email: Melissa_Nadel@abtassoc.com
- Walter Campbell, Associate/Scientist, Abt Associates
Email: Walter_Campbell@abtassoc.com