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The Downstream Effects of Bail and Pretrial Detention on Racial Disparities in Incarceration

Ellen A. Donnelly

John M. MacDonald

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THE DOWNSTREAM EFFECTS OF BAIL AND PRETRIAL DETENTION ON RACIAL DISPARITIES IN INCARCERATION

ELLEN A. DONNELLY
JOHN M. MACDONALD*

Bail and pretrial detention decisions may have important consequences for racial disparities in incarceration rates. Poor minority defendants who are unable to post bail and get released from jail before trial may be more likely to plead guilty and accept longer sentences of incarceration. Racial disparities in incarceration sentences may then reflect a combination of differences in the seriousness of a defendant's case, criminal history, and economic resources to pay bail. This study examines the extent to which bail decision-making and pretrial detention explain Black-White disparities in criminal adjudications and sentences in the Delaware courts from 2012 to 2014. Over 80% of all criminal

*Ellen A. Donnelly is an assistant professor of Sociology and Criminal Justice at the University of Delaware. John M. MacDonald is a professor of Criminology and Sociology at the University of Pennsylvania. This study was supported in part by a contract from the Delaware Administrative Office of the Courts (AOC) to the University of Pennsylvania (Penn). The authors thank Chief Justice Leo E. Strine, Jr. for initiating research on criminal processing in Delaware in conjunction with the Delaware Access to Justice Commission's Subcommittee on Fairness in the Adult Criminal Justice System. We acknowledge the assistance in access and institutional knowledge of the Delaware Criminal Justice Information System (DELJIS) from Executive Director Peggy Bell and Operations Manager Lynn Gedney. Special thanks are also due to Deputy State Court Administrator Amy Quinlan for coordinating data access and Research and Planning Coordinator Patti Mattson for overseeing research progress and funding. The opinions in this study are those of the authors and do not reflect the official positions of the AOC or Penn. This study was approved by the Penn institutional review board.

defendants have a bond imposed on them before their adjudication. Almost a third of cases involve pretrial detention. After controlling for measured differences in a variety of case characteristics, including severity of charges and criminal histories, cash-only bail and pretrial detention increase a defendant's likelihood of conviction and pleading guilty, being incarcerated, and receiving a longer incarceration sentence. Bail and pretrial detention also contribute to 30% to 47% of the explained Black-White disparity in these court dispositions. Careful examination of cash-only bail, bail amount, and pretrial detention policies may help reduce racial disparities in incarceration.

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INTRODUCTION

Race is one of the most glaring, yet complicated forms of disparity in the U.S. criminal justice system. Blacks and Latinos make up the majority (57%) of prisoners incarcerated in U.S. federal and state prisons.¹ Overrepresentation is especially serious for Blacks, who represented under 15% of the U.S. population but 35% of the nation's nearly 1.5 million state and federal prisoners in 2015.² At peak incarceration levels in 2009, about one in eleven Black citizens was under correctional supervision on any given day.³ Incarceration has serious effects on the lives of offenders, changing one's eligibility for public services, access to housing, rights to vote and serve on juries, and ability to obtain employment.⁴ The severity of racial disparities in incarceration necessitates a clearer understanding of its origins and areas for reform.

A priority in the scholarship on incarceration is to determine the size and sources of racial disparities as criminal cases move through various stages of the judicial process.⁵ Racial disparity studies most often focus on

¹ E. Ann Carson & Elizabeth Anderson, BUREAU OF JUST. STAT., *Prisoners in 2015*, at Table 3 (2016). Raw figures report 523,000 Blacks and 319,400 Hispanics among 1,476,847 prisoners in the United States at the yearend of 2015.

² *Id.*

³ See PEW CENTER ON THE STATES, *One in 31: The Long Reach of American Corrections* 1 (2009).

⁴ Jeremy Travis, *Invisible Punishment: An Instrument of Social Exclusion*, in *INVISIBLE PUNISHMENT: THE COLLATERAL CONSEQUENCES OF MASS IMPRISONMENT* 15, 15 (Marc Mauer & Meda Chesney-Lind eds., 2002) (discussing the development of legislation abridging the rights of the convicted); Alec C. Ewald, *Collateral Consequences in the American States*, 93 SOC. SCI. Q. 211, 211-13, (2012) (summarizing collateral consequences of incarceration across different states); Michael Pinard, *Collateral Consequences of Criminal Convictions: Confronting Issues of Race and Dignity*, 85 N.Y.U. L. REV. 457, 489-94 (2010) (breaking down specific collateral consequences relating to housing, employment, public benefits, and voting throughout the United States).

⁵ See, e.g., Eric P. Baumer, *Reassessing and Redirecting Research on Race and Sentencing*, 30 JUST. Q. 231, 240-41 (2013) (discussing observations by researchers that "by and large the research literature continues to focus overwhelmingly on the final sentencing stages"); Cassia Spohn, *Thirty Years of Sentencing Reform: The Quest for a Racially Neutral Sentencing*, 3 CRIM. JUST. 427, 429 (2000) (observing that "the findings of more than four decades of research have not resolved debates over whether minority overrepresentation is due to discrimination or differential involvement in crime"); Jeffery T. Ulmer, *Recent Developments and New Directions in Sentencing Research*, 29 JUST. Q. 1, 19-24 (2012) (discussing research relating to charging decisions, pretrial detention, mandatory minimums, and federal substantial assistance departure motions).

the imposition of incarceration sentences⁶ and whether differences in the average incarceration sentence length remain after one statistically controls for current case conditions, criminal history, and other contextual differences like age and gender.⁷ These studies may underestimate sentencing disparities between Blacks and Latinos relative to Whites if racial disparities occur at previous decision-making points. Blacks and Latinos may receive harsher sentences than Whites as a result of disadvantages that accumulate as their case progresses.⁸

Determinations of bail and detention before trial are crucial decisions that are made before final court dispositions. Shortly after a defendant's arrest, a magistrate, judge, or other judicial officer determines conditions of release from detention to ensure the defendant's appearance in court and reduce the risk to public safety.⁹ Provided that release is an option, magistrates set bail in terms of type and amount.¹⁰ The bail set from this

⁶ See, e.g., Ojmarrh Mitchell, *A Meta-Analysis of Race and Sentencing Research*, 21 J. QUANTITATIVE CRIMINOLOGY 439 (2005) (for large N comparison studies of the incarceration or non-incarceration (i.e. "in/out") sentencing decision); Spohn, *supra* note 5, at 438 (2000) (observing that dozens of sentencing studies have been completed between the 1970s and 1980s alone, and these "range from simple bivariate comparisons of incarceration rates for whites and racial minorities, to methodologically more rigorous multivariate analyses designed to identify direct race effects").

⁷ See, e.g., Marjorie S. Zatz, *The Changing Forms of Racial/Ethnic Biases in Sentencing*, 24 J. RES. CRIME DELINQUENCY 69, 70 (1987) (discussing different research methodologies for drawing data sets related to implicit and overt discrimination); Steven Klepper, et al., *Discrimination in the Criminal Justice System: A Critical Appraisal of the Literature*, in RESEARCH ON SENTENCING: THE SEARCH FOR REFORM RACE, ETHNICITY, AND CRIME IN AMERICA, 55, 55-57 (Alfred Blumstein, et al. eds., 1 ed. 1983); Eric P. Baumer, *Reassessing and Redirecting Research on Race and Sentencing*, 30 JUST. Q. 231, 249 (2013) (discussing shortcomings of and inconsistencies in studies that "examine separately or in combination the effect of race or social class on the likelihood of arrest, prosecution, bail, conviction, and the type and severity of sentence"); Jeffery T. Ulmer, *Recent Developments and New Directions in Sentencing Research*, 29 JUST. Q. 1, 8 (2012) (noting that the "vast majority of sentencing research takes the form of regression-based studies of one or another sentencing or case processing outcome").

⁸ Besiki L. Kutateladze et al., *Cumulative Disadvantage: Examining Racial and Ethnic Disparity in Prosecution and Sentencing*, 52 CRIMINOLOGY 514, 517-18 (2014) (noting that many studies indicated that "Blacks and Latinos were treated more severely than Whites at several [crucial] decision points" and that additional studies indicated that the overall effects were consistently more severe for African Americans); John Wooldredge, et al., *Is the Impact of Cumulative Disadvantage on Sentencing Greater for Black Defendants?*, 14 CRIMINOLOGY & PUB. POL'Y 187, 188-89 (2015) (discussing cumulative disadvantage in relation to race).

⁹ AM. BAR ASS'N, ABA CRIMINAL JUSTICE STANDARDS ON PRETRIAL RELEASE § 10-1.4 (3 ed. 2007).

¹⁰ *Id.* (summarizing different standards for monetary and nonmonetary release).

initial appearance can affect a defendant's likelihood of pretrial detention, as higher bail amounts may prevent defendants from posting bond and being released.¹¹ In turn, detention before trial and the "stress of confinement" can change a defendant's ability to prepare for a case or her willingness to go to trial.¹² A growing body of research has underscored how the inability to make bail and the experience of pretrial detention produces more guilty pleas, higher rates of conviction, and harsher sentences.¹³ By extension, racial differences in bail decision-making and pretrial detention may then impact the racial composition of incarcerated populations.¹⁴

This study examines the effects of bail and pretrial detention on Black-White disparities in incarceration in Delaware. We rely on original criminal processing data for arrests that occurred between 2012 and 2014. Our study first identifies the size of Black-White disparities at multiple criminal processing decision-points that begin at arrest and end with sentencing. Second, the study distinguishes the case and defendant factors that are associated with Black-White disparities in case outcomes. We take a special interest in determining the relative importance of bail and pretrial detention in explaining Black-White disparities in case outcomes. Addressing these two aims, the study provides a sense of direct and indirect effects of race on criminal court decisions.

We use conditional decomposition methods introduced by Jonah Gelbach, a University of Pennsylvania economist, to locate and understand Black-White disparities in criminal processing.¹⁵ We define disparity as

¹¹ *Id.* at § 10-5.3 (discussing standards for release on financial conditions).

¹² John Goldkamp, *The Effects of Detention on Judicial Decisions: A Closer Look*, 5 JUST. SYS. J. 234, 234 (1980); see also Stephen Demuth & Darrell Steffensmeier, *The Impact of Gender and Race-Ethnicity in the Pretrial Release Process*, 51 SOC. PROBS. 222, 223 (2004) (observing that "judicial and prosecutorial discretion that involves financial considerations also could produce disparities in pretrial release outcomes").

¹³ Will Dobbie et. al., *The Effects of Pretrial Detention on Conviction, Future Crime, and Employment: Evidence from Randomly Assigned Judges*, 108 AM. ECON. REV. 2, 212 (2018); Paul Heaton, et. al., *The Downstream Consequences of Misdemeanor Pretrial Detention*, 69 STAN. L. REV. 711, 724 (2017); Meghan Sacks & Alissa Ackerman, *Bail and Sentencing: Does Pretrial Detention Lead to Harsher Punishment?*, 25 CRIM. JUST. POL'Y REV. 59, 60 (2014).

¹⁴ Traci Schlesinger, *Racial and Ethnic Disparity in Pretrial Criminal Processing*, 22 JUST. Q. 170, 175 (2005); John Wooldredge, *Distinguishing Race Effects on Pre-Trial Release and Sentencing Decisions*, 29 JUST. Q. 41, 42-43 (2012).

¹⁵ Jonah B. Gelbach, *When Do Covariates Matter? And Which Ones, and How Much?*, 34 J. LAB. ECON. 509, 510 (2016). The Gelbach decomposition allows a researcher to determine whether criminal processing differences between Whites and Nonwhites are due

any difference in a criminal justice outcome between Blacks and Whites that can be caused by legal and extralegal factors. Legal factors include the seriousness of the charge, prior criminal record, and other aspects of a case that judicial officials can consider based upon statutory and constitutional law. Extralegal factors include race, ethnicity, age, gender, and other aspects of a defendant's background that have no legal basis for impacting criminal justice outcomes. For instance, race is not a legal factor in determining a sentence due to U.S. constitutional protections guaranteeing equal protection of the law.¹⁶ Based on the omitted variable bias formula, the decomposition determines how the effect of race on criminal court dispositions changes when one takes into account legal factors and other extralegal factors of a case.¹⁷ The decomposition also shows the relative contributions of each measured legal and extralegal factor, such as bail type (e.g. secured and cash-only bail), bail amount, and pretrial detention to the observed racial differences in court outcomes.¹⁸ The approach allows us to make precise estimates of Black-White disparities in conviction and sentencing, as well as highlights the importance of the pretrial process in shaping racial disparities at later processing stages. Recognizing the roles of bail and pretrial detention in contributing to Black-White disparities in incarceration may offer some promise as an area of racial disparity reform in criminal justice.

We present two key findings from our decomposition analysis. First, Black-White disparities are not consistent across criminal processing stages. At adjudication, Blacks are 14% less likely than Whites to be convicted and 10% less likely to enter into guilty pleas.¹⁹ There is no substantive unexplained Black-White disparity in incarceration sentencing, as Black and White defendants receive incarceration sentences at similar rates and comparable sentence lengths when all case factors have been considered.²⁰ Second, bail and pretrial detention absorb much of the criminal processing disparities between Blacks and Whites. Pretrial conditions contribute to 43.5% of explainable Black-White disparity in convictions and 37.2% of the disparity in guilty pleas. These processes

to unexplained differences by race or explainable differences due to differences in other measurable case characteristics.

¹⁶ SAMUEL WALKER ET AL., *THE COLOR OF JUSTICE: RACE, ETHNICITY, AND CRIME IN AMERICA* 26 (5th ed., 2012).

¹⁷ See *infra* Analytic Strategy.

¹⁸ See *infra* Table 3 and Figure 1.

¹⁹ See *infra* Table 2.

²⁰ *Id.*

explain nearly 30% of the Black-White disparity in the decision to sentence a defendant to any period of incarceration and under a quarter of the disparity in average incarceration sentence length.²¹ When broken down into specific factors, pretrial detention is an important contributor to the Black-White disparity in conviction, but plays a lesser role in sentencing. Cash-only bail consistently explains 10–13% of Black-White disparities in criminal adjudications and incarceration sentencing. Bail amount explains a small share of the racial disparity in incarceration sentence length.²² In all, pretrial decisions appear to be an important source of Black-White disparities in court processing and Blacks being overrepresented in the jail and prison population in Delaware.

This article proceeds in four parts. First, we provide an overview of prior empirical literature on racial disparities in incarceration and the downstream consequences of pretrial detention on case processing. Second, we address issues of racial disparities in Delaware and prior research in this setting. Third, we describe our analytic strategy and present results showing the contributions of bail, pretrial detention, and other factors in explaining average Black-White disparities at adjudication and sentencing. The article concludes with a discussion of potential implications for pretrial and sentencing reform that may help redress racial disparities in judicial processing and imprisonment.

I. RACIAL DISPARITIES IN CRIMINAL PROCESSING AND PRIOR EMPIRICAL LITERATURE

A. RACIAL DISPARITY IN INCARCERATION SENTENCING

Minority overrepresentation in incarceration has been a longstanding and prevalent problem throughout federal and state criminal justice systems.²³ Blacks have the highest rates of incarceration per population

²¹ See *infra* Table 3.

²² See *infra* Figure 1.

²³ See, e.g., MICHELLE ALEXANDER, *THE NEW JIM CROW: MASS INCARCERATION IN THE AGE OF COLORBLINDNESS* 101–02 (2011); MICHAEL TONRY, *MALIGN NEGLECT: RACE, CRIME, AND PUNISHMENT IN AMERICA* 52 (1995); WALKER, ET AL., *supra* note 16, at 40–08; see Bruce Western & Chris Wildeman, *Punishment, Inequality, and the Future of Mass Incarceration*, 57 U. KAN. L. REV. 851, 854–56 (2009) (describing how disproportionate minority confinement has unfurled over time and across various jurisdictions); Marc Mauer & Ryan King, *Uneven Justice: State Rates of Incarceration By Race and Ethnicity*, THE SENTENCING PROJECT (July 1, 2007), available at <https://www.sentencingproject.org/wp-content/uploads/2016/01/Uneven-Justice-State-Rates-of-Incarceration-by-Race-and-Ethnicity.pdf> [<https://perma.cc/6ZX9-HGDU>].

among all racial and ethnic groups.²⁴ Imprisonment rates are greatest for Black men between the ages of thirty and thirty-four.²⁵ Despite recent declines in the U.S. jail and prison population, the racial composition of incarceration population remains skewed.²⁶ Arrest patterns in terms of frequency and type of offending consistently fail to explain the disproportionate number of Blacks in U.S. correctional institutions.²⁷ In response, scholars have sought to understand why racial disparities in jail and prison occur by looking into the fairness of court procedures.

The bulk of research on racial disparities in incarceration has concentrated on sentencing.²⁸ Typically studies examine sentencing by estimating racial disparities in the decision to sentence someone to any jail or prison (i.e. the in/out decision) and the average length of an incarceration sentence (i.e. the sentence length decision).²⁹ These outcomes work in tandem, as the racial composition of an incarcerated population depends on

²⁴ See generally MARC MAUER, RACE TO INCARCERATE (1999) (detailing overrepresentation of Blacks in jail and prisons and breaking down disproportionalities by gender and offense types); Ashley Nellis, *The Color of Justice: Racial and Ethnic Disparity in State Prisons*, THE SENTENCING PROJECT (July 14, 2016), available at <http://www.sentencingproject.org/publications/color-of-justice-racial-and-ethnic-disparity-in-state-prisons/> [<https://perma.cc/9Z8T-XUMU>].

²⁵ E. Ann Carson, *Prisoners in 2014*, at Table 10, BUREAU OF JUST. STAT. (2015) (showing an imprisonment rate of 6,412 per 100,000 U.S. residents for Black men ages 30-34. This rate is higher than corresponding rates for all other demographic groups distinguished by age, race, and gender.).

²⁶ Carson & Anderson, *supra* note 1, at Table 3 (presenting figures that Blacks represented 572,400 of the 1,462,866 (39.1%) prisoners in 2005 and 523,000 of the 1,476,847 (35.4%) prisoners in 2015).

²⁷ Alfred Blumstein, *On the Racial Disproportionality of the United States' Prison Populations*, 73 J. CRIM. & L. CRIMINOLOGY 1259, 1267-68 (1982) (using mathematical models to examine racial disparities in arrests and incarceration); Michael Tonry & Matthew Melewski, *The Malign Effects of Drug and Crime Control Policies on Black Americans*, 37 CRIME & JUST. 1, 18 (2008) (discussing disparity between arrest and incarceration patterns, specifically noting declines in arrests for violent crimes).

²⁸ See Baumer, *supra* note 5, at 237 (2013) (“The predominant focus in the criminological literature on whether and how race affects the in/out and sentence length decisions is one important component of efforts to advance understanding racial inequality in punishment in the USA, but that leaves a lot of issues unaddressed . . . [I]t would appear while the typical approach to studying race and sentencing is *useful* for helping to clarify the widely referenced disparities in overall imprisonment rates, *this approach alone is highly insufficient.*”).

²⁹ *Id.* at 240 (discussing “overwhelming focus” on “sentence length outcomes among convicted defendants” and relating this focus to data availability); David Holleran & Cassia Spohn, *On the Use of the Total Incarceration Variable in Sentencing Research*, 42 CRIMINOLOGY 211, 211-12 (2004) (explaining the necessity of studying sentence severity to get a complete picture of racial disparity at the sentencing stage).

how many individuals are sentenced to prison and how long these individuals will serve a sentence.³⁰ Since the 1970s, scholars have examined whether racial disparities in incarceration rates can be explained by differences in criminal involvement or other factors.³¹ Many early studies were limited to single locations or regions (i.e. the American South).³² Most research only examined mean differences in outcomes and did not consider the average case for Whites may differ from the average case for Blacks.³³ Effectively, these estimates did not examine decision-making outcomes for similarly-situated Whites and Blacks. To make defendants of different races as similar as possible, scholars recognized that they must include measures of charge seriousness, criminal history, demographic characteristics like age or gender, and case contexts like use of a public defender or county of judicial processing.³⁴

Criminologists have embraced multiple regression as a statistical tool to simplify the analytical task of estimating racial disparities in incarceration sentences when considering multiple factors.³⁵ The regression framework suggests any remaining influence of race on sentencing after the introduction of all relevant case factors shows potential stereotyping, bias, and other forms of differentiation by race.³⁶ The direct effect of race is then

³⁰ *Id.*

³¹ Spohn, *supra* note 5, at 438–41 (2000) (describing methodological shortcomings of previous studies on sentencing severity).

³² See, e.g., Gary Kleck, *Racial Discrimination in Criminal Sentencing: A Critical Evaluation of the Evidence with Additional Evidence on the Death Penalty*, 46 AM. SOC. REV. 783, 788 (1981) (proposing to reexamine the sentencing discrimination hypothesis by suggesting that evidence for discrimination at sentencing was weak because it relied on old data from southern states and because no study had examined prior criminal record of convicts sentenced to death).

³³ John Hagan & Katherine Bumiller, *Making Sense of Sentencing: Review and Critique of Sentencing Research*, 1 in RESEARCH ON SENTENCING: THE SEARCH FOR REFORM 3–5 (Alfred Blumstein et al. eds., 1st ed. 1983) (discussing shortcomings of early sentencing disparity studies); BRIAN MACLEAN & DRAGAN MILOVANOVIC, AN ANATOMY OF THE NO DISCRIMINATION THESIS, 1 in RACISM, EMPIRICISM, AND CRIMINAL JUSTICE, 1, 1–2 (Dragan Milovanovic & Brian MacLean eds., 1st ed. 1990).

³⁴ Ulmer, *supra* note 5, at 17 (2012) (discussing incorporation of new factors, such as representation, social status, gender, ethnicity, and presence of different courtroom actors into sentencing outcome studies).

³⁵ Spohn, *supra* note 5, at 453 (2000) (discussing the use of multivariate statistical techniques and controlling for specific legal and extralegal variables).

³⁶ Marjorie S. Zatz, *The Convergence of Race, Ethnicity, Gender, and Class on Court Decisionmaking: Looking Toward the 21st Century*, 3 CRIM. JUST. 503, 532–33 (2000) (observing that the measurement of discrimination includes considerations such as whether

the primary focus of this form of disparity analysis.³⁷ The majority of studies find a significant association between race and the imposition of an incarceration sentence after including other relevant case factors.³⁸ Approximately a quarter of studies also find meaningful racial disparities in sentence length after including other relevant case factors.³⁹ From a statistical vantage point, racial disparities in incarceration sentences found in regression studies that control for other case factors are statistically significant but generally small in magnitude.⁴⁰ Race appears to have a weaker association with sentence length.⁴¹

Race can also indirectly affect processing outcomes through its relationship with other variables. Typically studies examine interactions among race, gender, and age.⁴² For instance, Darrell Steffensmeier and

scholarly conclusions “will rest solely on main or direct effects of race or sex controlling for other relevant factors”).

³⁷ Baumer, *supra* note 5, at 241 (2013); Travis W. Franklin, *Race and Ethnicity Effects in Federal Sentencing: A Propensity Score Analysis*, 32 JUST. Q. 653, 654 (2015); Ulmer, *supra* note 5, at 8 (2012).

³⁸ Spohn, *supra* note 5, at 457 (2000) (reviewing a study by Theodore Chiricos and Charles Crawford that compares the magnitude and direction of race effects on the “in/out” and sentence length decisions in 38 studies conducted between 1979 and 1991). See generally THEODORE CHIRICOS & CHARLES CRAWFORD, RACE AND IMPRISONMENT: A CONTEXTUAL ASSESSMENT OF THE EVIDENCE, IN ETHNICITY, RACE, AND CRIME (Darnell Hawkins ed., 1st ed. 1995) (providing details about their review of 38 sentencing studies to determine if race affects judicial decisions to imprison offenders). Our study does not show a significant main effect of race on the in/out sentencing decision.

³⁹ Spohn, *supra* note 5, at 457 (2000) (noting that 7 out of 31 studies considering sentence length outcomes in Chiricos and Crawford’s sample showed Nonwhites received longer incarceration sentences).

⁴⁰ Mitchell, *supra* note 6, at 456 (“Taken as a whole, data from non-Federal and Federal courts indicate that even after taking into account offense seriousness and prior criminal history, African-Americans were punished more harshly than whites. The magnitude of unwarranted disparity generally is statistically significant but substantively small and highly variable.”).

⁴¹ Travis W. Franklin, *The State of Race and Punishment in America: Is Justice Really Blind?*, 0 J. CRIM. JUST. 1, 4 (2017) (discussing “mixed, conflicting, and potentially inconclusive” nature of studies regarding race and sentence length); Mitchell, *supra* note 6, at 461 (finding that “the race effect persists” when controlling with different factors but that “the average estimate of racial disadvantage drops considerably”); Travis C. Pratt, *Race and Sentencing: A Meta-Analysis of Conflicting Empirical Research Results*, 26 J. CRIM. JUST. 513, 518 (1998) (finding that “the estimated effect size of race on sentencing decisions does not approach the magnitude of those associated with legally relevant variables (primarily the seriousness of the offense)”).

⁴² Jill K. Doerner & Stephen Demuth, *The Independent and Joint Effects of Race/Ethnicity, Gender, and Age on Sentencing Outcomes in U.S. Federal Courts*, 27 JUST. Q. 1, 5 (2010) (discussing prior studies examining joint effects of race/ethnicity, gender, and

colleagues' study of sentencing in Pennsylvania finds young Black males more often receive the harshest sanctions relative to other demographic groups.⁴³ The study attributes this result to court officials' "focal concerns" for public safety and culpability.⁴⁴ Poverty and differences in socioeconomic backgrounds may also exacerbate racial disparities in incarceration sentences.⁴⁵ To illustrate, Cassia Spohn and David Holleran report that unemployed Black and Latino males experienced higher odds of incarceration compared to employed White males in two major cities.⁴⁶ Taken together, research indicates that extralegal factors influence sentencing beyond the legal characteristics of the current case. In articulating future directions for disparity research, Jeffery Ulmer, a criminologist at Pennsylvania State University, observes, "[we] need more of such research."⁴⁷

While extensive, the sentencing literature provides limited answers to how and why disparities emerge. Theoretically, this scholarship treats sentencing as an isolated decision-making process. Sentencing in reality likely reflects the consequences of numerous prior interactions with police and courts.⁴⁸ Empirically, the multiple regression framework used in this research concentrates on evaluating the independent effect of race, holding all other factors constant.⁴⁹ Put simply, observed racial disparities are only considered to be important if race is significantly associated with

age); Franklin, *supra* note 41, at 657 (describing studies examining combinations of race/gender/age); Patricia Warren et al., *The Imprisonment Penalty for Young Black and Hispanic Males: A Crime-Specific Analysis*, 49 J. RES. CRIME & DELINQ. 56, 60-61 (2012) (summarizing various studies controlling for multiple factors).

⁴³ Darrell Steffensmeier et. al., *The Interaction of Race, Gender, and Age in Criminal Sentencing: The Punishment Cost of Being Young, Black, and Male*, 36 CRIMINOLOGY 763, 781 (1998) ("Overall, differences in sentence severity between Black and white males are (1) greatest among younger offenders, (2) smaller but persistent among middle-aged offenders, and (3) partly reversed among older offenders.").

⁴⁴ Zatz, *supra* note 7, at 503.

⁴⁵ See John R. Sutton, *Structural Bias in the Sentencing of Felony Defendants*, 42 SOC. SCI. RES. 1207, 1210 (2013) (hypothesizing that "where Black incomes are low relative to Anglos, and where Black poverty is spatially concentrated, African American defendants will more often be detained and will receive more severe sentences").

⁴⁶ Cassia Spohn & David Holleran, *The Imprisonment Penalty Paid by Young, Unemployed Black and Hispanic Male Offenders*, 38 CRIMINOLOGY 281, 299 (2000).

⁴⁷ Ulmer, *supra* note 5, at 27.

⁴⁸ Kutateladze et al., *supra* note 8, at 514-15 (discussing cumulative disadvantages to minority group defendants in "transit through the criminal justice system").

⁴⁹ See Baumer, *supra* note 5, at 249.

sentencing outcomes after other variables are taken into account.⁵⁰ However, the approach only measures the extent to which case conditions like criminal history or charge severity are directly associated with incarceration sentences by themselves.⁵¹ The method does not readily address how these relevant factors aggravate or mitigate disparities between Black and White defendants at different criminal processing stages. In short, studies of racial disparities in sentencing alone say little about the evolution of disparities as cases move from arrest to final court disposition.

B. CUMULATIVE DISADVANTAGE: AN ALTERNATIVE APPROACH TO UNDERSTANDING RACIAL DISPARITY

The cumulative disadvantage framework offers an alternative, systems-level view of the criminal case processing of defendants. Cumulative disadvantage refers to a process of intensifying inequality among individuals that grows over time through negative interactions with the criminal justice system.⁵² The concept frequently appears in life-course theories. For example, childhood aggression can propel a person on a path toward adult criminality as aggression is met with physical violence, rejection by peers, family hostility, discipline, and social exclusion.⁵³ Disadvantages may also cascade in the criminal justice system.⁵⁴ A person living in poverty, for instance, may be more likely to be arrested by police, unable to post bond, and afford counsel.⁵⁵ Limited resources may make poor arrestees more likely to receive harsher sanctions like incarceration.⁵⁶ Distinctions in treatment by poverty status at the arrest stage can then culminate in socioeconomic inequalities in incarceration.

⁵⁰ *Id.*

⁵¹ See Wooldredge et al., *supra* note 8, at 188 (articulating the need to focus on indirect race effects on sentence severity).

⁵² Sutton, *supra* note 45, at 1208–09.

⁵³ Robert J. Sampson & John H. Laub, *A Life-Course Theory of Cumulative Disadvantage and the Stability of Delinquency*, in 7 *ADVANCES IN CRIMINOLOGICAL THEORY* 133, 145 (Terence P. Thornberry ed., 1st ed. 1997).

⁵⁴ Elsa Chen, *Cumulative Disadvantage and Racial and Ethnic Disparities in California Felony Sentencing*, 3 in *RACIAL AND ETHNIC POL. IN CAL.*, 251, 253 (Bruce Cain, Jaime Regalado, & Sandra Bass eds., 2008) (discussing the use of cumulative disadvantage theory in criminal justice literature); Kathleen Auerhahn, *Just Another Crime? Examining Disparity in Homicide Sentencing*, 48 *SOC. Q.* 277, 281–82 (2007) (describing prior studies of cumulative disadvantage in the criminal justice system).

⁵⁵ Wooldredge et al., *supra* note 8, at 190 (listing possible disadvantages disproportionately faced by African American defendants).

⁵⁶ *Id.*

The criminal justice system can theoretically produce cumulative disadvantages due to its organizational structure.⁵⁷ Each component of criminal justice is loosely linked by the shared purpose of criminal prosecution. Loose coupling allows for considerable discretion to be given to criminal justice officials in formulating routine practices, setting policy priorities, and adapting decision-making to challenging cases.⁵⁸ Uncertainty about how to handle cases, however, may slow down processing in judicial systems typically taxed with high caseloads. The most salient facts that reduce uncertainty are the decisions made by upstream criminal justice officials.⁵⁹ Prior decisions, such as high bail amounts or release on own recognizance, may then shape expectations and approaches to cases at later points.

Cumulative disadvantage can be applied to examining racial disparities and the treatment of Black defendants. Blacks disproportionately enter the criminal justice system through arrests relative to their representation in the general population.⁶⁰ Cases involving Blacks are more likely to be dismissed by prosecutors, but such dismissals do not necessarily signal leniency.⁶¹ A prosecutor may decide not to pursue a case if police are too willing to arrest Black defendants. Conversely, victims and witnesses fail to come forward given their proximity to the offender or unwillingness to cooperate with police.⁶² Once formally charged, Blacks are more reluctant to plead guilty and more willing to go to trial.⁶³ Plea bargaining may be less common among Blacks than Whites if Blacks

⁵⁷ Celesta Albonetti, *Integration of Theories to Explain Judicial Discretion*, 38 SOC. PROBL. 247, 248 (1991) (identifying problems inherent in exercise of judicial discretion without complete information regarding all possible alternatives).

⁵⁸ John Hagan, *Why is There So Little Criminal Justice Theory? Neglected Macro- and Micro-Level Links between Organization and Power*, 26 J. RES. CRIME & DELINQ. 116, 119 (1989) (defining “loose coupling and discussing potential consequences”).

⁵⁹ Kutateladze et al., *supra* note 8, at 540; Sutton, *supra* note 45, at 1209.

⁶⁰ See Brad Heath, *Racial gap in U.S. arrest rates: ‘Staggering disparity’*, USA TODAY (Nov. 19, 2014), <https://www.usatoday.com/story/news/nation/2014/11/18/ferguson-Black-arrest-rates/19043207/> [<https://perma.cc/54LT-PMPR>] (noting that Ferguson’s arrest rate for Black people in 2014 was nearly three times higher than that for people of other races).

⁶¹ See Chen, *supra* note 54, at 260 (noting that “many researchers cite statistics . . . that the police are more willing to arrest innocent minorities despite insufficient grounds to file charges”).

⁶² Joan Petersilia, *Racial Disparities in the Criminal Justice System: A Summary*, 31 CRIME & DELINQ. 15, 27 (1985) (discussing several possible reasons for witnesses who become increasingly less cooperative as a case proceeds from arrest to disposition).

⁶³ Celesta Albonetti, *Race and the Probability of Pleading Guilty*. 6 J. QUANTITATIVE CRIMINOLOGY. 316, 322-23 (1991).

receive less favorable guilty plea agreements from prosecutors.⁶⁴ At this juncture, Whites who commit serious offenses and plead out may receive more lenient sentences and avoid incarceration.⁶⁵ Completing the process, convictions at trial carry stiffer sanctions.⁶⁶ Black defendants who are convicted at trial may have greater chances of receiving an incarceration sentence and longer sentences than if they had negotiated a more favorable plea agreement. These cumulative disadvantages associated with race then exacerbate disproportionate minority confinement.

C. BAIL AND PRETRIAL DETENTION AS CONTRIBUTORS TO CUMULATIVE DISADVANTAGE

Decisions made at a defendant's initial appearance may also generate disadvantages in criminal processing in criminal trial courts.⁶⁷ Determinations of bail and pretrial release are usually cursory proceedings that occur shortly after an arrest and without the support of counsel.⁶⁸ A court official must balance principles of protecting the public, ensuring

⁶⁴ See Chen, *supra* note 54, at 261 (noting that “negative perceptions of plea bargaining among African Americans, or prosecutors’ reluctance to offer attractive plea deals to minority defendants” may reduce Black defendants’ willingness to plea bargain before trial).

⁶⁵ Jeffrey T. Ulmer et al., *Trial Penalties in Federal Sentencing: Extra-Guidelines Factors and District Variation*, 27. JUST. Q. 560, 567–68 (2010).

⁶⁶ See generally Jim Sidanius, *Race and Sentence Severity: The Case of American Justice*, 18 J. BLACK STUD. 273, 274 (1988) (reporting more punitive sentencing outcomes for Blacks who are tried before juries rather than opting for plea bargains); Randall Kennedy, *Racial Trends in the Administration of Criminal Justice*, in AMERICA BECOMING: RACIAL TRENDS AND THEIR CONSEQUENCES, VOLUME II AT NAP.EDU (Neil Smelser, William Julius Wilson, & Faith Mitchell eds., 1st ed. 2001), available at <https://www.nap.edu/read/9719/chapter/2> [<https://perma.cc/7XPJ-T5M4>] (documenting disparities in punishment by jury trials due to discriminatory jury selection or bias of jurors).

⁶⁷ Several pre-sentencing studies have examined the charging decisions of prosecutors, such as initial charges and charge reductions. See, e.g., Kutateladze et al., *supra* note 8, at 538; Lauren O’Neill Shermer & Brian D. Johnson, *Criminal Prosecutions: Examining Prosecutorial Discretion and Charge Reductions in U.S. Federal District Courts*, 27 JUST. Q. 394, 418-420 (2010); M. Marit Rehavi & Sonja B. Starr, *Racial Disparity in Federal Criminal Charging and Its Sentencing Consequences*, SSRN ELECTRONIC J. (2012), 4–7 <http://www.ssrn.com/abstract=1985377> [<https://perma.cc/NF3W-XZKE>] (last visited Apr 12, 2017). Due to missing data on prosecutors’ decisions, we do not explore disparities in charging.

⁶⁸ See Douglas L. Colbert, *Prosecution Without Representation*, 59 BUFF. L. REV. 333, 345 (2011) (predicting that “states and localities will continue to refrain from providing legal representation until the Justices explicitly declare that *Gideon’s* principles apply to initial bail proceedings”).

appearance in court, and providing due process for the accused.⁶⁹ Magistrate judges have four options: release a defendant on his or her own recognizance, impose an unsecured bond, impose a secured bond, or require cash-only bail.⁷⁰ In many jurisdictions, bail schedules, or guidelines for appropriate types and amount of bail, assign a “going-rate” for release given the circumstances of a case.⁷¹ Judges can deviate from standards with a sufficient basis for their decisions, such as setting a higher bail amount than scheduled due to perceived danger to the public.⁷²

Studies of cumulative disadvantage should include measures of bail and detention before trial. Bail types and amounts are relevant insofar as they affect the likelihood of a defendant being detained before trial.⁷³ Failure to post bond may inadvertently signal dangerousness or culpability to court officials who determine guilt, as defendants charged with serious crimes tend to face higher bail amounts or may not have the right to be released before trial.⁷⁴ A detained defendant also loses access to work and family.⁷⁵ Case preparations like meeting with counsel, gathering evidence, and assembling witnesses become harder when a defendant is in jail.⁷⁶ Detained defendants, even those who are innocent, may become more willing to accept guilty pleas to end the judicial process or get credit time toward a sentence.⁷⁷ Cases for detained defendants will potentially take different trajectories compared to those released in the community.⁷⁸

Several empirical studies demonstrate bail and pretrial detention have consequential impacts on subsequent criminal justice stages. The Vera Institution (now Vera Institute of Justice) conducted the first major study of

⁶⁹ AM. BAR ASS'N, ABA STANDARDS FOR CRIMINAL JUSTICE: PRETRIAL RELEASE § 10.1.2 (3d ed. 2007), https://www.americanbar.org/content/dam/aba/publications/criminal_justice_standards/pretrial_release.authcheckdam.pdf [<https://perma.cc/WRH3-PMXV>].

⁷⁰ *Id.*

⁷¹ See Joseph Lester, *Presumed Innocent, Feared Dangerous: The Eighth Amendment's Right to Bail*, 32 N. KY. L. REV. 1, 26 (2005).

⁷² AM. BAR ASS'N, *supra* note 69, at § 10-1.1 (2007).

⁷³ Wooldredge et al., *supra* note 8, at 212–13.

⁷⁴ See Sutton, *supra* note 45, at 1209.

⁷⁵ Shima Baradaran Baughman, *Costs of Pretrial Detention*, 97 B.U. L. REV. 1, 4 (2017) (discussing direct and indirect effects of detention).

⁷⁶ *Barker v. Wingo*, 407 U.S. 514, 532 (1972) (noting that “the inability of a defendant to adequately prepare his case skews the fairness of the entire system”).

⁷⁷ See Heaton et al., *supra* note 13, at 721–22.

⁷⁸ See Anne Rankin, *The Effect of Pretrial Detention*, 39 N.Y.U. L. REV. 641, 642 (1964) (showing the percentage of defendants who posted bail who were sentenced to prison in relation to percentage of defendants who remained in jail who were sentenced to prison).

bail reform in the 1960s.⁷⁹ Its Manhattan Bail Project featured interviews with arrestees and recommendations for release based on low risk status. Using an experimental approach, researchers only conveyed their recommendations to judges for a random subset of cases.⁸⁰ The study found defendants who were low risk and released on their own recognizance had lower rates of conviction, more suspended sentences, and fewer imprisonment sentences relative to detained defendants.⁸¹ While ground-breaking, the project did not control for underlying differences between released and detained populations.⁸²

Regression-based studies of pretrial processes report comparable findings of cumulative disadvantage, suggesting the Vera Institution's descriptive results had some validity. In a sample of 8,791 defendants arrested in 1975, Temple University criminologist John Goldkamp found the majority of defendants detained until their final disposition were convicted, while 39% of defendants released within twenty-four hours had their cases diverted.⁸³ More stark differences by detention status appeared at sentencing. Almost 20% of those detained pretrial were sentenced to prison for two years or more compared to just 1% of those released in the community before trial.⁸⁴ The disadvantages of pretrial detention persisted when several legal factors were included in statistical models.⁸⁵ According to Goldkamp, these findings show "detention before trial was tantamount to punishment before adjudication."⁸⁶

More recently, Paul Heaton, Sandra Mayson, and Megan Stevenson of the University of Pennsylvania Law School demonstrate pretrial detention alters the course of misdemeanor criminal cases.⁸⁷ Their review of almost 380,000 cases in Harris County, Texas handled from 2008–2013 showed

⁷⁹ See Charles E. Ares et al., *The Manhattan Bail Project: An Interim Report on the Use of Pre-Trial Parole*, 38 N.Y.U. L. REV. 67, 69-71 (1963).

⁸⁰ *Id.* at 74.

⁸¹ *Id.* at 87 tbl.12.

⁸² To compare the most similarly-situated defendants, researchers might have examined the outcomes of low-risk defendants recommended for release and low-risk defendants who were not selected for release recommendation. See also Heaton et al., *supra* note 13, at 725.

⁸³ Goldkamp, *supra* note 12, at 238 tbl.1.

⁸⁴ *Id.*

⁸⁵ See *id.* for incarceration sentence length. These factors include charge seriousness, prior arrests, probation status, and number of offenses.

⁸⁶ John S. Goldkamp, *Danger and Detention: A Second Generation of Bail Reform*, 76 J. CRIM. L. CRIMINOLOGY 1, 3 (1985).

⁸⁷ See Heaton et al., *supra* note 13, at 736 tbl.1.

pretrial detention increased the odds of conviction and incarceration.⁸⁸ Defendants detained before trial were sentenced to more days in jail and fewer days on probation than those released on bail.⁸⁹ The adverse effects of pretrial detention were confirmed by a natural experiment that compared defendants based on the day of the week they had their bail hearings. Defendants processed on Tuesday, Wednesday, and Thursday—the days when detention is most probable—received the most punitive outcomes in adjudication and sentencing among all misdemeanor defendants processed.⁹⁰

Despite evidence of racial disparities in incarceration sentencing, few studies have linked these racial disparities to differences in bail and pretrial detention.⁹¹ In a landmark study, Traci Schlesinger contends racial disparities in the pretrial stage are responsible for inequalities in incarceration across several states.⁹² She found race had a significant effect on incarceration sentencing after controlling for pretrial processes, but that pretrial detention made a defendant more than four times more likely to receive a prison sentence.⁹³ In a study of New York City, Besiki Kutateladze and his co-authors found Blacks disproportionately ranked among the “most disadvantaged” defendants who were charged with felonies, detained, and sent to prison.⁹⁴ While demonstrative of compounding disadvantages, the study is less clear about how much pretrial detention changes processing outcomes. Finally, a study by University of Cincinnati criminologist John Wooldredge and his co-authors identify direct and indirect associations of cumulative disadvantages.⁹⁵ Their study suggests about 40% of the Black-White disparity in incarceration sentences could be attributed to racial differences in having hired private counsel, pretrial detention, and criminal history.⁹⁶ This research does not explore the

⁸⁸ *Id.* at 745 tbl.2, 748 tbl.3.

⁸⁹ *Id.* at 748 tbl.3.

⁹⁰ *Id.* at 754–57.

⁹¹ See Martin D. Jr. Free, *Race and Presentencing Decisions in the United States: A Summary and Critique of the Research*, 27 CRIM. JUST. REV. 203, 204–05 (2002) (observing that few studies examine extra-legal factors on pretrial processing and instead continue to focus on the sentencing phase); Schlesinger, *supra* note 14, at 171.

⁹² Traci Schlesinger, *The Cumulative Effects of Racial Disparities in Criminal Processing*, 7 J. INST. JUST. & INT’L STUD. 268, 268–69 (2007).

⁹³ *Id.* at 271, 272 tbl.1.

⁹⁴ See Kutateladze et al., *supra* note 8, at 536 tbl.4, 537.

⁹⁵ Wooldredge et al., *supra* note 8.

⁹⁶ *Id.* at 213 tbl.4.

impacts of pretrial conditions on other decisions, such as incarceration sentence length.

The empirical challenge of explaining racial inequalities in incarceration is to determine the extent to which cumulative disadvantage exists and what factors drive negative outcomes for minority defendants. This study makes two contributions. First, this study considers how racial disparities change along the criminal justice continuum. An emphasis is placed on distinguishing the size of disparities when other case factors are held constant. Second, this study focuses on the influence of decisions made at a defendant's initial appearance on subsequent Black-White disparities in criminal court decision-making outcomes. In particular, this study evaluates the effect of bail type, bail amount, and pretrial detention on Black-White disparities in adjudication and sentencing. The present study thus addresses two shortcomings in sentencing disparity literature by estimating Black-White disparities at multiple criminal justice stages and assessing the influence of bail, detention, and other case factors in contributing to these racial disparities.

II. RESEARCH CONTEXT: RACE AND JUSTICE IN THE DELAWARE CRIMINAL JUSTICE SYSTEM

This study examines Black-White disparities in incarceration and criminal processing in the state of Delaware. Racial disparity in Delaware's criminal justice system has emerged as a priority issue for policymakers and judicial officials.⁹⁷ About a quarter of Delaware residents are Black, yet Blacks constitute 42% of arrests, 42% of convictions, and 51% of incarceration sentences per recent arrest data.⁹⁸ Nearly six in ten inmates in

⁹⁷ See Jessica Reyes, *Committee Targeting Racial Disparities to Hold Hearings*, DELAWARE ONLINE (Oct. 8, 2015), <http://delawareonline.com/story/news/local/2015/10/08/committee-racial-disparities--hearing/73571924/> [<https://perma.cc/5GDS-GDFV>] (discussing a series of hearings held by a committee charged with finding ways to reduce racial disparities in Delaware's criminal justice system); Jessica Reyes, *Does Race Play a Role in Who Goes to Prison in Delaware?*, DELAWARE ONLINE (Sep. 23, 2016), <http://www.delawareonline.com/story/news/local/2016/09/23/does-race-play-role-who-goes-prison-delaware/90897630/> [<https://perma.cc/3QQM-2WPZ>] (discussing the creation of the Fairness Committee in the aftermath of a sentencing study).

⁹⁸ JOHN MACDONALD & ELLEN DONNELLY, EVALUATING THE ROLE OF RACE IN CRIMINAL JUSTICE ADJUDICATIONS IN DELAWARE, Report Submitted to Chief Justice of the Delaware Supreme Court & Delaware Access to Justice Commission's Subcommittee on Fairness in the Adult Criminal Justice System (2016), https://courts.delaware.gov/supreme/docs/DE_DisparityReport.pdf [<https://perma.cc/JG4T-V5LA>].

Delaware's correctional system are Black.⁹⁹ Black overrepresentation in criminal justice interactions then grows between arrest and incarceration stages.¹⁰⁰

Three empirical studies have evaluated Black-White disparities in Delaware's criminal justice system, and each has offered different explanations for these racial differences in incarceration.¹⁰¹ As we detail below, sometimes these studies have cited the importance of detention before trial. In 2000, Thomas Eichler, a former State Secretary of Health and Social Services, identified problems of racial disparities in a legislative report.¹⁰² Using relative percentages to measure the composition of incarcerated populations, Eichler posited Black overrepresentation is primarily driven by differential enforcement of drug laws.¹⁰³ This initial study, however, only looked at aggregate statistics of Delaware's general, arrested, and incarcerated populations. The study did not track how and why individuals moved through the criminal justice process. A follow-up study by the Delaware Statistical Analysis Center (DELSAC) sought to examine racial disparities from arrest to sentencing among defendants facing felony arrest charges.¹⁰⁴ The report showed higher rates of detention and lower rates of conviction for Blacks relative to Whites. Incarceration was more frequently imposed on Blacks upon adjudication.¹⁰⁵ DELSAC

⁹⁹ Authors' calculations from BUREAU OF JUSTICE STATISTICS, NATIONAL PRISONER STATISTICS 1978–2014 (2014), <http://www.icpsr.umich.edu/icpsrweb/NACJD/studies/36281> [<https://perma.cc/8PQN-B4XY>]. A unified correctional system means that the state operates all jails and prisons. Census figures of the state's incarcerated population do not separate out inmates who have received an incarceration sentence of one year or less from those with longer sentences. E. ANN CARSON & JOSEPH MULAKO-WANGOTA, BUREAU OF JUSTICE STATISTICS: CORRECTIONS STATISTICAL ANALYSIS TOOL, <https://www.bjs.gov/index.cfm?ty=nps> [<https://perma.cc/U85M-WAPP>] (last visited Jan 4, 2018).

¹⁰⁰ See MACDONALD & DONNELLY, *supra* note 98, at 14 fig.4.

¹⁰¹ These three studies were conducted by Thomas Eichler, the Delaware Statistical Analysis Center, and John MacDonald and Ellen Donnelly. See *infra* notes 98, 104, and 107.

¹⁰² THOMAS EICHLER, RACE AND INCARCERATION IN DELAWARE: A PRELIMINARY CONSIDERATION 1–28 (2000), <https://www.prisonpolicy.org/scans/RaceIncarceration.pdf> [<https://perma.cc/RXH5-9TSN>].

¹⁰³ *Id.* at 6–7.

¹⁰⁴ DEL. STATISTICAL ANALYSIS CTR., RACE AND INCARCERATION IN DELAWARE: A REPORT TO THE DELAWARE GENERAL ASSEMBLY (2011), <https://sac.delaware.gov/wp-content/uploads/sites/64/2017/04/RaceAndIncarcerationinDelaware-min.pdf> [<https://perma.cc/TL6X-GEKX>].

¹⁰⁵ *Id.* at tbl.13.

concluded that the Black-White disparity in sentencing outcomes could be partly “attributed to criminal history and detention differences.”¹⁰⁶

Most recently, the State of Delaware commissioned a report by University of Pennsylvania scholars that focused on Black-White differences in incarceration sentencing.¹⁰⁷ Empirical analyses of adult criminal arrests occurring between 2012 and 2014 found that Black defendants were slightly more likely to receive incarceration as a sentence and incur prison sentences of similar length when compared to similarly-situated White defendants.¹⁰⁸ The study was the first using Delaware data to control for current case characteristics, criminal history, demographic, and contextual factors. The study concluded that pretrial detention and county of judicial processing were leading contributors to incarceration sentencing disparities between Blacks and Whites.¹⁰⁹ However, the study did not include information about bail or consider other criminal processing decision-points.

Bail and pretrial detention may have important implications for criminal processing in Delaware. Usually within twenty-four hours of an arrest, a defendant must appear before a Justice of the Peace Court magistrate.¹¹⁰ With the exception of capital offenses, all defendants have a right to bail.¹¹¹ Defendants who cannot post bail are not released from custody.¹¹² Bail decisions are based on a review of the “totality of circumstances,” which attempts to ensure a defendant’s appearance in court and public safety.¹¹³ Bail types and amounts are set to each individual

¹⁰⁶ *Id.* at 14.

¹⁰⁷ MACDONALD & DONNELLY, *supra* note 98.

¹⁰⁸ *Id.* at 3.

¹⁰⁹ *Id.* at tbl.6. This table shows that pretrial detention contributes to 19.94% of the absolute explained Black-White difference in rates of receiving an incarceration sentence. County of judicial processing explains another 41.20% of the explainable racial difference in incarceration sentencing.

¹¹⁰ Initial appearances may occur later if an arrest happens during the weekend. *See* Matt Denn, *Steps in a Trial*, DEL. DEP’T OF JUST., <https://attorneygeneral.delaware.gov/criminal/stepsintrial/> [<https://perma.cc/9AZB-5KQX>].

¹¹¹ DEL. CONST. ART. I, § 12. (“All prisoners shall be bailable by sufficient sureties, unless for capital offenses when the proof is positive or the presumption great; and when persons are confined on accusation for such offenses their friends and counsel may at proper seasons have access to them.”).

¹¹² The Delaware Judiciary, *Bail and Bail Bonds*, <https://courts.delaware.gov/help/bail/> [<https://perma.cc/NT64-WGVB>] (last visited Sept. 19, 2018). (“Bail is the amount of money a defendant must post to be released from custody until their trial is heard.”).

¹¹³ ALAN DAVIS, POLICY DIRECTIVE NO. 11-242 (2011), <https://courts.delaware.gov/Form/s/Download.aspx?id=56388> [<https://perma.cc/U85P-Q4DK>] (last visited Jan. 2, 2018).

charge with total bail amounts per case kept in mind. Although the bail guidelines stipulate recommended monetary ranges, aggravating and mitigating factors may encourage magistrates to deviate from these amounts.¹¹⁴ A handful of conditions, such as domestic violence, substance abuse, violation of probation, and failure to appear in court for previous cases, require the use of special bail procedures and conditions, such as family supervision or medical evaluation.¹¹⁵ Over 80% of defendants arrested between 2012 and 2014 had a bond imposed in their case. Courts most frequently apply unsecured bail followed by secured and cash-only bail.¹¹⁶ In all, bail setting and pretrial detention appear to be key decision-points in the Delaware justice system, but previous studies do not distinguish the impact of bail and pretrial detention on racial disparities at later stages of criminal processing. No study of Delaware has considered the role of bail type and bail amount in judicial decision-making, though bail may be an important contributor to incarceration in the State of Delaware.

III. ANALYTIC STRATEGY

In the present study, we distinguish racial disparities in criminal processing and their sources by taking a decomposition approach. Decomposition methods allow us to estimate the size of racial disparities at a particular processing point and identify the factors that contribute to these differences. Although we can assess racial disparities in criminal processing using traditional regression approaches that estimate average differences in decision outcomes holding other variables constant, the decomposition method helps us to estimate what processing differences would look like for White defendants if they had the same traits and case circumstances as Black defendants. In other words, the technique is based on determining average case outcomes between defendants if these defendants only differed by their race.

Decomposition models begin with several assumptions. First, we assume Black and White defendants are mutually exclusive groups. This assumption is met because police officers in Delaware assign racial identities to all arrestees and these identities remain in the Delaware Criminal Justice Information System (DELJIS) records until a defendant is sentenced. Next, we assume all differences between Blacks and Whites

¹¹⁴ *Id.* at 3.

¹¹⁵ DAVIS, *supra* note 113.

¹¹⁶ Author's calculations are based on 75,912 arrests from DELJIS records.

come from observable and unobservable characteristics of cases. Observed characteristics, such as severity and type of charges, contribute to “explained” differences in processing outcomes by race. “Unexplained” racial differences in processing outcomes come from unobserved factors, which could be due to omitted variables or racial bias and discrimination. Technically, any residual difference between Blacks and Whites that are identical on observable factors can be viewed as the “effect” of race as if it were randomly assigned to alike cases. Unobserved characteristics, such as a defendant’s demeanor or relationship with their attorney that is not measured in our dataset, could also contribute to unexplained differences. Because we cannot confidently determine the causes of unexplained racial differences in criminal processing (i.e. whether this difference is due to racial discrimination or other unmeasured factors), we concentrate our discussion on explained racial differences. Finally, we assume average differences in case outcomes can be broken down into specific components of a case. Detailed decompositions apportion explained differences into the contributions of each individual variable. Effectively, these detailed contributions give a sense of the importance of each case characteristic in explaining the gaps between Blacks and Whites on criminal processing outcomes.

We apply Gelbach’s conditional decomposition in this study.¹¹⁷ Under this approach, we estimate the association between race alone and a criminal processing decision in a regression model. We then determine whether the effects of race persist after adding other relevant case and criminal history factors to the regression model. The decomposition relies on comparing the estimates for race under a base specification model and those of full specification model. Computationally, we begin with the traditional linear regression model where our outcome Y is a function of whether a defendant is Black, denoted by X_I and other related case

¹¹⁷ Differences can be decomposed through various statistical methods. The Gelbach decomposition approach examines shifts in the coefficient for race. See Gelbach, *supra* note 15, at 518–22. Other decompositions rely on non-linear estimation. See generally Robert W. Fairlie, *An Extension of the Blinder-Oaxaca Decomposition Technique to Logit and Probit Models*, 30 J. ECON. & SOC. MEASUREMENT 305 (2005) and Sergio Firpo et al., *Unconditional Quantile Regressions*, 77 ECONOMETRICA 953 (2009) (calculating changes in average outcomes by race using non-linear functions). The traditional decomposition relies on comparing mean outcomes for two groups. See MACDONALD & DONNELLY, *supra* note 98, at 24 (describing and applying Oaxaca-Blinder decomposition methods that break down differences in average probabilities of incarceration and average sentence lengths for Blacks and Whites in Delaware).

conditions, contained by X_2 . We take an interest in measuring the effect of race on criminal processing outcomes given by β_1 .

$$Y = X_1\beta_1 + X_2\beta_2 + e$$

Gelbach suggests we can estimate a model with a base specification that only includes race and excludes all other variables (X_2).¹¹⁸ This base specification estimates the effect of race as b_1^{Base} , yet we know this estimate is biased as it differs from β_1 due to omitted variables measured by X_2 . This bias in the base specification can be represented by d , which represents a special algebraic identity because it equals the omitted variable bias formula.

$$b_1^{Base} = d + \beta_1$$

$$\text{where } d = (X_1' X_1)^{-1} X_1' X_2 \beta_2$$

In order to approximate β_1 without omitted variable bias, we can run a full specification model that controls for X_2 . Our new estimate of b_1^{Full} is a consistent estimate of the race effect of β_1 . By implication, we can say that the difference between the base and full specification provides a test of the omitted variable bias formulation.

$$d = b_1^{Base} - b_1^{Full}$$

The omitted variable bias formula allows us to decompose the coefficients from the base and full specification models. By comparing the race coefficients from the base and full specification models we can partition out racial disparities that result from case conditions (explained) from those that are not measured by case conditions (unexplained).

The Gelbach decomposition has two strengths. The derivation that compares race coefficients from base and full specifications gives a clear sense of how aggregate differences change when covariates are added.¹¹⁹ The “effects of added covariates” are also readily interpretable. Black-White disparities in criminal processing will grow or decrease depending on whether an added case characteristic is associated with more or less punitive criminal processing, and whether this characteristic is more

¹¹⁸ Gelbach, *supra* note 15, at 522–23.

¹¹⁹ *Id.* at 510.

prevalent for Blacks or Whites. Detailed decompositions can then give a sense of the magnitude and direction that variables influence Black-White disparities in case outcomes. An additional benefit is the consistency of estimates as more covariates are included. Because estimates derive from a full specification, the sequence of adding covariates has no bearing on estimated explained Black-White disparities or detailed contributions of each set of case characteristics on these disparities.¹²⁰ The method then has desirable appeal for handling and interpreting the importance of legal factors, like criminal history, and extralegal factors, like age, for each case.

IV. DATA

This study uses data representing all adult criminal arrests between 2012 and 2014 reported in the DELJIS. DELJIS records start at the arrest stage and contain subsequent case processing decisions, making the data ideal for assessing the influence of bail and pretrial decision-making on later stages of criminal processing.¹²¹ DELJIS data are organized into a charge-level file containing case information, such as type of offense and severity of charge. We transformed charge information into a case-level file to reflect the full set of present conditions informing criminal court decision-making. Criminal history records were made available for anyone arrested in Delaware between 2012 and 2014. These criminal history records were merged with the current case records.

The final analytic dataset features 75,912 arrests for criminal and DUI offenses. These cases involve 45,177 persons, indicating that some individuals were arrested more than once. The analytic dataset contains cases with full information on defendant characteristics, criminal history, and criminal court decisions that occurred before July 9, 2014, when Delaware overhauled its incarceration sentencing laws.¹²² Finally, the analytic file was restricted to cases involving Black and White defendants because other minority groups make up less than 4% of arrests in a given

¹²⁰ *Id.* at 519–20.

¹²¹ See Delaware Criminal Justice Information Systems, *DELJIS Systems*, <https://deljis.delaware.gov/> [<https://perma.cc/U8YP-YA3K>] (last visited Oct. 13, 2018).

¹²² See OFFICE OF THE GOVERNOR, *Governor Signs Criminal Justice Reforms into Law*, DELAWARE NEWS (July 9, 2014), <https://news.delaware.gov/2014/07/09/governor-signs-criminal-justice-reforms-into-law/> [<https://perma.cc/3TWU-R5FU>].

year.¹²³ The analyses concentrate on Black-White disparities. Blacks and Whites represent 42% and 58% of defendants in the analytic database.

A. OUTCOMES

We examine four stages of criminal processing as our dependent variables: conviction, guilty plea, incarceration sentencing, and incarceration sentence length. *Conviction* is a dummy variable that measures whether a defendant was adjudicated as guilty through trial, a plea of guilt, or a plea of no contest (i.e. *nolo contendere*) to one or more current charges (1 = yes and 0 = no). *Guilty plea* measures whether a defendant pleaded guilty or *nolo contendere* to at least one charge in his current case (1 = yes and 0 = no). Sentencing is measured by two outcomes. A dichotomous variable, *incarceration sentence*, measures if a defendant received an incarceration sentence (1 = yes and 0 = no), rather than a sentence of probation, home confinement, or residential treatment. *Sentence length* measures the logged number of months a defendant was sentenced to incarceration in a state prison.¹²⁴ Life sentences were excluded from the sample.¹²⁵

B. DEMOGRAPHICS

Race is measured by a dichotomous variable that represents if a defendant is Black (=1) or White (=0) according to DELJIS arrest and case records. Other demographic variables identify a defendant's gender and age. *Male* measures whether a defendant is male (1 = yes and 0 = no). *Age* is a categorical variable that measures a defendant's age at arrest using eleven categories that roughly correspond to five-year increments.

C. PRETRIAL DETENTION AND BAIL INFORMATION

Four variables were used to identify the influence of bail and pretrial detention on subsequent criminal processing outcomes. *Pretrial detention* is a dummy variable denoting whether a defendant was detained for any time before trial (1 = yes and 0 = no). *Cash-only bail* measures if a

¹²³ Because police officers assign the racial and ethnic identity of arrestees in Delaware, minority group representation in the data may differ if arrestees self-identified with particular racial or ethnic groups. MACDONALD & DONNELLY, *supra* note 98.

¹²⁴ Delaware has a unified correctional system, so there are no jails separate from prisons. All defendants sentenced to incarceration (i.e. Level V) are adjudicated and monitored in the same secure confinement facilities regardless of the length of their sentence.

¹²⁵ Life sentences represent just 0.2% (n=16) of the cases.

magistrate judge imposed any cash-only bail in a case regardless of amount in dollars (1 = yes and 0 = no). *Secured bail* measures whether a magistrate required a defendant to pay the court money or post security in any amount of the bail (1 = yes and 0 = no). Lastly, the *amount of bail* is measured by dollars per 1,000 in each case.

D. LEGAL AND CONTEXTUAL CHARACTERISTICS

The legal and contextual characteristics of a current case were based on DELJIS record information. Legal conditions approximate the severity of the case by the *number of charges* a defendant faces and the classification of *the most serious charge* according to the Delaware Code's offense classification system for felonies, misdemeanors, and other offenses (i.e. Felony A-G; Misdemeanor A, B, or Unclassified; or other offenses).¹²⁶ Three variables measure if a case features at least one *violent, drug, or weapons* charge (1 = yes and 0 = no). Another legal variable measures whether the case involves a *violation of probation* (1 = yes and 0 = no) from a previous conviction.

Two contextual factors measured non-legal conditions that potentially influence case processing. *Public defender* measures if a defendant used court-appointed counsel for representation (1 = yes and 0 = no). *County* measures the county in which a case was processed. Kent, New Castle, and Sussex are the three counties in the state of Delaware. New Castle serves as the comparison group.

E. CRIMINAL HISTORY

Three variables measured a defendant's previous contacts with the juvenile and criminal justice systems. *Prior arrests* are measured by a variable representing the number of times a defendant was arrested before their current case. *Juvenile record* is measured by a variable identifying whether a defendant had a case processed in Delaware's juvenile justice system (1 = yes and 0 = no). *Prior convictions* are measured by a variable representing the number of previous determinations of guilt in the State's criminal justice system.

V. RESULTS

Table 1 presents descriptive statistics of bail, pretrial detention, and case outcomes for Black and White defendants. Table 1 shows that over

¹²⁶ See DEL. CODE. ANN. TIT. 11, § 4201 (2018).

two-thirds of all criminal cases end with a conviction. Most convictions are the result of guilty pleas. About 13% of cases carry an incarceration sentence and the average sentence is 1.23 months (0.21 logged months). Racial differences are apparent across criminal processing outcomes. Black defendants are significantly less likely than White defendants to plead guilty and be convicted. Approximately 15.4% of Blacks receive incarceration sentences compared to 11.4% of Whites. Average incarceration sentences for Blacks are longer than those imposed on Whites.

Table 1: Descriptive Statistics of Bail, Pretrial Detention, and Case Outcomes Involving White and Black Defendants

Variable	Overall	White	Black
Conviction (%)	67.45%	68.87%	65.48%**
Guilty Plea (%)	59.26%	59.95%	58.31%**
Incarceration Sentence (%)	13.07%	11.36%	15.43%**
Sentence Length (in Logged Months)	0.21	0.17	0.27**
Pretrial Detention (%)	35.22%	32.90%	38.42%**
Cash-Only Bail (%)	12.80%	11.40%	14.84%**
Secured Bail (%)	25.80%	23.60%	28.80%**
Bail Amount (\$ in 1,000s)	8.52	6.43	11.39**
No. of Cases	75,912	31,910	44,002
No. of Persons	45,177	18,473	26,718

Note: * $p < 0.05$, ** $p < 0.01$ for statistically significant differences in means by race.

Resource-intensive bail and pretrial detention are common in Delaware. About 26% of cases involve secured bail and 13% involve cash-only bonds. Over a third of cases result in detention before trial. Racial differences are, however, evident in pretrial detention and bail proceedings. Approximately 38% of Blacks compared to 33% of Whites are detained before trial. Cash-only bail is more prevalent among cases involving Black defendants (14.8%) than those involving White defendants (11.4%). A larger proportion of Black defendants have secured bail imposed on their cases. Finally, average bail amounts per case are considerably higher for Blacks. The average Black-White disparity in bail is nearly \$5,000.

Black and White defendants also differ in their current cases and criminal histories. Table 2 provides summary statistics of case characteristics by race. Demographically, the average Black defendant is more likely than a White defendant to be younger (i.e. under 25) and male.

Black defendants are on average more likely than White defendants to use a public defender and have their cases heard in Delaware's most urban county (New Castle). Blacks are also more likely than Whites to face felony charges and charges involving drugs, weapons, or violence. White defendants compared to Black defendants have a greater number of charges per case. Black and White defendants are equally likely to violate probation, yet Whites have less extensive histories of arrest, conviction, and juvenile records.

The differences in case characteristics between the average White and Black defendant underscores the need to adjust for underlying group differences when assessing the consequences of bail and pretrial detention on Black-White disparities case outcomes. The differences in the average case characteristics between Black and White defendants also motivate the use of decomposition methods to assess how much of the Black-White disparity in criminal justice processing outcomes is due to observed case characteristics and how much of it is due to unmeasured factors that could indicate racial bias.

Table 2: Descriptive Statistics of Case Characteristics Involving White and Black Defendants

Variable	Overall	White	Black
Number of Charges in Case	3.90	4.02	3.74**
Most Serious Arrest Charge (%)			
Felony A	0.36%	0.29%	0.46%**
Felony B	6.46%	4.64%	8.98%
Felony C	2.60%	1.69%	3.86%
Felony D	9.17%	8.12%	10.63%
Felony E	3.41%	3.12%	3.79%
Felony F	5.86%	6.73%	4.65%
Felony G	9.43%	9.50%	9.32%
Misdemeanor A	31.41%	32.80%	29.50%
Misdemeanor B	8.41%	9.21%	7.30%
Misdemeanor Unclassified	21.08%	22.17%	19.57%
Other	1.81%	1.72%	1.94%
Violent Case (%)	3.99%	3.21%	5.05%**
Weapon Case (%)	6.33%	4.54%	8.81%**
Drug Case (%)	18.10%	17.19%	19.36%**
Violation of Probation Case (%)	14.49%	14.60%	14.34%
Public Defender (%)	56.45%	54.56%	59.05%**
County (%)			
New Castle	43.08%	39.42%	48.13%**
Kent	31.96%	30.15%	34.45%
Sussex	24.96%	30.43%	17.41%
Male (%)	72.25%	69.38%	76.21%**
Age at Arrest (%)			
18- <21	13.62%	11.93%	15.97%**
21- <25	18.32%	17.22%	19.84%
25- <30	18.39%	18.57%	18.14%
30- <35	14.71%	15.20%	14.02%
35- <40	9.63%	10.08%	9.01%
40- <45	8.10%	8.50%	7.55%
45- <50	7.04%	7.36%	6.60%
50- <55	5.27%	5.73%	4.65%
55- <60	2.61%	2.84%	2.29%
60- <65	1.29%	1.37%	1.18%
65+	1.02%	1.22%	0.75%
Juvenile Record (%)	45.17%	39.05%	53.60%**
Prior Arrests	10.06	8.26	12.53**
Prior Convictions	4.97	4.88	5.08**
No. of Cases	75,912	31,910	44,002
No. of Persons	45,177	18,473	26,718

Note: * $p < 0.05$, ** $p < 0.01$ for statistically significant differences in means by race.

A. REGRESSION FINDINGS OF RACE EFFECTS ON CRIMINAL PROCESSING OUTCOMES

Table 3 shows regression estimates of race on criminal processing outcomes after adjusting for relevant case and criminal history factors. Controlling case characteristics, Blacks compared to Whites have a lower likelihood of conviction. Black defendants are 14% less likely than White defendants to be convicted (OR = 0.86; $100 \times (1-0.86)$). This trend may be driven by guilty pleas, as Blacks are approximately 10% less likely than Whites to plead guilty or no contest to charges (OR = 0.90; $100 \times (1-0.90)$). Whites and Blacks are almost equally likely to receive an incarceration sentence. The average length of an incarceration sentence also does not appear to differ statistically by race, after other case factors are taken into account. These estimates suggest that the Black-White disparity in incarceration sentences and length of sentences is driven by differences in case characteristics, a finding that is consistent with our previous research on incarceration disparities in Delaware.¹²⁷

Table 3: Regression Estimates of Race, Bail, and Pretrial Detention Effects on Criminal Processing Decisions

Variable	Conviction	Guilty Plea	Incarceration Sentence	Sentence Length
	OR (SE)	OR (SE)	OR (SE)	B (SE)
Black	0.860** (0.017)	0.899** (0.016)	0.961 (0.027)	-0.002 (0.005)
Pretrial Detention	1.549** (0.045)	1.462** (0.038)	1.877** (0.072)	0.111** (0.007)
Cash-Only Bail	1.818** (0.084)	1.702** (0.067)	3.814** (0.198)	0.315** (0.014)
Secured Bail	1.257** (0.037)	1.275** (0.035)	2.087** (0.093)	-0.011 (0.007)
Bail Amount	1.0001 (0.0004)	1.001 (0.0003)	1.003** (0.001)	0.002** (0.0002)
No. of Cases	75,912	75,912	75,912	75,912
No. of Persons	45,177	45,177	45,177	45,177

Notes: * $p < 0.05$, ** $p < 0.01$. Standard errors are clustered at the person-level. OR=odds ratio; SE= standard error; B= beta. Models control for all case factors.

¹²⁷ MACDONALD & DONNELLY, *supra* note 98; John M. MacDonald & Ellen A. Donnelly, *Evaluating the Role of Race in Sentencing: An Entropy Weighting Analysis*, 0 JUST. Q. 1, 17–19 (2017).

Pretrial detention increases a defendant's likelihood of conviction by 55%, guilty plea by 46%, and incarceration sentencing by 88%. Pretrial detention is also associated with an average of 0.5 more months of incarceration.¹²⁸ Cash-only bail elevates a defendant's likelihood of adjudication, and its imposition makes a defendant over three times more likely to be sent to prison. The average prison sentence is longer for defendants required to post cash-only bail. The imposition of secured bail also increases a defendant's odds of conviction, guilty plea, and incarceration. Secured bail has no discernible impact on prison sentence length. Lastly, higher bail amounts are associated with incarceration sentences. Notably, a \$1,000 increase in total bail amount per case elevates one's chance of imprisonment by 0.3%.¹²⁹

B. DECOMPOSITION OF RACIAL DISPARITIES IN CRIMINAL PROCESSING

Although Black-White disparities in criminal justice processing outcomes do not appear to be substantial when the effect of race is estimated after controlling for other factors, we are interested in how much specific case factors explain racial disparities. We then unpack how much of the Black-White disparity in criminal processing is explained by bail conditions, pretrial detention, and other measurable case conditions using the Gelbach decomposition. Table 4 reports conditional decomposition results that compare the estimated effect of race on the four criminal processing outcomes in a base regression to a full regression specification. The explained contribution represents the difference between the race

¹²⁸ We derive this by calculating elasticity based on the raw mean probability of detention (0.352) and the regression coefficient for pretrial detention (0.111), given by $e^{(0.352 \cdot 0.111)} - e^{(0.111)} = 0.472$.

¹²⁹ Our control variables influence criminal processing in expected directions. For instance, having a higher number of charges increases the chance that a defendant will be convicted, plead guilty, and go to prison for a longer period. Defendants charged with the most serious felonies (i.e. Felony A) have a lower risk of conviction than other felony or misdemeanor charges, but defendants are more likely to be incarcerated and sentenced to a longer term in prison if they are charged with a more serious felony. Demographic, contextual, and criminal history factors are also associated with criminal processing. Defendants who are older, male, and represented by public defenders are more likely to plead guilty and incur an incarceration sentence. Men also on average have longer prison sentences than women. Counties differ in their likelihood of adjudications and sentence length. Previous interactions with the juvenile and criminal justice systems consistently increase a defendant's odds of adjudication and receiving an incarceration sentence. Only past arrests and a juvenile record, though, increase the length of a prison sentence. Full tables are available upon request from the authors.

coefficient in the base specification model that includes no other variables and the race coefficient in the full specification model that includes all other measured case factors.

Table 4 shows that racial disparities exist at different processing points, but these disparities are not consistently explained by observable case factors. At adjudication, Blacks are on average less likely to be convicted and plead guilty than Whites. Black-White disparities in adjudication exist after controlling for all case factors, suggesting case factors do not explain a meaningful share of racial disparities in adjudication. By contrast, Black-White disparities in incarceration sentencing can be almost entirely explained by racial differences in case and criminal history factors. Race no longer has a significant effect when one moves from base to full specification.

Table 4: Decomposing Black-White Gaps in Criminal Processing into Unexplained and Explained Components

	Base Model	Full Model	Explained
Outcome	B (SE)	B (SE)	B (SE)
Conviction	-0.034** (0.0039)	-0.031** (0.0037)	-0.003 (0.0019)
Guilty Plea	-0.016** (0.0041)	-0.023** (0.0039)	0.007** (0.0021)
Incarceration Sentence	0.041** (0.1136)	-0.003 (0.0024)	0.044** (0.0018)
Sentence Length	0.106** (0.0063)	0.001 (0.0052)	0.107** (0.0042)
No. of Cases	75,912	75,912	75,912
No. of Persons	45,177	45,177	45,177

Notes: * $p < 0.05$, ** $p < 0.01$. B= beta; SE= standard error. Standard errors are clustered at the person-level. Base model reports the coefficient and standard error (in parentheses below) for race when it is the only coefficient in the regression model. Full model reports the coefficient and standard error (in parentheses below) for race with all relevant control variables. Explained reports the part of the race coefficient explained by control variables and details the contributions of variable sets, conditional on all of them simultaneously.

Table 5: Decomposing Black-White Gaps in Criminal Processing into Bail, Pretrial Detention, and Other Case Characteristics Components

	Conviction	Guilty Plea	Incarceration Sentence	Sentence Length
Variable Set	B (SE)	B (SE)	B (SE)	B (SE)
All (Explained)	-0.003 (0.0019)	0.007** (0.0021)	0.044** (0.0018)	0.107** (0.0042)
Pretrial Detention	0.005** (0.0005)	0.004** (0.0005)	0.004** (0.0004)	0.006** (0.0006)
Cash-Only Bail	0.003** (0.0003)	0.003** (0.0004)	0.006** (0.0006)	0.011** (0.0011)
Secured Bail	0.003** (0.0003)	0.003** (0.0004)	0.002** (0.0003)	-0.0006 (0.0004)
Bail Amount	0.003** (0.0001)	0.0004** (0.0001)	0.002** (0.0003)	0.008** (0.0015)
Legal Factors	-0.0005 (0.0010)	0.004** (0.0011)	0.011** (0.0009)	0.050** (0.0026)
Contextual Factors	-0.012** (0.0009)	-0.012** (0.0009)	0.010** (0.0006)	0.016** (0.0011)
Criminal History	-0.001 (0.0009)	0.004** (0.0010)	0.010** (0.0008)	0.017** (0.0015)
No. of Cases	75,912	75,912	75,912	75,912
No. of Persons	45,177	45,177	45,177	45,177

Notes: * $p < 0.05$, ** $p < 0.01$. B= beta; SE= standard error. All reports the part of the race coefficient explained by control variables and details the contributions of variable sets, conditional on all of them simultaneously, as reported as Explained in Table 4.

Table 5 details the contributions of variable sets to the explained Black-White disparities in adjudication and sentencing. The detailed decomposition estimates identify the specific contributions of pretrial detention, cash-only bail, secured bail, and bail amount to average Black-White disparities in adjudication and sentencing outcomes. The contributions of thirteen case factors are clustered into three groups: legal factors, contextual factors, and criminal history factors.¹³⁰ To be clear,

¹³⁰ Specifically, the legal characteristics group includes the contributions of number of charges, most serious charge, drug case, weapons case, violent case, and violation of

these variables do not make any contribution to remaining unexplained racial disparities in criminal processing outcomes.

Table 5 shows several important trends. Pretrial detention and contextual factors matter more in explaining Black-White disparities in convictions than legal factors and criminal history. This is evident by the fact that the coefficients for the legal factors and criminal history groups are not statistically significant. All clusters of case and defendant factors, however, significantly explain Black-White disparities in guilty pleas and incarceration outcomes. The Black-White disparity in sentence length is explained by all clusters of factors other than the imposition of secured bail.

Figure 1 displays as percentages the contributions of variable sets to explainable Black-White disparities in adjudication and sentencing. Each percent is calculated by taking absolute value of each of the decomposition coefficients from Table 5, summing these values to create a total absolute explained difference, and dividing the absolute value of each coefficient by the total absolute difference. This adjustment ensures that variable sets' contributions to Black-White gaps are not negative and add up to 100.

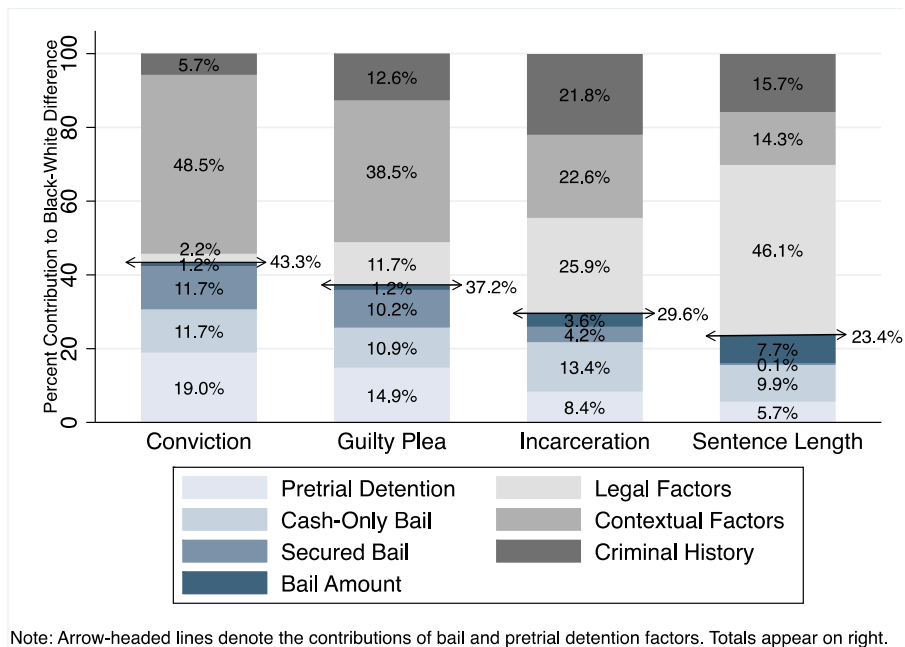
Figure 1 shows case factors vary considerably in importance by criminal justice outcomes. Contextual factors like county of processing and representation by a public defender account for most of the explained racial differences in convictions and guilty pleas. This affirms findings in Table 5. At sentencing, legal factors, such as severity and type of charge, become paramount in driving average Black-White disparities in any incarceration sentence and the length of an incarceration sentence. Criminal history plays a secondary role in contributing to average Black-White disparity in sentencing outcomes.

Figure 1 shows that across all measures of criminal justice processing outcomes, bail and pretrial detention are key contributors to racial disparities in later criminal processing stages. The decomposition estimates of cash-only bail, secured bail, bail amount, and pretrial detention account for 43.5% of the average explained racial disparity in conviction, 37.2% of the explained disparity in guilty pleas, 29.6% of the explained disparity in incarceration sentencing, and 23.4% of the explained disparity in length of incarceration sentences. These findings show that bail and pretrial detention factors have more explanatory power for earlier criminal

probation case. The contextual factors group includes the effects of use of a public defender, county, age of defendant, and gender of defendant. The criminal history group includes the contributions of juvenile records, prior arrests, and prior convictions.

processing outcomes in criminal courts. But pretrial decisions still have considerable impact on the final stages of judicial processing.

Figure 1: Detailed Contributions of Variables After Decomposing Black-White Gaps in Criminal Processing



Pretrial detention and secured bail contribute more to the average Black-White disparity in adjudication than sentencing. These two pretrial factors specifically contribute to 19.0% and 11.7% of Black-White disparities in convictions compared to less than 6% of the disparity in incarceration sentence length. By contrast, bail amount has minimal effects on racial disparities in adjudication, but explains almost 8% of the Black-White disparity in prison sentence lengths. Cash-only bail is the only pretrial factor that consistently explains Black-White disparities in all criminal processing outcomes. Cash-only bail accounts for about 12% of the average explained Black-White disparity in conviction, 13% of the explained disparity in incarceration sentencing, and 10% of the explained disparity in guilty pleas and sentenced time. The imposition of cash-only bail then appears to contribute to racial inequalities across the continuum of criminal processing outcomes.

C. LIMITATIONS

These empirical results should be interpreted with several limitations in mind. The decomposition approach we used assumes that the functional form of criminal justice decisions is linear in expectation given a set of measured case conditions. The model further assumes all relevant variables are included. Misspecification of the form of criminal justice decisions and incorrectly measured variables may mean that our results for race are not accurately estimated. Missing information about bail and pretrial detention may be another relevant concern for our study. DELJIS records do not contain details about a defendant's failure to appear in court for previous cases or special conditions specified by the state legislature that govern pretrial detention, such as fugitive status or involvement in domestic violence. We also cannot firmly determine whether magistrates deviate from recommended bail schedules on particular charges. Finally, we lack data about the socioeconomic background of defendants. DELJIS records do not report the education and occupations for all arrestees, so we have limited information about a defendant's financial resources. Pretrial processes and Black-White disparities in criminal processing may then reflect differences in the relative social and economic standing of defendants. This form of omitted variable bias, however, does not negate the importance of racial disparities in criminal processing given that Black-White disparities also exist in educational attainment, employment status, and wealth.

CONCLUSION

Disproportionate confinement of Blacks in U.S. jails and prisons today raises concerns about the fairness of criminal justice procedures. Racial disparities in incarceration are not fully explained by differences in criminal offending, suggesting that discretion in criminal court processing elevates risks of incarceration for Blacks relative to Whites. Research has thoughtfully explored the relative importance of criminal history, charge seriousness, quality and type of counsel, and charge discretion of prosecutors in explaining racial disparities in criminal sentencing.¹³¹ Less research has explored how bail and pretrial detention decisions influence

¹³¹ See generally Baumer, *supra* note 5; Kutateladze et al., *supra* note 8; Spohn, *supra* note 5; Wooldredge et al., *supra* note 8; Zatz, *supra* note 7 (identifying the impacts of racial or ethnic identity and other relevant case circumstances on criminal processing decisions using multiple regression methods).

decisions in criminal trial courts¹³² and contribute to racial disparities in incarceration.¹³³ This study examined how much of the average Black-White disparities in criminal processing outcomes were attributable to differences in bail and pretrial detention decisions. Using decomposition methods, we were able to estimate the size of average Black-White disparities in convictions, guilty pleas, incarceration sentences, and incarceration sentence lengths. We also provided estimates of how much of the Black-White disparity in these outcomes was attributable to various bail conditions, pretrial detention, and other case conditions.

The results from this study suggest that bail and pretrial detention decisions have serious consequences for later criminal processing decisions and contribute to Black-White inequalities throughout the criminal justice system. Our findings indicate Blacks appear to be less likely than Whites with similar average case characteristics to plead guilty and be convicted. While there is only a small unexplained Black-White disparity in incarceration sentences, we see that approximately 30% and 24% of the explained racial disparity in incarceration sentencing and sentence length can be attributed to pretrial decisions. Among pretrial factors, detention appears to be most consequential factor in creating explained Black-White disparities in adjudication. Pretrial detention plays an insignificant role in explaining Black-White disparities in sentencing. Cash-only bail consistently explains a moderate, but meaningful share of Black-White disparities (10–13%) in conviction, pleas, and sentencing. Bail amount also contributes to the average difference between Blacks and Whites in the length of an incarceration sentence.

Our study points to two policy implications for scholars and legal practitioners. First, bail and pretrial detention have meaningful consequences for racial disparities in incarceration. On the one hand, higher bail amounts and the experience of pretrial detention make all defendants more likely to face harsher sanctions. This may be fair in more serious cases. On the other hand, the large Black-White disparity in pretrial detention, bail amounts, use of cash-only bail, and the importance of pretrial factors in subsequent decision-making highlight a defendant's initial appearance as a ripe area for racial disparity reform. Although our results derive from a small state, our findings underscore the importance of studying pretrial detention as a potential contributor to racial disparities in criminal justice outcomes in other jurisdictions. Magistrate judges in other

¹³² Heaton et al., *supra* note 13, at 722-27; Sacks & Ackerman, *supra* note 13, at 71.

¹³³ Schlesinger, *supra* note 92, at 271.

jurisdictions make bail and pretrial detention determinations with similar immediacy, policy concerns, and procedures to arrive at “fair” bonds per case.¹³⁴ In this respect, the inability to make bail may create downstream consequences that contribute to disproportionate rates of incarceration for Blacks in other states. Examining different policy options for pretrial reform offers one avenue for helping reduce Black overrepresentation among incarcerated populations.

Second, the importance of cash-only bail, and to a lesser extent bail amount, in explaining racial disparities in adjudication and sentencing highlights a need for a better understanding of how socioeconomic inequalities enter the criminal justice system. Making bonds more resource-intensive may legitimately function to reduce flight risk and danger to communities, yet high bail amounts may contribute to unnecessary incarceration disparities associated with poverty.¹³⁵ This principle is especially true for the imposition of cash-only bail that requires far more resources from defendants and their families.¹³⁶ Across the nation, Blacks are significantly more likely to live in poverty, attend underserved schools, and be unemployed.¹³⁷ If socioeconomic disadvantages are a major reason for defendants not making bail, they likely contribute to Black-White disparities in court outcomes and incarceration. Cash-only bail reform and reformulation of bail schedules may then serve as racial disparity reforms without invoking racial justice claims. At the writing of this article, Delaware policymakers adopted new legislation to curb the use of cash-only bail and encourage judges to use other pretrial alternatives, such as check-ins with probation and ankle monitors.¹³⁸ As advocacy for

¹³⁴ See AMBER WIDGERY, PRETRIAL DETENTION, NAT’L CONF. OF ST. LEGISLATORS (Jun. 7, 2013), <http://www.ncsl.org/research/civil-and-criminal-justice/pretrial-detention.aspx> [<https://perma.cc/6LTJ-JBLL>] (providing a comparative study of mandatory pretrial detention across the U.S.).

¹³⁵ RAM SUBRAMANIAN ET AL., VERA INST. OF JUST., INCARCERATION’S FRONT DOOR: THE MISUSE OF JAILS IN AMERICA 29–32 (2015), <http://www.safetyandjusticechallenge.org/wp-content/uploads/2015/01/incarcerations-front-door-report.pdf> [<https://perma.cc/P6KC-XE5D>].

¹³⁶ CRIMINAL JUSTICE POLICY PROGRAM OF HARVARD LAW SCH., MOVING BEYOND MONEY: PRIMER ON MONEY BAIL4 (2017), <http://cjpp.law.harvard.edu/assets/FINAL-Primer-on-Bail-Reform.pdf> [<https://perma.cc/JV6K-KC6H>].

¹³⁷ Bruce Western, et al., *Crime, Punishment, and American Inequality*, in SOCIAL INEQUALITY, 778–89 (Katherine Neckerman ed. 1st ed. 2004).

¹³⁸ See J.G. Wogan, *Delaware Strengthens Bail Reform Movement*, GOVERNING (Jan. 29, 2018), <http://www.governing.com/topics/public-justice-safety/gov-delaware-states-cash-bail-bill-carney.html> [<https://perma.cc/RR79-287G>].

bail reform grows among states, improvements to fairness in adjudication, sentencing, and incarceration can be made.¹³⁹

¹³⁹ Jon Schuppe, *Post Bail*, NBC NEWS (Aug. 22, 2017), <https://www.nbcnews.com/specials/bail-reform> [<https://perma.cc/YN3B-ANLE>] (discussing risk assessment tools being used around the country in an attempt to move away from monetary bail).

