

CORRECTIONS FOR RACIAL DISPARITIES IN LAW  
ENFORCEMENT

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ABSTRACT

*Much empirical analysis has documented racial disparities at the beginning and end stages of criminal cases. However, our understanding about the perpetuation of—and even corrections for—differential outcomes in the process remains less than complete. This Article provides a comprehensive examination of criminal dispositions using all DWI cases in North Carolina from 2001 to 2011, focusing on several major decision points in the process. Starting with pretrial hearings and culminating in sentencing results, we track differences in outcomes by race and gender. Before sentencing, significant gaps emerge in the severity of pretrial release conditions that disadvantage black and Hispanic defendants. Yet when prosecutors decide whether to pursue charges, we observe an initial correction mechanism: Hispanic men are almost two-thirds more likely to have those charges dropped relative to white men. Although few cases survive after the plea bargaining stage, a second correction mechanism arises: Hispanic men are substantially less likely to receive harsher sentences and are sent to jail for*

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*significantly less time relative to white men. The first mechanism is based, in part, on prosecutors' reviewing the strength of the evidence, but much more on declining to invest scarce resources in the pursuit of defendants who fail to appear for trial. The second mechanism seems to follow more directly from judicial discretion to reverse decisions made by law enforcement or prosecutors. We discuss possible explanations for these novel empirical results and review methods for more precisely identifying causal mechanisms in criminal justice.*

TABLE OF CONTENTS

INTRODUCTION . . . . . 1368  
I. THE THEORY AND PRACTICE OF DWI CASE DISPOSITION . . . 1374  
    *A. Theoretical Considerations* . . . . . 1374  
    *B. DWI Case Processing in North Carolina* . . . . . 1383  
II. DATA AND DESCRIPTIVE STATISTICS . . . . . 1386  
    *A. The ACIS Data* . . . . . 1386  
    *B. Descriptive Statistics* . . . . . 1388  
III. EMPIRICAL ANALYSIS . . . . . 1392  
    *A. The Empirical Model* . . . . . 1393  
    *B. The First Correction Mechanism: Prosecutors* . . . . . 1394  
    *C. The Second Correction Mechanism: Judges* . . . . . 1400  
IV. DISCUSSION . . . . . 1403  
CONCLUSION . . . . . 1412  
FIGURES AND TABLES . . . . . 1414

## INTRODUCTION

Although recognized for years, widespread concern over racial, ethnic, and income-based disparities persists in the criminal justice system.<sup>1</sup> These differentials arise at various stages of case processing, starting with the probability of being stopped and searched by law enforcement, and culminating in penalties assessed after conviction, irrespective of any prior plea agreement.<sup>2</sup> These bookend events have received ample attention in the literature.<sup>3</sup> But intermediate decision points—the terms of bail at arraignment, whether the prosecutor declines to charge an arrestee, the quality of legal representation, and plea agreements—are not well understood.<sup>4</sup> Moreover, the predominant analytical framework compares outcomes for black defendants relative only to their white counterparts with little to no discussion of the rapidly growing Hispanic population.<sup>5</sup>

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1. See generally DAVID COLE, NO EQUAL JUSTICE: RACE AND CLASS IN THE AMERICAN JUSTICE SYSTEM (1999); Joan Petersilia, *Racial Disparities in the Criminal Justice System: A Summary*, 31 CRIME & DELINQ. 15, 16 fig.1 (1985) (showing large differences between the racial composition of the United States and prison populations from the 1980s); Ruth D. Peterson, *The Central Place of Race in Crime and Justice—The American Society of Criminology's 2011 Sutherland Address*, 50 CRIMINOLOGY 303, 306-07 (2012) (documenting a range of statistical patterns in which racial minorities fare much worse in the criminal justice system); Robert J. Sampson & Janet L. Lauritsen, *Racial and Ethnic Disparities in Crime and Criminal Justice in the United States*, 21 CRIME & JUST. 311, 341-56 (1997) (reviewing “general patterns and trends” regarding “racial differences in criminal justice processing”).

2. Sampson & Lauritsen, *supra* note 1, at 343-44, 346-49.

3. See, e.g., Shamena Anwar & Hanming Fang, *An Alternative Test of Racial Prejudice in Motor Vehicle Searches: Theory and Evidence*, 96 AM. ECON. REV. 127, 145-47 (2006) (analyzing police searches of motor vehicles); John Knowles et al., *Racial Bias in Motor Vehicle Searches: Theory and Evidence*, 109 J. POL. ECON. 203, 203-09 (2001) (same); Jeffery T. Ulmer & Mindy S. Bradley, *Variation in Trial Penalties Among Serious Violent Offenses*, 44 CRIMINOLOGY 631, 631-32, 655-56 (2006) (studying sentencing patterns after jury convictions); John Wooldredge et al., *Victim-Based Effects on Racially Disparate Sentencing in Ohio*, 8 J. EMPIRICAL LEGAL STUD. 85, 86 (2011) (same).

4. To our knowledge, the only study that systematically examines intermediate decision points and expands demographic variables to include Hispanic arrestees is Traci Schlesinger, *The Cumulative Effects of Racial Disparities in Criminal Processing*, 7 J. INST. JUST. & INT'L STUD. 261, 263-64 (2007). Schlesinger's multi-jurisdictional work considers only judicial decision-making and finds no evidence of correction as we do here. See *id.* at 263-64, 275-76; see also *infra* Part III.B-C.

5. *But cf.* Brian D. Johnson et al., *Ethnic Threat and Social Control: Examining Public*

This Article addresses both deficiencies. First, we examined the anatomy of a subset of criminal offenses from arrest to sentencing at several critical junctures, and, second, we accounted for puzzling differences between Hispanic and white defendants, as well as between Hispanic and black defendants. Our findings suggest that racial minorities<sup>6</sup> still fare worse than white defendants, especially at the time of arrest.<sup>7</sup> Even if such differences arise in law enforcement practices, we found strong evidence that the judicial process self-corrects by offsetting—or at least narrowing—these gaps as the prosecution’s case develops.<sup>8</sup>

Our empirical analysis focuses exclusively on driving while intoxicated (DWI), also known as driving under the influence (DUI), a decidedly major public health issue.<sup>9</sup> As of 2009, DWI arrests were the second-most common offense across the United States.<sup>10</sup> State legislatures have responded to the threats posed by drunk driving through tough laws designed to deter DWI offenses and punish perpetrators.<sup>11</sup> The underlying assumption has been that, by enacting stricter laws, legislatures will be one step closer to accomplishing their task of reducing DWI incidence.<sup>12</sup> However, prior evaluations of these laws, which often used state-level panel data, have yielded mixed results with respect to the laws’ effects on

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*Support for Judicial Use of Ethnicity in Punishment*, 49 CRIMINOLOGY 401, 407-08 (2011) (testing hypotheses related to the relationship between the size of the Hispanic population and the salience of ethnicity in sentencing).

6. Hereinafter, the phrase “racial minority” encompasses both racial and ethnic minority status.

7. *See infra* Part II.B.

8. *See infra* Part III.B-C & Table 6.

9. In this Article, we use data from North Carolina, which uses the label DWI to denote the criminal offense. *See* N.C. GEN. STAT. § 20-138.1 (2013). Henceforth, we only refer to DWI, although one could generalize our findings to DUI depending on the jurisdiction. *See, e.g.*, ARIZ. REV. STAT. ANN. § 28-1381 (2013).

10. Howard N. Snyder & Joseph Mulako-Wangota, *Arrests by Age in the U.S., 2009*, BUREAU OF JUSTICE STAT., <http://www.bjs.gov/index.cfm?ty=datool&surl=/arrests/index.cfm> (last visited Feb. 25, 2014).

11. *See, e.g.*, ARIZ. REV. STAT. ANN. § 28-1381 (requiring any motor vehicle operated after a DUI conviction to include a certified ignition interlock device). The device takes a breath sample before the car will start. *Id.* § 28-1301; *see also* Adam M. Gershowitz, *12 Unnecessary Men: The Case for Eliminating Jury Trials in Drunk Driving Cases*, 2011 U. ILL. L. REV. 961, 963.

12. *See* Frank J. Chaloupka et al., *Alcohol-Control Policies and Motor-Vehicle Fatalities*, 22 J. LEGAL STUD. 161, 161 (1993).

motor vehicle mortality, binge drinking, and DWI.<sup>13</sup> These inconclusive findings suggest that we cannot merely legislate our way out of the problem. After enactment, the manner in which local law enforcement implements new statutes greatly affects the realization of legislative objectives.

Our empirical understanding of the interaction between legal interventions and social behavior remains incomplete because there are many links in the causal chain between passing laws and improving safety. These factors include: (1) the extent to which police enforce the laws and investigate crimes; (2) how prosecutors and courts handle DWI arrests; (3) policies and practices of the corrections system; and (4) how people respond to sanctions and complementary policies involving substance abuse treatment.<sup>14</sup> Each stage can be highly complex, and most are understudied. In particular, very little is known about how prosecutors and judges handle the wide variety and volume of cases that appear before them.<sup>15</sup> To the extent that these issues have been studied at all, research has focused on higher-level offenses such as capital

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13. See *id.* at 162, 164, 184 (studying forty-eight states' alcohol deterrence laws); Koyin Chang et al., *The Effectiveness of Alcohol Control Policies on Alcohol-Related Traffic Fatalities in the United States*, 45 ACCIDENT ANALYSIS & PREVENTION 406, 406-07, 413 (2012) (determining the effectiveness of various alcohol-related motor vehicle laws); William N. Evans et al., *General Deterrence of Drunk Driving: Evaluation of Recent American Policies*, 11 RISK ANALYSIS 279, 279, 282-83, 287-88 (1991) (finding no specific punitive laws contributed to success of national campaign against drunk driving); Donald S. Kenkel, *Drinking, Driving, and Deterrence: The Effectiveness and Social Costs of Alternative Policies*, 36 J.L. & ECON. 877, 878-79, 884, 889-93 (1993) (comparing deterrence policies and alcohol-control policies, with an emphasis on relative social costs); Christopher J. Ruhm, *Alcohol Policies and Highway Vehicle Fatalities*, 15 J. HEALTH ECON. 435, 437, 439, 450-51 (1996) (finding increased alcohol tax rates most effective); Frank A. Sloan & Penny B. Githens, *Drinking, Driving, and the Price of Automobile Insurance*, 61 J. RISK & INS. 33, 34, 48-52 (1994) (analyzing the relationship between insurance costs, drunk driving, and state intervention); Frank A. Sloan et al., *Effects of Prices, Civil and Criminal Sanctions, and Law Enforcement on Alcohol-Related Mortality*, 55 J. STUD. ON ALCOHOL 454, 455-56, 463 (1994) (studying the effectiveness of alcohol-control policies as measured by alcohol-related mortality); Alexander C. Wagenaar et al., *General Deterrence Effects of U.S. Statutory DUI Fine and Jail Penalties: Long-Term Follow-Up in 32 States*, 39 ACCIDENT ANALYSIS & PREVENTION 982, 982-83, 992 (2007) (studying the effects of mandatory minimum penalties); Kathryn Whetten-Goldstein et al., *Civil Liability, Criminal Law, and Other Policies and Alcohol-Related Motor Vehicle Fatalities in the United States: 1984-1995*, 32 ACCIDENT ANALYSIS & PREVENTION 723, 724-26, 729-30 (2000) (analyzing alcohol and motor vehicle fatalities in relation to civil and criminal liability).

14. See *infra* Part I.A.

15. See *infra* notes 68-71 and accompanying text.

crimes.<sup>16</sup> Although capital offenses are responsible for more harm per crime than DWIs, they are fewer in number.<sup>17</sup> Further, although a substantial amount of research has dealt with policing and arrests, comparatively little attention has been paid to downstream decisions following those same arrests.<sup>18</sup>

Based on the background fact that stop and arrest rates for DWI offenses are higher for black men—and even more so for Hispanic men—than their population shares would predict,<sup>19</sup> this Article primarily addresses two questions about racial disparities and criminal process: (1) Do decisions after arrest, both by prosecutors and the courts, significantly differ according to race and gender? and (2) Is there evidence of correction mechanisms that mitigate adverse outcomes experienced at earlier stages of criminal processing? We analyze the first question using regressions with and without controls for socioeconomic attributes that should be systematically related to defendants' demographic characteristics. Answers to the second question arise from comparing differential outcomes in successive stages of the prosecution and trial, namely, whenever all available evidence suggests errors in arrest or charging that a presiding judge later remedies. Correction of differential outcomes among DWI defendants sheds light on the roles of prosecutorial and judicial discretion in the U.S. criminal justice system. Although we detect beneficial, warranted discretion in these data, we recognize

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16. See, e.g., Samuel R. Gross & Robert Mauro, *Patterns of Death: An Analysis of Racial Disparities in Capital Sentencing and Homicide Victimization*, 37 STAN. L. REV. 27, 35-37, 105 (1984); Samuel R. Gross, *Race and Death: The Judicial Evaluation of Evidence of Discrimination in Capital Sentencing*, 18 U.C. DAVIS L. REV. 1275, 1275, 1305, 1321-22 (1985); 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, 783-84, 798-99 (1981); Marian R. Williams & Jefferson E. Holcomb, *Racial Disparity and Death Sentences in Ohio*, 29 J. CRIM. JUST. 207, 210, 214 (2001). For an overview of studies of the deterrent effect of death penalty regimes, see generally NAT'L RESEARCH COMM. ON DETERRENCE & THE DEATH PENALTY COUNCIL OF THE NAT'L ACADS., DETERRENCE AND THE DEATH PENALTY (Daniel S. Nagin & John V. Pepper eds., 2012).

17. See Snyder & Mulako-Wangota, *supra* note 10.

18. See sources cited *supra* note 3. For recent examples of analysis that extends beyond the stop decision, see IAN AYRES & JONATHAN BOROWSKY, A STUDY OF RACIALLY DISPARATE OUTCOMES IN THE LOS ANGELES POLICE DEPARTMENT 2 (2008), available at <http://www.aclusocal.org/issues/police-practices/racially-disparate-outcomes-in-the-los-angeles-police-department/>; Nicola Persico & Petra E. Todd, *The Hit Rates Test for Racial Bias in Motor-Vehicle Searches*, 25 JUST. Q. 37, 37-39 (2008).

19. See *infra* Part II.B.

that discretion can also be used to socially undesirable and perhaps even unconstitutional ends.<sup>20</sup>

We investigate DWI arrests in North Carolina (NC) for important analytical reasons. First, although common, DWIs are atypical in that charges are often based on a biological test, which involves sampling a driver's breath or blood to gauge its blood alcohol concentration (BAC).<sup>21</sup> The implication is that evidence supporting charges and convictions is arguably more limited and straightforward than for many other crime types. Second, focusing on a single offense rather than on a wider array of offenses avoids many of the difficulties generated by unobserved heterogeneity across offense types. Third, studying one offense type across many or all states must account for jurisdiction-specific effects in, at best, crude ways—that is, using fixed effects regression models. Our exclusive focus on NC reduces jurisdictional variation to the prosecutorial and judicial districts within the state as opposed to across the country.<sup>22</sup> Although there are differences in severity, even for a single offense type such as DWI, such variation is small relative to offenses in the aggregate. Reducing both observed and unobserved heterogeneity in crime severity is a useful step toward addressing equality of outcomes among ostensibly similar arrestees. Fourth, the administrative data available for NC are exceptional, and although DWI laws, drinking culture, and the availability of public transportation certainly vary among the states, the underlying legal processes are very similar. Finally, one's prior convictions for drunk-driving offenses are the only criminal records that matter in sentencing for a misdemeanor DWI. Having constructed prior DWI records for

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20. See *Wayte v. United States*, 470 U.S. 598, 608 (1985) (“As we have noted in a slightly different context, however, although prosecutorial discretion is broad, it is not unfettered. Selectivity in the enforcement of criminal laws is ... subject to constitutional constraints.” (quoting *United States v. Batchelder*, 442 U.S. 114, 125 (1979))) (internal quotation marks omitted); Robert E. Scott & William J. Stuntz, *Plea Bargaining as Contract*, 101 YALE L.J. 1909, 1919-21 (1992) (discussing the possibility that plea bargains are achieved under duress).

21. In North Carolina a BAC of 0.08 or more is sufficient for a DWI charge. N.C. GEN. STAT. § 20-138.1 (2013).

22. In a recent analysis of over 5000 felony defendants in an urban Ohio jurisdiction, Wooldredge found, once other factors such as offense severity and criminal history were included as controls, that black men did not differ relative to whites in: (1) the odds of being released on their own recognizance; (2) bond amounts assessed; and (3) prison sentences. See John Wooldredge, *Distinguishing Race Effects on Pretrial Release and Sentencing Decisions*, 29 JUST. Q. 41, 42, 56-57 (2012).



every arrestee in the dataset, we can confidently attest that the data capture every objective measure that could influence sentencing outcomes. To our knowledge, no previous study has tracked outcomes for arrestees in any crime category from the initial arrest through sentencing, particularly for an administrative entity as large as a state. A host of other work has examined differential enforcement behavior by highway officers, with at least one study exclusively using data from NC.<sup>23</sup>

A complete overview of the criminal process permits a discussion that extends beyond identifying racial disparities. Pointing out ways in which law enforcement and prosecutors make decisions that seem to correlate more with demographic characteristics than underlying risk or true guilt assuredly matters to our understanding of how well the system functions. The most consequential contribution of this Article is our substantial evidence of how those misperceptions are remedied as the case unfolds before subsequent actors, namely, prosecutors and judges. Because there is almost no work examining the complete anatomy of a criminal case, we are confident that our results are also the first to detect internal correction outside of the appeals process.

The remainder of the Article proceeds as follows. Part I sketches the procedural issues of interest, with reference to the theory and practice of DWI case disposition in NC. In Part II, we discuss the unique dataset used, the Automated Criminal and Infraction System (ACIS), and review descriptive statistics on racial and ethnic disparities at key decision points. Part III details the regression analysis at these same stages, from the setting of pretrial release conditions to incarceration sentence lengths. Part IV presents our interpretation of the empirical findings, specifically that prosecutors, judges, and even defendants make decisions that generate consequential and robust differences by race and gender. Evidence exists, especially in the context of prosecutorial declinations and judicial sentencing, that correction mechanisms reduce racial and gender-based differences as a case winds its way through the system. Specifically, Hispanic males are subjected to some of the

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23. See Patricia Warren et al., *Driving While Black: Bias Processes and Racial Disparity in Police Stops*, 44 *CRIMINOLOGY* 709, 717, 729-31 (2006) (finding stronger evidence for racial bias among local police officers making vehicle stops relative to highway patrol).

more onerous pretrial release conditions but receive more prosecutorial dismissals and relatively lighter sentence types.<sup>24</sup> Part IV also reviews alternative explanations for the findings in Part III and addresses endogeneity issues that may affect the analysis. We conclude with thoughts for further study.

## I. THE THEORY AND PRACTICE OF DWI CASE DISPOSITION

### A. *Theoretical Considerations*

Empirical research on racial profiling by law enforcement has focused on the difference between statistical<sup>25</sup> and taste-based discrimination,<sup>26</sup> concepts borrowed from economics. The former occurs when law enforcement officers are uncertain about offender identity and must allocate scarce resources to detection.<sup>27</sup> If there are differences in crime propensity according to readily observable characteristics, for example, race, gender, or neighborhood income, then it is rational to allocate more resources to groups for which the probability of crime is higher.<sup>28</sup> On the other hand, taste-based discrimination involves biased law enforcement behavior stemming from an officer's dislike of persons who are "different" or "other."<sup>29</sup> We do not extend this long line of research conducted on differentials at the point of highway stops. In fact, if anything, our results imply that exclusively focusing on stops may lead to false conclusions because of corrective actions undertaken later. Rather, we mention these models because of their applicability to subsequent events in criminal procedure. Specifically, we test for evidence of

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24. See *infra* Part III.B-C.

25. See Dennis J. Aigner & Glen G. Cain, *Statistical Theories of Discrimination in Labor Markets*, 30 INDUS. & LAB. REL. REV. 175, 176, 178 n.8 (1977) (alteration in original) (quoting LESTER C. THUROW, *GENERATING INEQUALITY* 172 (1975)) ("[Statistical discrimination] occurs whenever an individual is judged on the basis of the average characteristics of the group, or groups, to which he or she belongs rather than upon his or her own determinations.").

26. See GARY S. BECKER, *THE ECONOMICS OF DISCRIMINATION* 16-17 (2d ed. 1971) ("[I]f someone has a 'taste for discrimination,' he must act *as if* he were willing to forfeit income in order to avoid certain transactions.").

27. See Aigner & Cain, *supra* note 25, at 178 n.8.

28. See Kate Antonovics & Brian G. Knight, *A New Look at Racial Profiling: Evidence from the Boston Police Department*, 91 REV. ECON. & STAT. 163, 163 (2009).

29. See BECKER, *supra* note 26, at 17; Persico & Todd, *supra* note 18, at 38-42.

these disparities—without commenting on whether they are borne of rational prediction or animus—in the way that officers of the court handle DWI arrestees.

The first post-arrest decision usually involves the prosecutor determining whether to charge the arrested individual and, conditional on formal charges, the nature of the offense.<sup>30</sup> Shortly after detention, most individuals will appear before a magistrate to learn of the filed charges.<sup>31</sup> At that pretrial hearing, the magistrate will set the release conditions, requiring the defendant to post bail or a bond, or even a promise to appear.<sup>32</sup> Setting bail achieves several criminal justice goals: (1) conditioning pretrial release on the severity of the charge; (2) increasing the probability of appearance for offenses of a given severity level or, conversely, reducing the probability of flight; and (3) deterring pretrial misconduct.<sup>33</sup>

Evidence from at least two studies points to discrimination in bail setting. Ian Ayres and Joel Waldfogel used a market-based test to locate bias in pretrial release.<sup>34</sup> Their perspective focused on bond dealers' pricing behavior: higher relative costs for supplying bail for defendants of a particular race should be reflected in relative pricing differences by race.<sup>35</sup> They found that blacks and Hispanics paid bond dealers lower interest rates, indicating that dealers did not regard minorities as greater flight risks.<sup>36</sup> The authors argued that any difference in rates should be attributable to discrimination in bail setting.<sup>37</sup> After eliminating competing explanations, Ayres and Waldfogel concluded that New Haven courts discriminated against blacks and Hispanics in bail setting.<sup>38</sup> Another state-level analysis using Bureau of Justice Statistics data from the 1990s found that

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30. See DIV. FOR PUB. EDUC., AM. BAR ASS'N, *How Courts Work: Pre-trial Court Appearances in a Criminal Case*, [http://www.americanbar.org/groups/public\\_education/resources/law\\_related\\_education\\_network/how\\_courts\\_work/pretrial\\_appearances.html](http://www.americanbar.org/groups/public_education/resources/law_related_education_network/how_courts_work/pretrial_appearances.html) (last visited Feb. 25, 2014).

31. *Id.*

32. *Id.*

33. See William M. Landes, *Legality and Reality: Some Evidence on Criminal Procedure*, 3 J. LEGAL STUD. 287, 288, 336 (1974).

34. See Ian Ayres & Joel Waldfogel, *A Market Test for Race Discrimination in Bail Setting*, 46 STAN. L. REV. 987, 993 (1994).

35. *Id.*

36. *Id.*

37. *Id.*

38. *Id.* at 993-94, 1039.

Hispanic defendants were disadvantaged at the pretrial stage in three ways.<sup>39</sup> Hispanics were the group most likely to have to pay bail to obtain pretrial release, they were assessed the highest bail amounts, and they were the least likely to actually pay for release.<sup>40</sup>

Legal scholars have characterized prosecutors as criminal law's gatekeepers because they decide the fate of arrestees well before they appear before a judge or jury at trial.<sup>41</sup> Usually an assistant district attorney (ADA) will receive notice from law enforcement about the facts and recommended charges.<sup>42</sup> The ADA then faces a two-step choice: (1) pursue or decline a conviction even after law enforcement recommends charges; and (2) charge the arrestee with the recommended or a lesser offense.<sup>43</sup> A third option, related to the second, permits the ADA to negotiate for a conviction through plea bargaining.<sup>44</sup> Given demands on prosecutor resources, budget constraints, and political pressure, many charges are declined, especially when evidence of guilt is lacking.<sup>45</sup> Alternatively, prosecutorial discretion may not offset higher arrest rates if racist motivations predominate.<sup>46</sup>

Exercising prosecutorial discretion through declinations occurs relatively infrequently in NC—about 19 percent by our calculations—because of statutory requirements.<sup>47</sup> Still, there is far less information on prosecutorial charging behavior than on judicial

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39. See Stephen Demuth, *Racial and Ethnic Differences in Pretrial Release Decisions and Outcomes: A Comparison of Hispanic, Black, and White Felony Arrestees*, 41 CRIMINOLOGY 873, 883, 892 (2003).

40. See *id.* at 891 tbl.1, 892, 895-97.

41. James Q. Whitman, *Equality in Criminal Law: The Two Divergent Western Roads*, 1 J. LEGAL ANALYSIS 119, 130 (2009) ("Americans allow prosecutors degrees of discretion that are unparalleled in the advanced democratic world."); see Angela J. Davis, *Prosecution and Race: The Power and Privilege of Discretion*, 67 FORDHAM L. REV. 13, 18 (1998).

42. See DIV. FOR PUB. EDUC., *supra* note 30.

43. See Marc L. Miller & Ronald F. Wright, *The Black Box*, 94 IOWA L. REV. 125, 148-53 (2008); Whitman, *supra* note 41, at 130.

44. See Whitman, *supra* note 41, at 130. For an example of prosecutorial discretion in plea bargains at the federal level, see Lauren O'Neill Shermer & Brian D. Johnson, *Criminal Prosecutions: Examining Prosecutorial Discretion and Charge Reduction in U.S. Federal District Courts*, 27 JUST. Q. 394, 397-98 (2010).

45. See Miller & Wright, *supra* note 43, at 148-49.

46. See generally Davis, *supra* note 41 (arguing for the use of prosecutorial discretion as a remedy for racial discrimination).

47. See, e.g., Shermer & Johnson, *supra* note 44, at 397 (discussing limitations imposed on federal prosecutors by the federal sentencing guidelines).

sentencing decisions. Lauren Shermer and Brian Johnson reviewed the limited empirical evidence on racial disparities in prosecutorial treatment with mixed findings.<sup>48</sup> The samples on which their research was based are small and pertain to different crimes and local jurisdictions.<sup>49</sup>

In addition to budget constraints and personal preferences, prosecutors must consider the overwhelming size of the state court docket.<sup>50</sup> This deluge of criminal cases has prompted Professors Gershowitz and Killinger to observe: “[M]any prosecutors are asked to commit malpractice on a daily basis by handling far more cases than any lawyer can competently manage.”<sup>51</sup> Thus, some of the unexplained discrepancies in plea bargain outcomes may result from ADAs’ adopting heuristics about the propensity for racial minorities to be guilty of, or willing to plead guilty to, DWI offenses. Finally, we note the importance of so-called “executive exclusion” as a source of unobserved heterogeneity. This practice involves the prosecutor declining the case and therefore, “avoid[ing] the wasted effort” of using evidence likely to spur a defense motion to exclude that might ultimately lead to a dismissal.<sup>52</sup> Our data do not include information on the probative value of evidence from the arrest site. It is possible, therefore, that, independent of prosecutorial zeal or resource constraints, some declinations or bargains reflect a prosecutor’s reasoned judgment that he might not secure a conviction through the default process.

Rates of plea agreements in the United States now exceed 90 percent,<sup>53</sup> and their overwhelming use is justified by appeals to rational allocation of scarce prosecutorial and judicial resources.<sup>54</sup>

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48. *Id.* at 399-400, 424.

49. *See id.* at 396-97.

50. Adam M. Gershowitz & Laura R. Killinger, *The State (Never) Rests: How Excessive Prosecutorial Caseloads Harm Criminal Defendants*, 105 NW. U. L. REV. 261, 263-65 (2011).

51. *Id.* at 263.

52. *See* Miller & Wright, *supra* note 43, at 137-38.

53. *See* Stephanos Bibas, *Regulating the Plea-Bargaining Market: From Caveat Emptor to Consumer Protection*, 99 CALIF. L. REV. 1117, 1118, 1119 & n.2 (2011).

54. *See* Missouri v. Frye, 132 S. Ct. 1399, 1407 (2012) (“The potential to conserve valuable prosecutorial resources and for defendants to admit their crimes and receive more favorable terms at sentencing means that a plea agreement can benefit both parties.”); *see also* Santobello v. New York, 404 U.S. 257, 260 (1971) (“The disposition of criminal charges by agreement between the prosecutor and the accused, sometimes loosely called ‘plea bargaining,’ is an essential component of the administration of justice. Properly administered,

In effect, defendants are choosing the certainty of some sanction—but at a reduced level—over a probabilistic sanction following trial with a higher expected value.<sup>55</sup> Given this uncertainty, the plea bargain is an insurance device for both the defendant and the state.<sup>56</sup> But in some cases, defendants may be induced to accept a plea agreement when the expected value of pleading not guilty exceeds the bargain's value.<sup>57</sup> Whether the reverse is true more often for nonwhite defendants is a question that we address in our empirical analysis.<sup>58</sup>

A related concern is that the quality of one's defense, which plausibly correlates with race and ethnicity in addition to income, wealth, and educational attainment, affects case resolution. Defendants possess limited choice in selecting defense counsel; they can represent themselves, obtain state-financed counsel if indigent, or privately retain their own attorney. If DWI defendants select public counsel, they cannot choose whether a public defender or a court-appointed private attorney will provide representation.<sup>59</sup> Seventy-four of the one hundred NC counties do not staff public defenders;<sup>60</sup> by definition, using a publicly subsidized legal service

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it is to be encouraged. If every criminal charge were subjected to a full-scale trial, the States and the Federal Government would need to multiply by many times the number of judges and court facilities.”).

55. See, e.g., Oren Bar-Gill & Oren Gazal Ayal, *Plea Bargains Only for the Guilty*, 49 J.L. & ECON. 353, 353-55 (2006); William M. Landes, *An Economic Analysis of the Courts*, 14 J.L. & ECON. 61, 61, 66, 68 (1971).

56. Gene M. Grossman & Michael L. Katz, *Plea Bargaining and Social Welfare*, 83 AM. ECON. REV. 749, 749 (1983) (emphasis omitted).

57. A related concern is that by threatening defendants with multiple charges and onerous sentences proscribed by statute, prosecutors have gained too much power relative to defendants. See Rachel E. Barkow, *Institutional Design and the Policing of Prosecutors: Lessons from Administrative Law*, 61 STAN. L. REV. 869, 876-84 (2009); William J. Stuntz, *Plea Bargaining and Criminal Law's Disappearing Shadow*, 117 HARV. L. REV. 2548, 2254-58 (2004). Enacting mandatory minimum sentencing laws may have increased prosecutorial discretion by giving the prosecutor a threat, that is, a minimum sentence attached to a charge, with which to extract a plea to a lower charge not covered by the minimum sentence law. See David Bjerk, *Making the Crime Fit the Penalty: The Role of Prosecutorial Discretion Under Mandatory Minimum Sentencing*, 48 J.L. & ECON. 591, 603-06 (2005) (empirically analyzing the effects of a three-strikes law). Whether on average a guilty plea results in lower penalties remains an unsettled issue, even among experts.

58. See *infra* Part III.

59. See, e.g., *United States v. Saldivar-Trujillo*, 380 F.3d 274, 277-78 (6th Cir. 2004).

60. See N.C. OFFICE OF INDIGENT DEF. SERVS., N.C. PUB. DEFENDER DIRECTORY, <http://www.ncids.org/State%20Defender%20Offices/Directory%20Pages/Public%20Defender%20>

in these locations implies representation by members of the general state bar. In turn, if blacks and Hispanics tend to enjoy lower quality representation because they choose to appear pro se or have less zealous counsel, the probability of conviction may be higher and penalties more adverse.<sup>61</sup> Although we might expect private counsel to exert more effort, to the extent that effort yields “wins” followed by improved reputational and pecuniary rewards at the margin, the relative performance of public defenders and court-appointed attorneys is unclear based solely on the financial incentives they face. For one, NC judges place caps on public expenditures for court-appointed counsel on a case-specific basis.<sup>62</sup> Thus, after expending some effort, financial rewards to court-appointed work may be limited.<sup>63</sup> Financial rewards also diminish with limits on hourly fees.<sup>64</sup> Public defenders are paid a salary that arguably does not increase as a function of one’s win rate. On the other hand, this “market for representation” framework may exaggerate the role of price signals.

In one empirical study of the issue, Radha Iyengar found that public defenders are more effective in achieving acquittals for their clients than court-appointed defense counsel.<sup>65</sup> Given the high proportion of arrests resolved by guilty pleas, defense attorneys play an important role advising clients about accepting the ADA’s plea offer. As of the Supreme Court’s decision in *Padilla v. Kentucky*, defense attorneys must discuss the collateral consequences of a conviction, including deportation, with their clients.<sup>66</sup> James

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Directory.pdf (last updated Feb. 24, 2014).

61. See Erica J. Hashimoto, *Defending the Right of Self-Representation: An Empirical Look at the Pro Se Felony Defendant*, 85 N.C. L. REV. 423, 447-50 & tbl.1 (2007).

62. See, e.g., *State v. Williamson*, 468 S.E.2d 840, 846 (N.C. Ct. App. 1996) (holding that indigent counsel fees and expenses are awarded at the discretion of the trial court).

63. See *id.*

64. Fees for publicly supplied counsel are determined at the state level by the NC Office of Indigent Defense Services. See Michael Hewlett, *Forsyth Defense Attorneys Off Court Appointed Lists*, WINSTON-SALEM J., May 6, 2011. A recent reduction in the hourly compensation for court-appointed work resulted in many attorneys removing themselves from the supply of willing lawyers. *Id.* Practically, this development may result in less experienced attorneys taking court-appointed cases. *Id.*

65. See Radha Iyengar, *An Analysis of the Performance of Federal Indigent Defense Counsel* 28 (Nat’l Bureau of Econ. Research, Working Paper No. 13,187, 2007).

66. 559 U.S. 356, 373 (2010) (citations omitted) (“[W]e have long recognized that the negotiation of a plea bargain is a critical phase of litigation for purposes of the Sixth

Anderson and Paul Heaton similarly discovered high success rates with public defenders in murder cases exploiting initially random assignment of lawyers in Philadelphia.<sup>67</sup>

The remaining stages involve the presiding judge's discretion in deciding the basic conviction status and, conditional on a guilty plea or guilt following trial, any sentences and nonincarceration sanctions, such as supervised probation. A major decision involves the location of incarceration, whether in a county jail (where the vast majority of convicted DWI offenders are held) or a state prison (where most convicted DWI felons and persons sentenced to lengthy terms are placed). Understanding judicial sentencing patterns, which perhaps has been more vexing than locating the determinants of prosecutorial discretion, requires attention to similar kinds of unobserved, idiosyncratic decision inputs as well as legislatively mandated norms, like sentencing guidelines. The NC Legislature has prescribed certain minimum sanctions for DWI offenses, and the sentencing judge must report in writing all evidence regarding factors that affect the ultimate sentence.<sup>68</sup>

Drawing on reports from state judiciaries, the distribution of DWI sentences should be a function of individual judges' assessments of the severity of the offense, the quality of evidence, risk assessments of the likelihood of recidivism, and prior experience with DWI cases.<sup>69</sup> Unlike prosecutors, the size of state budget allocations to the criminal justice system should not have a discernible effect on judicial decision-making. The effort required when presiding over a case and handing down a sentence is much less time-consuming and virtually costless relative to the prosecutor's job. Judges' utility functions should therefore depend on their accuracy in reaching decisions about guilt and fairness. In achieving accuracy, judges seek to minimize Type I (false acquittals) and Type

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Amendment right to effective assistance of counsel. The severity of deportation ... only underscores how critical it is for counsel to inform her noncitizen client that he faces a risk of deportation.”)

67. See James M. Anderson & Paul Heaton, *How Much Difference Does the Lawyer Make? The Effect of Defense Counsel on Murder Case Outcomes*, 122 YALE L.J. 154, 183 (2012).

68. N.C. GEN. STAT. § 20-179(c1) (2013).

69. See generally Michael A. Wolff, *Evidence-Based Judicial Discretion: Promoting Public Safety Through State Sentencing Reform*, 83 N.Y.U. L. REV. 1389, 1404-11 (2008) (describing risk assessments through which judges ascertain sanctions for individual offenders).



II (false convictions) errors, the latter of which may lead to successful appeals of their decisions.<sup>70</sup> The American legal system is designed to reduce the probability of Type II more than Type I errors, and judges plausibly internalize this ordering. No consensus exists among law and economics researchers on the arguments in a judge's utility function.<sup>71</sup> Yet our empirical specifications capture the essence of the underlying concepts. Fairness has two dimensions: horizontal, treating similarly situated defendants equally, and vertical, treating defendants convicted of more severe crimes more harshly. Thus, all else equal, race and ethnicity should not explain convictions conditional on a not guilty plea or sentence severity unless minorities commit more serious DWI and concurrent offenses and unless there is also a correlation between these characteristics and some other relevant factor, for example the probability of recidivism.

Finally, we mention the role that Hispanic identity and immigration status may play in criminal proceedings given the relatively high frequency of Hispanic defendants appearing in the data. Using statistics from the 1995 National Alcohol Survey, Raul Caetano and Catherine Clark found that Hispanic men were more likely to self-report drinking and driving in the previous year (21 percent) relative to black men (14 percent).<sup>72</sup> Meanwhile, DWI arrest rates for men during the past year were 1 percent each for whites and blacks but 4 percent for Hispanics.<sup>73</sup> Eleven percent of white and black men responded that they had ever been arrested for DWI, whereas 19 percent of Hispanic men reported affirmatively.<sup>74</sup> These data strongly suggest that the incidence of drinking and driving is

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70. See A. Mitchell Polinsky & Steven Shavell, *Legal Error, Litigation, and the Incentive to Obey the Law*, 5 J.L. ECON. & ORG. 99, 99-100 (1989). But see Aspasia Tsoussi & Eleni Zervogianni, *Judges as Satisficers: A Law and Economics Perspective on Judicial Liability*, 29 EUR. J.L. & ECON. 333, 345-46 (2010) (stating that the possibility of appellate review lacks a deterrent effect).

71. Cf. Hugo M. Mialon et al., *Judicial Hierarchies and the Rule-Individual Tradeoff*, 15 SUP. CT. ECON. REV. 3, 4 (2007) (claiming that the study of judicial behavior has been difficult because "economists are unable to specify the details of judges' utility functions").

72. Raul Caetano & Catherine L. Clark, *Hispanics, Blacks and Whites Driving Under the Influence of Alcohol: Results from the 1995 National Alcohol Survey*, 32 ACCIDENT ANALYSIS & PREVENTION 57, 59 tbl.1 (2000).

73. *Id.* at 62. No female respondents to the survey had been arrested for DWI during this period. See *id.* at 59, 61.

74. *Id.* at 59.

higher among Hispanic and white men than among black men, but that Hispanic men are more likely to be arrested than are men in the other demographic groups.

In *Padilla*, the Court held that a criminal defense attorney who fails to inform a noncitizen client of his nearly certain deportation following a guilty plea fails to satisfy the constitutional standard of objective reasonableness.<sup>75</sup> This failure could lead to the plea and conviction being overturned under the Sixth Amendment's ineffective assistance doctrine.<sup>76</sup> *Padilla* may have two consequences. The first would be that lawyers will be informed of or seek information on the law regarding deportation and hence condition bargaining with prosecutors on deportation consequences.<sup>77</sup> The other, not intended by the Court, would broaden the responsibility of defense counsel to advise clients on a range of collateral consequences of criminal convictions.<sup>78</sup> Indeed, "[i]mmigration status affects the proceedings from bail through execution of a sentence."<sup>79</sup> The direction of this relationship is ambiguous; for some noncitizens, the threat of deportation may result in denial of bail or probation on one hand or, on the other, possible early release, albeit to initiate deportation proceedings.<sup>80</sup>

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75. 559 U.S. 356, 373-74 (2010).

76. *See id.*

77. *See* Darryl K. Brown, *Why Padilla Doesn't Matter (Much)*, 58 UCLA L. REV. 1393, 1395 (2011).

78. *Id.* at 1395-96.

79. Gabriel J. Chin, *Illegal Entry as Crime, Deportation as Punishment: Immigration Status and the Criminal Process*, 58 UCLA L. REV. 1417, 1420 (2011).

80. *Id.* at 1421. Unfortunately, our data do not permit disaggregating observations on the basis of legal residency. Among the limited, systematic evidence available, one study compared sentencing outcomes by race and then by citizenship status. *See* Scott E. Wolfe et al., *Unraveling the Effects of Offender Citizenship Status on Federal Sentencing Outcomes*, 40 SOC. SCI. RES. 349, 350, 354, 358 (2011). The authors concluded that blacks were more likely to be incarcerated than whites among U.S. citizens, but there was no statistical difference in the same probability between Hispanics and whites. *Id.* at 356 tbl.2. When citizenship status entered the analysis, however, Hispanic citizens were sentenced to shorter incarceration spells on average than whites. *Id.* at 357 tbl.4. But among illegal aliens, sentences were longer for Hispanics than for whites. *Id.*

*B. DWI Case Processing in North Carolina*

Law enforcement officers must have reasonable suspicion to arrest a driver.<sup>81</sup> The sources of such suspicion include erratic driving behavior such as crossing the centerline, or observing slurred speech or alcohol on the breath after pulling over the driver for another infraction like speeding.<sup>82</sup> Once the officer suspects that the driver is impaired, he may conduct a field sobriety test before arresting an individual for DWI.<sup>83</sup> As long as the arresting officer has reasonable grounds to believe the driver is intoxicated, the mere act of driving on a highway or public roadway implies consent to chemical analysis.<sup>84</sup> The chemical screening is typically conducted on-site using a portable breathalyzer and then again at the police station using a more sensitive breath test.<sup>85</sup> The mini-breathalyzer can be used in lieu of or in addition to the field sobriety test, and officers may use its results to establish reasonable suspicion for arrest even though the evidence is not admissible in court.<sup>86</sup> For the test to be admissible evidence, the officer must conduct it on a machine maintained at the police station, and the defendant has the right to consult with an attorney as well as call a witness during test administration.<sup>87</sup>

Because DWI arrests are warrantless, defendants charged with the offense must appear before a magistrate or judge without undue delay for arraignment and bail hearing.<sup>88</sup> At this stage, the

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81. *United States v. Arvizu*, 534 U.S. 266, 273 (2002).

82. *See* NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., DWI DETECTION AND STANDARDIZED FIELD SOBRIETY TESTING B4-B5 (2004).

83. The National Highway and Traffic Safety Administration has attempted to standardize field sobriety tests by providing guidelines for their use. *See id.* at 2-3. Standard field sobriety tests include the horizontal gaze nystagmus, the walk and turn, and the one-leg stand. *Id.* at 9.

84. N.C. GEN. STAT. § 20-16.2(a) (2013). Although consent to chemical analysis is implied, the driver has the right to refuse testing; however, refusal results in license revocation for at least one year. *Id.* § 20-16.2(a)(1). Officers also have the right to compel analysis under other laws. *Id.*

85. *See id.* § 20-16.3(a)-(b).

86. *Id.* § 20-16.3(d).

87. *Id.* §§ 20-16.3(c), 20-16.2(a)(6). Although the defendant has the right to call a witness, the test cannot be delayed more than thirty minutes. *Id.* § 20-16.3(a)(6). But denying access to counsel after a DWI charge constitutes a constitutional violation. *State v. Hill*, 178 S.E.2d 462, 462 (N.C. 1971).

88. § 15A-501.

defendant is informed of the charges, and a bond hearing is conducted.<sup>89</sup> NC uses several types of bonds. The least restrictive option does not carry any financial obligation, just a written promise to appear, which is followed by custodial release.<sup>90</sup> More stringent types involve some financial obligation but do not require payment unless the bond is forfeited. Unsecured bonds, for example, require a specific payment only when the defendant fails to appear for the scheduled court date.<sup>91</sup> Cash bonds are secured by deposits in the full amount of the bail set.<sup>92</sup> The most restrictive condition for pretrial release is the secured bond. These instruments vary with respect to collateral sources and may require security by mortgage<sup>93</sup> or at least one solvent surety, such as a professional bondsman.<sup>94</sup> During the preliminary hearing, few defendants have attorneys present. Of those that do, all are privately retained; court-appointed attorneys or public defenders do not enter the process until after the initial appearance. The practical implication for indigent defendants is that any amendments to their excessive or unduly burdensome bond assignment cannot be remedied until after appointment of counsel.

NC maintains two trial courts: district and superior.<sup>95</sup> Although our analysis does not disaggregate by court type, it effectively tracks this difference because the vast majority of felony defendants are tried before a superior court judge, whereas misdemeanants and those charged with other violations appear in district courts. Only superior courts empanel juries, which also hear appeals of misdemeanor convictions.<sup>96</sup>

Defense attorneys often use the appeal process to effectively stay the district court sentence, thus allowing their client time to

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89. *See id.* § 15A-511.

90. *See id.* § 15A-531(4).

91. *See id.*

92. *See id.* A bond secured by a bail agent acting on behalf of an insurance company is considered a cash deposit under the terms of the statute. *See id.* A bond secured by a professional bondsman, though, is considered a secured bond. *See id.*

93. § 58-74-5.

94. *See* § 15A-531(4).

95. Superior courts have original jurisdiction for all felony cases; however, the initial appearance for all DWI cases, including felonies, occurs in district court. §§ 7A-271, 15A-601.

96. § 20-38.7.

produce mitigating factors such as attending substance abuse counseling. In many cases, the DWI defendant will be charged with at least one concurrent offense: a felony, misdemeanor, traffic violation, or other infraction. Table 1 documents the most frequently observed offenses within several of these categories.<sup>97</sup>

The ADA may file a felony DWI charge only for habitual DWI offenders, that is, those with at least three convictions in the last ten years.<sup>98</sup> Non-felony convictions are governed by a fairly tight statutory framework that determines both a sentencing level and the sanction within each level.<sup>99</sup> These crimes carry the possibility of jail and thus, if the defendant is indigent, eligibility for publicly supplied counsel.<sup>100</sup> Sentencing levels range from one (most severe) to five (least severe), including a special aggravated Level 1 classification.<sup>101</sup> The statutory language refers to mitigating factors—for example, driving with a BAC no greater than 0.09, evidence of safe driving, willingness to enter substance abuse treatment—and aggravating factors—such as driving with a BAC at least 0.15, having a child in the vehicle, reckless driving, and prior DWI convictions.<sup>102</sup> Fines and imprisonment for Level 1 offenses may not exceed \$4000 and two years, respectively, with probation possible after thirty days.<sup>103</sup> Level 5 offenses carry fines capped at \$200 and imprisonment of one day to two months.<sup>104</sup> A sentencing judge, however, may place the defendant on probation and allow him to serve the one-day minimum as community service.<sup>105</sup> In NC, sentences of at least six months are generally served in state prisons operated by the Department of

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97. *See infra* Table 1.

98. § 20-138.5. The state statutes include only one felony DWI charge: habitual DWI. Concurrent felony charges may be filed when drunk driving results in serious injury or death, for example, vehicular manslaughter. *Id.* § 20-141.4. The ADA may also charge the arrestee with a completely different felony (for example, vehicular manslaughter) arising from the DWI even if it is the defendant's first DWI. *Id.*

99. *Id.* § 20-179(a).

100. § 15A-603(a).

101. *See* § 20-179.

102. *See id.* § 20-179(d)-(e).

103. *Id.* § 20-179(g). Note that penalties for Level 1 are not the most severe maximum; aggravated Level 1 can lead to fines up to \$10,000 and imprisonment up to three years, with probation possible after 120 days. *Id.* § 20-179(f)(3).

104. § 70-179(k).

105. *Id.*

Corrections.<sup>106</sup> Thus, despite the appearance of mandatory sentencing for DWI, the statutes actually set boundaries for judges to locate defendants within and across culpability levels, exercising considerable discretion in the process.<sup>107</sup>

## II. DATA AND DESCRIPTIVE STATISTICS

### A. *The ACIS Data*

The primary data source for our empirical analysis is the North Carolina Administrative Office of the Courts (AOC), which houses the Automated Criminal Infractions System (ACIS).<sup>108</sup> Although the complete ACIS files to which we obtained access are unique, the ACIS contents are available to any requesting member of the public, subject to statutory limitations and resource constraints.<sup>109</sup> ACIS contains separate records for each individual and criminal charge organized by the day the charge was filed and lists the related state statute and offense descriptions.<sup>110</sup> We use data on arrests for DWI and associated charges from 2001 to 2011, which cover all charges tried in courts of general jurisdiction, including convictions that subsequently led to enrollment in treatment courts. We use data from 1998 to 2000 only for documenting prior DWI convictions. All other charges associated with a particular DWI arrest are also flagged.<sup>111</sup>

These data have several important advantages. First, they permit analysis at the individual level of arrest as opposed to using

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106. § 15A-1352.

107. § 20-179(f). The statute allows the judge to determine if the aggravating factors “substantially outweigh” mitigating factors or if the aggravating factors are “substantially counterbalanced” by mitigating factors. *Id.*

108. *Automated Criminal/Infractions System (ACIS)*, N.C. ADMIN. OFFICE OF THE COURTS, [http://www.nccourts.org/Citizens/JData/Documents/Technology\\_ACIS\\_Facts.pdf](http://www.nccourts.org/Citizens/JData/Documents/Technology_ACIS_Facts.pdf) (last visited Feb. 24, 2014).

109. *See id.*

110. *See id.*

111. There are several types of DWI offenses in the ACIS data: DWI—Drugs, DWI—Alcoholic Beverage, DWI—Second Offense, DWI—Third Offense, DWI—Fourth Offense, Driving While Impaired, DWI—Driving Instructor, Driving w/0.1 or more Blood Alcohol, DWI Level 1—DWI Level 5, DWI (0.10) Level 1—DWI (0.10) Level 5, Habitual Impaired Driving DWI Commercial Vehicle, Commercial DWI Under Influence, Commercial DWI >= 0.04, Commercial DWI Schedule I Controlled Substance. *See ACIS, supra* note 108.

aggregate measures at the county or state level, as in many studies of criminal behavior.<sup>112</sup> Although the data do not contain a unique identifier to link an individual's records over time, they do contain personally identifying information, including name, date of birth, and gender, which we use to generate unique identifiers with reasonable accuracy. Data on residential address at the time the offense occurred also appears in ACIS, which we use for merging ACIS data with socioeconomic indicators for census block groups. As a result, these generated identifiers provide a second distinct advantage: tracking the development of a case from the offense through corrections outcomes. Information on how the defendant arrived in court, for example, citation, warrant, and criminal summons; the defendant's choice, if any, of legal representation; and the method of disposition, including verdicts and sentences, for example, jail terms, fines, and license revocation, all appear in the dataset. The method of disposition is listed in several categories, such as trial or dismissal. Third, unlike NC, most states do not have a central, standardized system for maintaining court records; data must be obtained from individual courts.

As with any dataset, ACIS carries some disadvantages. Foremost among them is the lack of several pertinent individual characteristics such as educational attainment, employment, or household income. Instead, we use proxies for small areas in which the arrested individual lived at the time of the arrest.<sup>113</sup> Nevertheless, the structure of the ACIS data suggests the possibility of conducting unique within-defendant analysis and examining certain offenses across arrestees.

We organized the data into a file for index arrests, in which an index arrest is defined as the first DWI occurring in *each* calendar year from January 1, 2001 through December 31, 2011. Thus, an individual may have as many as eleven index offenses. Our baseline dataset includes 517,629 index DWI arrests over the observational

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112. See, e.g., Steven N. Durlauf & Daniel S. Nagin, *Imprisonment and Crime: Can Both Be Reduced?*, 10 CRIMINOLOGY & PUB. POL'Y 13, 23-27 (2011) (reviewing the literature based on aggregate data).

113. ACIS does not permit analysis of arrest probabilities because we do not observe whether an individual committed a crime. We can, however, analyze the effects of prosecution on a DWI charge and, conditional on a conviction, the probability of a DWI re-arrest during the two years following an index arrest.

period 2001 to 2011. Figure 1 graphically displays the sequential disposition of all the arrest observations.<sup>114</sup>

To supplement the ACIS data, we used information on median household income, the fraction of “expensive” homes<sup>115</sup> as a measure of household wealth, and the fraction of adults over age twenty-five with less than twelve years of education as a measure of educational attainment. The area data vary by year and by the census block group in which the defendant’s address was located at the time of arrest. A block group is much smaller than a zip code area, which entails enhanced precision, but some interpersonal variation in personal characteristics still remains even at this level of granularity. We were unable to match about one-fifth of the sample because of missing or overly general addresses, such as military bases or trailer parks. In these cases, rather than lose observations, we specified an additional covariate, “no match” which takes the value “1” if the residential address did not appear in the census block groups and “0” otherwise. Values of the block group variables were set to “0” when the no match variables equaled “1.” The block group data were purchased from Geolytics, a firm that offers data for small geographic areas based on the U.S. Census, American Community Survey, and other sources.

### *B. Descriptive Statistics*

To establish a baseline comparison for arrestee outcomes, in Figure 2 we juxtapose the mean percentage shares of white, black, and Hispanic persons in the ACIS data against their corresponding figures in the NC population for the years 2001 to 2011.<sup>116</sup> Data for the latter were gathered from the U.S. Census Bureau’s intercensal estimates. Because both time series are relatively stable over this period, we calculated the mean percentage share of each racial group across the eleven years. That white residents are much less likely to be arrested relative to their population share, and that the reverse is true for Hispanics, becomes immediately clear. Somewhat

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114. See *infra* Figure 1.

115. The index is based on the fraction of homes with values of at least \$1 million with the U.S. average set to “1.”

116. See *infra* Figure 2.



unexpectedly, black North Carolinians were arrested, on average, at the same rate as their representation in the population—just over 20 percent.

Even still, higher arrest rates among certain population segments could track evidence about their higher risk rate. Here, we use as an alternative baseline the shares of drivers on the road by race and gender that drive while intoxicated. The best approximation at our disposal is the percentage distribution of motor vehicle fatalities attributable to alcohol impairment. Not only is the resulting accident an unambiguous endpoint, but it also is not subject to potential biases in law enforcement or in post-arrest case processing. The Fatality Analysis Reporting System (FARS), maintained by the U.S. Department of Transportation, provides a public-use file on such crashes. Data queries from the system appear in Table 2.<sup>117</sup> Limiting the sample to motor vehicle fatalities of drivers in NC attributable to alcohol use from 2001 to 2010, only 10.2 percent of such fatalities involved Hispanic drivers, about half of this group's share of DWI arrests. Consistent with the arrest data, Hispanic men accounted for the vast majority of deaths incurred by Hispanic drivers. By contrast, the share of black drivers (21 percent) is in line with their corresponding NC population percentage. Furthermore, Hispanics' representation in the FARS data declined between 2001 and 2010, even though their total state population share substantially increased over the same period.

DWI offenses are classified as felonies or non-felonies depending on the nature of the stop and any prior related offenses committed by the arrestee.<sup>118</sup> The vast majority of DWI arrests in the ACIS data, however, are not considered felonies. In fact, less than 1 percent are charged or convicted as felons. Thus, Table 3 displays means for a subset of the available variables related to non-felony charges during the observation period.<sup>119</sup> The first column presents aggregate information across all race/gender combinations, and the remaining five columns include the same information for select groups.<sup>120</sup> We exclude remaining categories, such as “other” men and

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117. See *infra* Table 2.

118. See *supra* Part I.B.

119. See *infra* Table 3.

120. See *infra* Table 3.

women, even though they are included in the regression analysis, because these categories comprise such a small percentage of the data. Because of the large sample size, the vast majority of means for the reported race/gender combinations are significantly different at the 5 percent level.<sup>121</sup>

The first four rows of Table 3 show the mean rates of assignment to the four bail/bond types identified above.<sup>122</sup> These unadjusted figures suggest that white defendants are more likely to face more permissive pretrial release conditions. Comparing the means for the promise to appear with secured bonds, white men receive the former 35 percent of the time, compared to 18 percent and 28 percent for Hispanic and black men, respectively. On the other hand, white men must post a secured bond 37 percent of the time, whereas black and Hispanic male defendants confront the most restrictive condition at rates of 49 and 46 percent, respectively. Pretrial release conditions are important because of the disruptions they can cause to employment, time with family, and full access to counsel to mount a defense.<sup>123</sup> The incidence of prosecutorial declinations is relatively equal for each group except Hispanic men, who see their cases dropped most often, 30 percent of the time.<sup>124</sup> Correspondingly, we observe that not guilty pleas are rather infrequent, occurring in only 11 percent of overall pleas, which accords with the general observation that most criminal charges are disposed of through the plea bargain.

Because we expect the quality and nature of legal representation to affect pretrial bargaining and trial outcomes, we always account for this variable in the regression analysis. Whether the defendant receives private representation or foregoes a lawyer appears to correlate with race and gender. Hispanic and black men are more likely to appear pro se, at rates of 22 and 20 percent, respectively.

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121. See *infra* Table 3. Exceptions are noted in the table.

122. See *infra* Table 3.

123. Douglas L. Colbert, *Thirty-Five Years After Gideon: The Illusory Right to Counsel at Bail Proceedings*, 1998 U. ILL. L. REV. 1, 13-14, 17-21 (discussing the difficulties defense counsel faces when clients remain incarcerated before trial); Jeffrey Manns, *Liberty Takings: A Framework for Compensating Pretrial Detainees*, 26 CARDOZO L. REV. 1947, 1951 (2005) ("By cutting defendants off from family, friends, and jobs and subjecting them to the indignities of detention, prosecutors place defendants in a position where they face great incentives to plea bargain to end or minimize the detention.").

124. *Infra* Table 3.

White men and women are much more likely than any other group to retain private counsel, at rates of 66 and 64 percent, respectively.<sup>125</sup> Use of publicly provided counsel, however, does not seem to depend on race, ethnicity, or gender. Because the availability of public defenders and court-appointed counsel where public defenders' offices are not staffed does not depend on demographic factors, the differences by race, ethnicity, and gender appear much more muted.

Following trial, each of the race/gender groups is on average convicted, conditional on a not guilty plea, between 59 and 66 percent of the time.<sup>126</sup> Hence, about a third of defendants who either are confident that the prosecutor has erred in bringing charges or who are willing to take their chances in front of the judge seem to escape sanction. Among those who are convicted, though, white men and women receive fines more often than Hispanic and black men. Yet the unconditional fine amounts are skewed toward men regardless of race or ethnicity. Black and white men must pay about \$214 for a DWI conviction, but black and white women are fined \$177 and \$186, respectively. With respect to incarceration in the county jail or state prison, white men, white women, and black women are more likely to be sent to the former. Interestingly, Hispanic men are almost *never* sentenced to prison terms. Because of the differential rates of jail and prison sentences, black men face the most time behind bars (about 174 days), approximately two weeks more than white men and over a month more than white and black women. The incidence and length of supervised probation also seem to qualitatively follow the pattern for incarceration; black men are more likely to receive supervised probation and receive the longest probation terms.

On average, median household income in the block groups in which arrestees resided was \$41,000. White men and women lived in areas with the highest incomes: \$43,000 and \$44,000, respectively. For black men and women, the corresponding values were \$36,000 and \$39,000. Arrestees resided in block groups with many fewer expensive homes than the national average. Generally, the fraction of persons with less than twelve years of schooling was 21

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125. *Infra* Table 3.

126. The data in the remainder of this Part are based on the authors' ACIS calculations.

percent across block groups. Hispanic men lived in areas with the highest fraction of persons with low educational attainment.

At this stage of the analysis, the apparently slight, but statistically significant, differences in magnitude across race and gender at the various stages of the criminal process mask extensive heterogeneity in case characteristics, and the interactions between the identity of defense counsel and the probability of conviction or receiving a particular sanction. We now turn to regression analysis separately conducted at various decision points to parse the complicated interactions among these factors.

### III. EMPIRICAL ANALYSIS

The following regressions isolate race and gender from the array of permissible factors that might affect outcomes along the path from arrest to sentencing. Consequently, we both avoid the pitfalls of so-called included variable bias<sup>127</sup> and focus on the noncausal relationship between demographic factors and judicial outcomes. Selection effects undoubtedly plague our empirical specifications; however, we explicitly condition each iteration on some prior outcome such as nondeclination or entering a not guilty plea. For example, we do not analyze the conviction rate among all arrestees; as our data show, the vast majority of non-felons and nearly all felons plead guilty to a DWI offense, and those pleas result in convictions. As long as we reasonably define the universe of relevant defendants at each step of the analysis, selection effects are relatively ignorable.<sup>128</sup>

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127. See Ian Ayres, Testing for Discrimination and the Problem of “Included Variable Bias” 3-4 (2010) (unpublished manuscript), available at <http://islandia.law.yale.edu/ayres/ayresincludvariablebias.pdf>.

128. See, e.g., Thomas A. Eaton et al., *The Effects of Seeking Punitive Damages on the Processing of Tort Claims*, 34 J. LEGAL STUD. 343, 345-46 (2005).

### A. *The Empirical Model*

For nearly all the results presented below, the empirical model takes the form:

$$Outcome_i = \beta_0 + \Gamma X_i + \Sigma \delta * Attorney\_Type_i + \Sigma \lambda * Bond\_Class_i + \Sigma \varphi * Concurrent\_Offenses_i + \Sigma \theta * Area\_Characteristics_i + \tau + \varepsilon_i$$

where  $i$  refers to individual arrests. The  $Outcome_i$  variable is a dichotomous measure of whether an event—for example, a conviction conditional on a not guilty plea—occurs during case processing.  $X_i$  is a vector of race/gender indicators and two other characteristics: whether the defendant was charged with felony DWI and whether the defendant had been convicted of any DWI in the two-year “look back” period. Regardless of its use as the dependent variable or a regressor,  $Attorney\_Type_i$  captures each of the defense counsel possibilities with privately retained counsel as the omitted value, and  $Bond\_Class_i$  tracks the pretrial release condition imposed relative to the promise to appear.  $Concurrent\_Offenses_i$  are included to help measure more precisely the attendant crimes charged that should explain differential treatment aside from demographic factors at each stage. These offenses can be felonies of variable severity, such as felony death by vehicle; misdemeanors, like possession of drug paraphernalia; traffic violations, such as hit and run with property damage; or several other infractions, for example, failure to wear a seat belt. The first three of these categories are each divided into severity levels, which we enter as separate binary variables in the regressions.  $Area\_Characteristics_i$  includes the three covariates for block groups defined above. Almost all of the regressions use a logit estimator; the few OLS regressions include county fixed effects. All regressions include year fixed effects ( $\tau_i$ ). We do not include fixed effects in the logit models because testing of the difference between linear probability models with and without them suggests negligible effects from inclusion.

Econometric analysis of trial and sentencing outcomes must include a complete record of prior convictions given their admissibility as aggravating factors or even as evidence of a defendant’s

recidivist tendencies.<sup>129</sup> One of the more advantageous aspects of studying DWI is that the only relevant prior record is drunk-driving convictions. It does not matter that we do not have, and thus cannot construct, full criminal backgrounds for each defendant. That we can do so for DWI convictions sufficiently captures the effect that recidivism has on adjudication and sentencing. Consequently, the fully specified models below always include prior DWI convictions within the last two years as an element of the  $X_i$  vector.

### *B. The First Correction Mechanism: Prosecutors*

The first set of outcomes we explored relates to how magistrates set pretrial release bail or bond. Recalling the four broad classes of release conditions—(1) promise to appear/custodial release/pretrial release; (2) unsecured bond; (3) cash; and (4) secured bond—we estimate Equation (1) with *Bond\_Class* as the dependent variable and various subsets of the remaining regressors included. The ordered structure of the dependent variable means that larger odds ratios correspond to increased odds of the higher bond values. Thus, although we do not estimate the likelihood of receiving each pretrial release condition, we can say something about the relative likelihood of receiving more onerous conditions. Column 1 of Table 4 displays odds ratios and 95 percent confidence intervals from an ordered logit regression in which the dependent variable is sequenced as above with respect to perceived severity.<sup>130</sup> The point

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129. See, e.g., Oren Gazal-Ayal et al., *Do Sentencing Guidelines Increase Prosecutorial Power? An Empirical Study*, 76 LAW & CONTEMP. PROBS. 131, 151 (2013) (“In all steps, the prior criminal record of the defendant also seems to be a significant variable in the decision to impose a prison sentence.”); Cassia Spohn et al., *The Effect of Race on Sentencing: A Re-Examination of an Unsettled Question*, 16 LAW & SOC’Y REV. 71, 75-76, 80 (1981-1982) (indicating significant effort to include defendants’ criminal records and reinforcing “the importance of ... legal factors, including prior criminal record, in explaining sentence severity”).

130. See *infra* Table 4. Odds ratios give intuitive measures of relative risk, that is, the increased or decreased probability of the specified outcome occurring. The reference value is 1. This odds ratio is equivalent to no change in probability due to the explanatory factor. Odds ratios greater than 1 suggest increased probabilities, and odds ratios less than 1 suggest decreased probabilities. The specific value above or below 1 denotes the magnitude. Thus, an odds ratio of 1.25 on the variable “black male” means that being a black male increases the probability of an outcome by 25 percent, whereas an odds ratio of 0.75 means a 25 percent less chance. Finally, 95 percent confidence intervals tell the reader the estimated range of values

estimates suggest that Hispanic men are 86 percent more likely to receive a more taxing release mandate than white men and that this relationship is less pronounced for black men. White women, on the other hand, are 23 percent less likely to receive more onerous pretrial release conditions.

Column 2 indicates that the same pattern holds for whether the release condition carries any monetary payment, and Column 3 reports differences with respect to the amount of those payments using ordinary least square regressions.<sup>131</sup> In total, magistrates seem to set cash payments or bond amounts \$330 higher for black men than white men and add stricter qualifications, for example, collateral property, for Hispanics and black men. One reason for Hispanic arrestees receiving less lenient treatment could be the higher perceived flight risk among undocumented immigrants. Whether black males suffer from outright animus or statistical discrimination over the probability of flight or culpability is a question we cannot reliably address with these data alone.<sup>132</sup>

Felony DWI charges and prior DWI convictions predict bail/bond amounts. As we expect, defendants charged with a felony DWI must overcome significant barriers to release, with bond amounts set about \$8000 more than for non-felony arrestees.<sup>133</sup> In addition to the index offense, a prior DWI conviction also significantly increases the set bail amount by about \$240. When we account for the fact that some of these conditions are cash payments versus bonds in Column 3, more restrictive pretrial release conditions lead to monotonic increases in the monetary value of the release condition.

Despite the fact that the use of public defenders versus court-appointed counsel is exogenous to the individual defendant,<sup>134</sup> the decision to appear *pro se* or pay for representation merits some exploration. The first notable feature of Table 5 is the robustness of

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that is 95 percent likely to include the true value of the estimated odds ratio. Provided that the confidence interval does not contain the value 1, the associated odds ratio is statistically significant at conventional levels ( $p < 0.05$ ). For additional information on odds ratios, see DAVID R. ANDERSON ET AL., STATISTICS FOR BUSINESS AND ECONOMICS 730-33 (12th ed. 2014).

131. See *infra* Table 4.

132. The ACIS data permit some analysis of flight probability or bond forfeiture, though to a limited extent because of missing observations on these variables.

133. See *infra* Table 4 (Column 3).

134. See *supra* notes 59-67 and accompanying text.

the odds ratios across all specifications.<sup>135</sup> Reading across the rows for each race/gender group, black and Hispanic men are much more likely than white defendants of either gender to “choose” public or self-representation.<sup>136</sup> Black men are almost twice as likely as white men not to retain private counsel, whereas white women are almost indistinguishable from their male counterparts.<sup>137</sup> The estimates in Column 4 include all relevant explanatory variables yet essentially tell the same story as the parsimonious model in Column 1.<sup>138</sup> The most interesting result is that felony DWI charges dramatically increase the likelihood of public counsel or pro se representation. Even after controlling for socioeconomic characteristics—which unsurprisingly show that higher income reduces the odds of public or pro se representation—defendants charged with the most serious offense do not seek assistance from the private bar.

A prosecutor’s decision to withdraw or never pursue charges opens the door to even more unobserved heterogeneity, primarily regarding the quality of underlying evidence or office priorities among different sorts of crimes. Nonetheless, the identity of opposing counsel, which should act as a proxy for the effort required to secure a conviction; the chance of recidivism, perhaps elevated by an existing prior DWI conviction; and the existence of concurrent charges should explain a great deal of the ADA’s decision calculus. In Table 6 we observe pronounced differences among black males, Hispanic males, and white females relative to the omitted group of white males, but particularly among Hispanic male defendants.<sup>139</sup> Specifically, when controlling for attorney type and characteristics of the crime in the fully specified model in Column 5, Hispanic men are 58 percent more likely to see charges dropped. Increases in the fraction of adults with less than a high school diploma in the block group increases the probability of declination. With block group characteristics included, arrests of black men are no more likely to be dismissed than arrests for white men. Even in specifications excluding all other covariates, as in Column 1, the difference in

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135. *See infra* Table 5.

136. *See infra* Table 5.

137. *See infra* Table 5.

138. *See infra* Table 5.

139. *See infra* Table 6.



declination probabilities between black and white men is small.

Table 6 offers the first robust evidence that case processing by an officer of the court positively corrects for potential error in arrest and pretrial release patterns. Recall that Hispanic men were much more likely to be arrested at rates exceeding their underlying DWI risk than any other race/gender combination.<sup>140</sup> ACIS distinguishes between declinations with and without leave, that is, those for which the prosecutor may refile charges or not. Hispanic men are defendants in about 30 percent of all cases declined by prosecutors. However, 78 percent of those declinations permit the prosecutor to refile charges. The most common reason the state offers for abandoning the case, at least temporarily, is that the defendant cannot be located.<sup>141</sup> Therefore, some of the more onerous pretrial release conditions for Hispanic males could be justified by their greater flight risk.

These data support a reading that, perhaps inadvertently, the system is “self-correcting” at the declination stage. Prosecutors’ decisions to pursue a DWI case plausibly reflect their judgments about guilt and risk after reviewing evidence collected by law enforcement and the magistrate’s initial assessment.<sup>142</sup> And one could infer that the choice to decline serves as a correction of both police officers’ and magistrates’ inaccuracies. Alternatively, higher declinations could and seem to follow from a cost-benefit analysis whereby office budget constraints or crime priorities counsel against tracking down defendants that have eluded the criminal justice system. Finally, a combination of both accuracy correction and resource constraints could operate in tandem. Given the skew toward declinations with leave among Hispanic male defendants, we infer that prosecutors are opting to preserve attention and resources on other defendants or crime categories. Presumably, some arrested Hispanic males who should not be detained initially exit the criminal justice system for legitimate reasons. Others may be guilty

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140. See *infra* Figure 2; *supra* text accompanying note 116.

141. Authors’ calculations are based on the ACIS data.

142. See Michael Edmund O’Neill, *Understanding Federal Prosecutorial Declinations: An Empirical Analysis of Predictive Factors*, 41 AM. CRIM. L. REV. 1439, 1458 (2004) (“[T]he most commonly cited reason for declining to pursue a prosecution was evidentiary concerns .... Overall, one might infer from these findings that criminal investigators are not as well versed in the fundamentals of evidence as they perhaps ought to be.”).

of DWI and still escape justice. Regardless of the underlying reasons, Tables 1, 3, and 6 provide substantial evidence that prosecutor review offsets the disproportionately high arrest rates for Hispanic males.

Our findings on the determinants of not guilty pleas are at once fascinating and troubling. Hispanic men—and to a much lesser extent black men—are significantly (both statistically and practically) less likely to enter a not guilty plea than their white counterparts, ranging from 51 to 59 percent, depending on the specification.<sup>143</sup> Including other important explanatory variables does little to upset these estimates. In accordance with reasonable expectations, the propensity to plead not guilty decreases monotonically with the severity of pretrial release conditions. In other words, assuming that bail conditions somewhat relate to underlying guilt or innocence, defendants who have to pay more to secure their release are also more likely to plead guilty. After accounting for presumed attorney effort and the seriousness of the index offense, mainly through the felony charge indicator, it is difficult to pinpoint why minority men would exhibit such different pleading behavior relative to white men. The answer could lie in differential priors about fairness in the criminal justice system, which would prompt Hispanic men to take the certain outcome rather than a gamble over a higher expected punishment level. Another possibility lies in the accounts of prosecutors pressuring racial and ethnic minorities into accepting plea deals even when prosecutors sense that the probability of conviction is much less than certain.<sup>144</sup> All we can say for sure is that, after controlling for observable characteristics of the defendant and the crime, the differential by race—but not by gender—is robust and larger than one might naturally expect.

Our results for not guilty pleas therefore set up a reversal of the prosecutorial correction story based on declination rates independent of the reason for declination. Once prosecutors decide to pursue a DWI conviction, disparities reemerge in terms of the probability of a guilty plea. Keeping in mind that only 11 percent of all arrests

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143. See *infra* Table 7.

144. See Albert Alschuler, *Sentencing Reform and Prosecutorial Power: A Critique of Recent Proposals for "Fixed" and "Presumptive" Sentencing*, 126 U. PA. L. REV. 550, 564 (1978).

in the data lead to a not guilty plea,<sup>145</sup> the rest are disposed of through either guilty pleas on the stated charge or plea bargains with the ADA. Controlling for all other relevant factors, especially observable characteristics of the crime, should generate indistinguishable estimates on the race/gender variables if prosecutors are offering plea bargains or otherwise equally communicating with defendants across the race/gender groups. Yet Table 7 clearly shows that Hispanic men who remain in the system after declinations are much more likely to be convicted through a guilty plea.<sup>146</sup> We cannot determine from these data whether that difference is due to underlying differences in defendant risk preferences by race and gender or prosecutor behavior. Regardless, we still detect dramatic disparities after accounting for all conceivably important factors that would encourage the defendant to plead one way or the other, which raises the possibility that Hispanic men are treated adversely, though not necessarily because of taste-based discrimination.

The narrative for convictions conditional on a not guilty plea is perhaps the most straightforward because guilty pleas are so prevalent. In other words, the shadow plea bargaining system effectively weeds out cases that lack sufficient evidence or that rest on the margin of acquittal. First, the casual result gleaned from the unadjusted statistics, namely that conditional conviction rates were roughly the same across race and gender, survives the multivariate analysis.<sup>147</sup> Once again, however, Hispanic males are more likely to be convicted following a not guilty plea. In the most fully specified model, the practical magnitude is a 10 percent greater likelihood relative to white male defendants. This estimate is itself a significant drop from the unadjusted result (25 percent greater odds), but the fact remains that Hispanic men, after controlling for relevant observable crime characteristics, lose at trial more often. Combining the evidence from not guilty pleas and trial convictions, it might also be true that those who roll the dice on a trial are less likely to have some exculpatory evidence or helpful witness at hand. Alternatively, given the higher propensity for Hispanic men to take

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145. *See infra* Table 3.

146. *See infra* Table 7.

147. *See infra* Table 8 (Column 1).

a non-trial conviction, the true rate of innocence among those who proceed to trial might be higher. On this account, the results in Table 8 would suggest differential treatment at trial that cannot be explained on purely legal grounds.<sup>148</sup> We are not suggesting that judges are behaving in a discriminatory fashion. Rather, consistent with our correction narrative,<sup>149</sup> the innocence/guilt decision should be subject to less discretion than sentencing after a guilty verdict or plea. Thus, the puzzle focuses less on why Hispanic male outcomes are relatively unfavorable when trials conclude and more on their favorable sentencing outcomes in light of these higher conviction rates.

Odds ratios for the defense counsel types agree qualitatively with previous findings that public defenders perform better than court-appointed counsel.<sup>150</sup> Yet privately retained lawyers—the omitted category in Table 8—implicitly achieve better acquittal rates because the odds ratios on the three included types all exceed unity. This finding seemingly burnishes the idea raised above that higher financial incentives, such as non-capped fees for relatively straightforward representation work in the average case, correlate with defendants' success before the presiding judge.<sup>151</sup>

### *C. The Second Correction Mechanism: Judges*

Black men are noticeably sentenced to higher levels within the statutory matrix than white men.<sup>152</sup> The difference relative to white men is about 15 to 27 percent,<sup>153</sup> and the odds ratios suggest that the levels are much higher for black men than for Hispanic men or white women.<sup>154</sup> Here, we no longer condition the analysis on whether defendants enter not guilty pleas; instead we pool all convicted defendants regardless of plea status, reintroducing any upstream differences by race and gender. The dependent variable in these ordered logit regressions is the numerically increasing

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148. See *infra* Table 8.

149. See *infra* Part III.C

150. See Anderson & Heaton, *supra* note 67, at 179; Iyengar, *supra* note 65, at 3.

151. See *supra* notes 61-65 and accompanying text.

152. See *infra* Table 9.

153. See *infra* Table 9 (Columns 3 and 4).

154. See *infra* Table 9.

sentence level, so that just as with the ordered logit pretrial release condition regression,<sup>155</sup> odds ratios greater than unity in Table 9 indicate an increased likelihood of more severe sentencing levels. The dependent variable is constructed so that Level 5 misdemeanors are coded “1” and felonies are coded “6.”

Comparing these estimates with those in Table 4, we again infer some correction among the Hispanic male defendant population, this time initiated by sentencing judges. Specifically, we found that Hispanic men were significantly *more* likely to be assigned to more restrictive pretrial release classifications and to have those conditions tethered to monetary payments. When presiding judges reach a sentencing decision, however, Hispanic men are between 13 and 15 percent *less* likely to receive the more severe sentences, and the more severe corresponding penalties, than white men. On the other hand, across all race/gender combinations, the relationship between pretrial release conditions and sentencing levels is monotonically increasing. That is, more burdensome pretrial release stipulations correspond with tougher sentencing outcomes. As expected, perhaps, individuals with higher imputed income receive less severe sentences, whereas lower education is overwhelmingly associated with more severe sentences.

The correction mechanism here likely results from variation in the gravity of the index DWI by race; Hispanic males' high rate of pleading guilty, including through plea bargains; and judicial discretion in imposing sentences within the guidelines matrix. Just as with prosecutorial correction through higher declination rates, we interpret the more lenient sentencing outcomes for Hispanic males as downward adjustment of penalties for those who are convicted through pleas and trial determinations. Because we have controlled for collateral offenses, characteristics of the defendant, and characteristics of the crime, any disparities that favor Hispanic males could plausibly stem from judges reviewing law enforcement evidence and prosecutor charges to calibrate sentences. On this account, the closer scrutiny that Hispanic males receive early in case processing is counterbalanced by some judicial forbearance after conviction.

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155. See *infra* Table 4.

Finally, we analyze the precise sanctions that defendants receive post-conviction after controlling for whether the individual pleaded not guilty.<sup>156</sup> Given the strong correlation between the imposition of fines and sentencing to some jail time, black men are 22 percent less likely to pay fines<sup>157</sup> and 21 percent more likely to serve time in prison<sup>158</sup> relative to a very low baseline probability of prison sentencing (2 percent in the aggregate data). Yet among all incarcerated defendants, black men are sentenced to around four days more jail time and two weeks less prison time than white men.<sup>159</sup> In the fully specified model for monetary sanctions, black men are 22 percent less likely to be required to pay a fine.<sup>160</sup>

Hispanic men, as the descriptive statistics suggest, almost uniformly complete any incarceration spells in county jail. Again, our best conjecture relates, in part, to judicial correction. Such inference appears logical when one combines the overwhelmingly high odds ratios for this defendant group in Columns 1-3 of Table 11 and the significant, negative OLS estimates in Columns 1-2 of Table 12.<sup>161</sup> Stated otherwise, Hispanic men serve most of their sentences in county jail but for sentences much shorter than white men and, by extension, black men. The narrative with respect to defense attorneys effectively remains the same, with defendants represented by court-appointed counsel more likely than any others to land in prison rather than jail; however, sentence lengths across both incarceration types are always higher for those represented by public defenders.

In each of Tables 9 through 11, one specification includes covariates for block group household income, the ratio of expensive homes, and a measure of educational attainment. A \$100,000 increase in income raises the probability that a fine is imposed by 60 percent,<sup>162</sup> decreases the probability of a sentence to state prison by 69 percent,<sup>163</sup> and more than triples the probability of being

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156. *See infra* Tables 9-11.

157. *See infra* Table 10 (Column 4).

158. *See infra* Table 11 (Column 5).

159. *See infra* Table 12 (Columns 2 and 4).

160. *See infra* Table 10 (Column 4).

161. *See infra* Tables 11-12.

162. *See infra* Table 10 (Column 4).

163. *See infra* Table 11 (Column 5).

sentenced to county jail.<sup>164</sup> There is no significant difference in sentence length for prison, but jail terms are about two weeks less for a \$100,000 rise in income.<sup>165</sup> Lower educational attainment leads to a lower probability of a fine;<sup>166</sup> an increase in the fraction of adults with less than a high school diploma results in nearly a quadrupling of the probability of state prison<sup>167</sup> and a substantial reduction in the probability of being sentenced to jail.<sup>168</sup> There is no statistically significant difference by educational level in sentence lengths.<sup>169</sup>

For almost all of the above outcomes, the presence of expensive homes as a proxy for wealth does not affect the probabilities of fine, jail, prison, or sentence length. Because we also accounted for attorney type, the effects for income and education are over and above these effects, which tend to favor clients of private attorneys—those who face a lower probability of prison time but higher probabilities of fines and jail time, and if anything, lower sentence lengths. These results potentially point to unequal judicial outcomes on the basis of socioeconomic status. This result is not new but clearly reiterated by our findings.

#### IV. DISCUSSION

One fundamental proposition of the common law is that the legal system should treat equals equally.<sup>170</sup> Yet another reflects the right of individuals to be heard in court,<sup>171</sup> which allows for the possibility that some will be more effective in presenting their cases before the court than others. Thus, to some extent, the goals of horizontal equity—equal treatment of equals—and vertical equity—proportionality of outcomes across cases—rest in tension with the defendant's

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164. See *infra* Table 11 (Column 3).

165. See *infra* Table 12 (Columns 2 and 4).

166. See *infra* Table 10 (Column 4).

167. See *infra* Table 11 (Column 5).

168. See *infra* Table 11 (Column 3).

169. See *infra* Table 12.

170. See Alexandra D. Lahav, *The Case for "Trial by Formula,"* 90 TEX. L. REV. 571, 572 (2012).

171. Judith Resnik, *Fairness in Numbers: A Comment on AT&T v. Concepcion, Wal-Mart v. Dukes, and Turner v. Rogers,* 125 HARV. L. REV. 78, 86 (2011) ("What about individuals hoping to get into court ...? ... [F]airness entails access rights for those standing at the door.").

right to act self-interestedly.<sup>172</sup> Even within the class of DWI offenses, the subtleties of specific cases, for example, the endless combinations of concurrent offenses with which the defendant may be charged beyond the index DWI, substantially increase the complexity of classifying any individual's alleged crime. Very few presumably support "trial by formula" in the criminal context.<sup>173</sup> The best that our system of justice can hope for is some amount of prosecutorial and judicial discretion to make necessary judgments about charging, conviction, and sentencing, coupled with effective internal crosschecks. Although legislatures, especially Congress, have moved in the direction of limiting judicial discretion in sentencing, the need to preserve discretion appropriately limits the automation of criminal law decisions by formula that some suspect would generate outcomes purged of race, gender, or other characteristics.<sup>174</sup>

Reflecting the conflicting objectives of promoting equal outcomes for similarly situated parties, the liberty interest in presenting one's best case, and the inevitable heterogeneity of underlying facts, prior empirical studies have consistently demonstrated that law enforcement decisions and treatment in the courts are not equal across all citizens.<sup>175</sup> The findings presented in this Article, cataloging the anatomy of DWI arrest resolutions in a single state, are no exception. Yet our unique findings with respect to downstream corrections signal a more complete and possibly hopeful account of criminal processing in the United States. Much of the hand-wringing over the pitfalls of discretion assumes that it will be targeted toward unjustifiably lenient or harsh prosecution and sentencing. The results for Hispanic male defendants complicate this conventional wisdom. As the case unfolds, usually at a more rapid pace than for other serious crimes, judicial actors can weigh objective evidence more carefully and ensure more equitable outcomes.

Throughout this discussion, it is critical that the reader not misunderstand our conjectures about correction as indictments of

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172. See Lahav, *supra* note 170, at 573.

173. *But cf. id.* at 612-21.

174. See Samuel L. Bray, *Announcing Remedies*, 97 CORNELL L. REV. 753, 764-66 (2012).

175. See *supra* notes 3, 16.



law enforcement officers or prosecutors for discriminatory behavior. Whether actual discrimination, statistical or taste-based, influences decisions is not something we test for in this Article. As an empirical matter, nevertheless, Hispanic men are arrested at rates far higher than their underlying incidence of drunk driving would suggest as proportionate. They are also convicted more often than white defendants, but are not pursued as often by prosecutors and given more lenient sentences. At most this information implies that enforcement and prosecutorial resources might be inefficiently utilized in ways that disadvantage minority citizens and require downstream rectification. Likewise, judicial sentencing decisions and even prosecutor declinations are not, standing alone, indicative of altruistic intent. Our data on declinations reveal that most declinations involving Hispanic arrestees allow the prosecutor to re-file charges, and we do not have direct evidence that judges are treating Hispanic males found or pleading guilty more softly. We believe that in the former case, resource constraints, and in the latter, a review of the entire pre-sentencing record, explain much more of the correction mechanisms observed in the data.

Even though disposition outcomes tend to be less favorable for Hispanic and black men relative to their white counterparts, we observed significant variation *between* the two minority groups. What they shared in common was a much lower propensity to retain private counsel or appear pro se than white men charged with DWI. The overall proportion of defendants appearing pro se, almost 20 percent, certainly is surprising. We conjecture that both the aggregate statistic and the differentials by race follow from poor information about the sanctions available for more severe DWI offenses or, even more likely, from bias in defendants' expected value over the likely sanctions for their individual cases.<sup>176</sup> Perhaps

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176. Unfortunately, few studies exist on the formation of beliefs about criminal law outcomes generally. For some recent exceptions, see Shamena Anwar & Thomas A. Loughran, *Testing a Bayesian Learning Theory of Deterrence Among Serious Juvenile Offenders*, 49 CRIMINOLOGY 667 (2011); Mandeep K. Dhami et al., *Canadian and Spanish Youths' Risk Perceptions of Drinking and Driving, and Riding with a Drunk Driver*, 46 INT'L J. PSYCHOL. 81 (2011); Lance Lochner, *Individual Perceptions of the Criminal Justice System*, 97 AM. ECON. REV. 444 (2007); Thomas A. Loughran et al., *On the Ambiguity in Perceptions of Risk: Implications for Criminal Decision Making and Deterrence*, 49 CRIMINOLOGY 1029 (2011). These studies place relatively more emphasis on the probability of arrest than on penalties conditional on arrest, and on juvenile rather than adult risk perceptions. Additional studies

thinking that a DWI conviction will result in a license suspension at worst, defendants unfortunately miscalculate not the probability of conviction, but the sentencing level or punishment within levels. Part of the miscalculation could be inescapable; with judicial discretion comes some uncertainty. But the high rate of pro se litigation implies that DWI defendants underappreciate the value of formal representation. For those at the margin of indigence, our results indicate that expending some resources on private counsel should lead to more salutary conviction and sentencing outcomes.

Despite these similarities, the differences between Hispanic and black men are more pronounced, in no small part because of the correction mechanisms documented by our empirical analysis. For example, the fraction of Hispanics in the pool of DWI arrestees was about four times their fraction in the total NC population, whereas the same two proportions were fairly similar for blacks. Among all male arrestees, representation in ACIS was far higher than percentage shares in the state population. DWI arrests of Hispanic women were so rare, however, that our estimates were extremely imprecise and therefore not sufficient for comparison with white or Hispanic men. Rates of prosecutorial declinations were far higher for Hispanic than for black or white men, suggesting that prosecutors often weed out arrests of Hispanic men with weak supporting evidence of guilt or because of pressure from immigration enforcement. Our analysis of FARS data for NC indicates that Hispanics are substantially overrepresented among DWI arrestees in the state. Thus, we find no support for an alternative hypothesis that the arrest rate is accurate and that correction by the criminal justice system is unwarranted.

The other major difference between Hispanic and black males arrested for DWI was that, even after accounting for socioeconomic characteristics of the block groups in which they resided, black men were more likely to be sent to state prison than their white and Hispanic counterparts. Prison sentences were extremely rare events among Hispanic defendants. Even though many were sent to county jail, their sentences tended to be about a week shorter relative to white men sentenced to jail, and jail sentence lengths were much

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of risk perception among adults as they apply to the various phases of the criminal disposition process should be conducted.

shorter than for those defendants sent to state prison.

One final reason, aside from judicial correction, might explain why Hispanic individuals in the ACIS data exhibit such patterns. We have mentioned that immigration law and deportation threats can intersect in important ways with criminal law more generally.<sup>177</sup> Specifically, Congress significantly amended the Immigration and Nationality Act in 1996, including the addition of § 287(g), part of the Illegal Immigration Reform and Immigrant Responsibility Act.<sup>178</sup> This provision allows local law enforcement agencies to partner with U.S. Immigration and Customs Enforcement (ICE) in the removal of illegal aliens charged with crimes.<sup>179</sup> Seven NC counties and one city participate in this program,<sup>180</sup> and another eighteen counties have applied to participate.<sup>181</sup> Those already participating in the § 287(g) program have seen an increase in DWI and license checkpoints.<sup>182</sup> NC may be one of the first states with almost statewide implementation at the local level of immigrant-identification procedures.<sup>183</sup>

Other localities participate in the Secure Communities program associated with ICE. These programs allow law enforcement to run fingerprints through Department of Justice and Homeland Security Immigration databases.<sup>184</sup> In addition to partnerships with ICE, the

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177. See *supra* text accompanying notes 72-80.

178. Deborah M. Weissman, Rebecca C. Headen & Katherine Lewis Parker, *The Policies and Politics of Local Immigration Enforcement Laws: 287(g) Program in North Carolina* 8 (Feb. 2009), <http://www.law.unc.edu/documents/clinicalprograms/287gpolicyreview.pdf>.

179. Edmond W. Caldwell Jr., *The North Carolina Sheriffs' Association's Perspective on the 287(g) Jail Enforcement Model*, 74 POPULAR GOV'T, Spring/Summer 2009, at 2, 2. For an in-depth discussion of the agreements between local agencies and ICE, see Weissman, Headen & Parker, *supra* note 178, at 22-26.

180. *Immigration Customs Enforcement 287(g) Agreements with Local Sheriffs*, ACLU OF NORTH CAROLINA, <http://web.archive.org/web/2013022790647/http://acluofnc.org/?q=due-process> (accessed through the Internet Archive Index).

181. *Fast Facts: 287(g) Program*, MECKLENBURG COUNTY SHERIFF'S OFFICE, <http://web.archive.org/web/20120731144548/http://charmec.org/mecklenburg/county/MCSO/Pages/287facts.aspx> (accessed through the Internet Archive Index). Of consequence is the fact that a separate, additional bond is issued to individuals detained under § 287(g).

182. See *Immigration Customs*, *supra* note 180. The North Carolina ACLU attributes the increase in checkpoints to attempts to catch more undocumented immigrants.

183. Hannah Gill et al., *Legal and Social Perspectives on Local Enforcement of Immigration Under the 287(g) Program*, 74 POPULAR GOV'T, Spring/Summer 2009, at 2, 5; see also N.C. GEN. STAT. § 148-64.1(a) (2013).

184. See *Secure Communities*, U.S. IMMIG. & CUSTOMS ENFORCEMENT, [http://www.ice.gov/secure\\_communities](http://www.ice.gov/secure_communities) (last visited Feb. 25, 2014).

NC General Assembly passed legislation that requires jail administrators to attempt citizenship status determination when the offender is charged with a felony or an impaired driving offense and confined for any period of time.<sup>185</sup> After conviction and sentencing, NC is one of only a few states to grant the Parole Commission discretionary authority to release an inmate convicted of DWI early and into ICE custody for immediate deportation.<sup>186</sup> In sum, less severe sentence types and lengths may derive from immigration enforcement rather than judicial correction. Only through the extensive examination of hard copy case files will we have a firmer grasp on how many Hispanic defendants do or expect to confront citizenship-related questions.

Thinking more broadly about the issues addressed in this Article, we recognize that research on differentials in criminal justice outcomes has been conducted on essentially two levels. The first describes differences among groups at a single decision point over time. Because we presume up to some limit that equality is “good” and that, above some threshold, inequality is “bad,” it is perhaps more illustrative to think about how these perceptions differ in a longer-run, dynamic analysis. It is much easier to translate negative findings on the basis of income differentials into pathways for advancement; changing one’s skin color, altering one’s gender, tweaking one’s accent, or relocating one’s birthplace are obviously much taller orders. Following this reasoning, empirical evidence on disparate outcomes and intertemporal differentials should be of policy interest. Because the observational period in our study is eleven years, we have accounted for changing patterns over time to rule out confounding effects from varying risk levels, enforcement policies, and demographic shifts.

Recognizing limitations to our approach, we do not expect these findings to automatically generalize to other crimes, time periods, or states. In fact, although some results probably do contain more widely applicable information, namely with respect to bond class assignment and lower rates of private defense counsel use by blacks and Hispanics, we expect other findings, such as the corrective

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185. § 162-62(a); *see also* Weissman, Headen & Parker, *supra* note 178.

186. James M. Markham, *Other Responsibilities of Sheriff's Offices in Relation to the State's Foreign-Born Population*, 74 POPULAR GOV'T, Spring/Summer 2009, at 15, 15.

nature of prosecutorial and judicial discretion, to be more context-specific. Deriving a uniform set of principles underlying observed differences by race and gender is important work, but it is more important for individual jurisdictions to monitor outcomes regularly and systematically before evaluating justifications for specific policy interventions.<sup>187</sup> The increasing willingness of states to keep their criminal data in digital formats facilitates this agenda. Because records tend to be available only in hard copy, it is not surprising that quantitative evaluations of the type we conducted are few and far between, based on much more localized and smaller samples than ours, and typically for select stages within the case disposition process.<sup>188</sup> More recent studies have exploited electronic arrest records but generally only for parts of the resolution process.<sup>189</sup>

Second, one ideally would explore truly causal mechanisms underlying any observed differences. The goal would be to attribute our regression estimates to such factors as: (1) the unobserved severity of underlying offenses; (2) unobserved indicators of recidivism that may also affect the magistrate's decision when bail

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187. *But see* Chris S. Dula et al., *Policing the Drunk Driver: Measuring Law Enforcement Involvement in Reducing Alcohol-Impaired Driving*, 38 J. SAFETY RES. 267, 267-68 (2007) (using DUI arrest data in Tennessee to recommend policies for reducing recidivism).

188. *See, e.g.*, Shawn D. Bushway & Anne Morrison Piehl, *Judging Judicial Discretion: Legal Factors and Racial Discrimination in Sentencing*, 35 LAW & SOC'Y REV. 733, 750-60 (2001) (using data from Maryland); Kris Henning & Lynette Feder, *Criminal Prosecution of Domestic Violence Offenses: An Investigation of Factors Predictive of Court Outcomes*, 32 CRIM. JUST. & BEHAV. 612, 633-34 (2005) (using data on 4178 domestic violence cases from one domestic violence court to examine bail setting, prosecution outcomes, and disposition at trial); Janell Schmidt & Ellen Hochstedler Steury, *Prosecutorial Discretion in Filing Charges in Domestic Violence Cases*, 27 CRIMINOLOGY 487, 490-99 (1989) (studying domestic violence screening decisions among thirty-eight prosecutors employed in the office of the Milwaukee County District Attorney).

189. *See, e.g.*, Laura Braslow & Ross E. Cheit, *Judicial Discretion and (Un)equal Access: A Systematic Study of Motions to Reduce Criminal Sentences in Rhode Island Superior Court (1998-2003)*, 8 J. EMPIRICAL LEGAL STUD. 24, 33 (2011); *see also* Max Schanzenbach & Michael L. Yaeger, *Prison Time, Fines, and Federal White-Collar Criminals: The Anatomy of a Racial Disparity*, 96 J. CRIM. L. & CRIMINOLOGY 757, 772-73 (2006); Darrell Steffensmeier & Stephen Demuth, *Ethnicity and Sentencing Outcomes in U.S. Federal Courts: Who Is Punished More Harshly?*, 65 AM. SOC. REV. 705, 707 tbl.1 (2000) (documenting the parameters of other relevant studies on sentencing disparities); Jeffrey T. Ulmer et al., *Prosecutorial Discretion and the Imposition of Mandatory Minimum Sentences*, 44 J. RES. CRIME & DELINQUENCY 427, 436 (2007) (analyzing sentencing outcomes using Pennsylvania Commission on Sentencing data); Xia Wang & Daniel P. Mears, *Examining the Direct and Interactive Effects of Changes in Racial and Ethnic Threat on Sentencing Decisions*, 47 J. RES. CRIME & DELINQUENCY 522, 524 (2010) (using U.S. Bureau of Justice Statistics State Court Processing data).

is set or the judge's decision at sentencing; and (3) indigence, measured roughly by median household income in the block group, which at a minimum affects access to court-appointed counsel or public defenders and the amount of cost-sharing available to the recipients of legal services. Any residual after controlling for these factors could plausibly track taste-based discrimination. For example, one reason we found for the different prison incarceration rates of black and white men is that black men charged with DWIs were more likely to be convicted of a serious offense than white men were. But we cannot extend such conclusions too far, certainly not into the realm of identifying discriminatory behavior, because our data do not capture enough of the relevant decision inputs.

Even if these alternative causal mechanisms are conceptually distinct, rank-ordering in terms of their likelihood presents an empirical challenge. Relationships between race and, say, income are complex. For example, to what extent do black-white differences in income reflect historic taste-based discrimination?<sup>190</sup> Are illegal aliens placed at a disadvantage in the job market because of their immigration status? Magistrates and judges may be viewed as Bayesian updaters.<sup>191</sup> On this account, judicial officials maintain priors with regard to guilt and offense severity. As they gain experience with various types of cases, they update their beliefs in light of previously convicted defendants' post-release behavior and the evidence presented in new cases, which in part is a function of the quality of legal representation. Representation in turn reflects income. Even though black men arrested for DWI tend to be convicted on more serious charges, could this reflect the quality of legal counsel rather than actual differences in the offenses committed? Higher arrest rates for a particular group may reflect statistical discrimination that leads to greater rates of patrolling in majority-Hispanic neighborhoods. Given how convoluted these causal

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190. This question is analogous to the identification of so-called premarket factors in the analysis of labor market discrimination. See generally Pedro Carneiro et al., *Labor Market Discrimination and Racial Differences in Premarket Factors*, 48 J.L. & ECON. 1 (2005); Kerwin Kofi Charles & Jonathan Guryan, *Studying Discrimination: Fundamental Challenges and Recent Progress*, 3 ANN. REV. ECON. 479 (2011); Derek A. Neal & William R. Johnson, *The Role of Premarket Factors in Black-White Wage Differences*, 104 J. POL. ECON. 869 (1996).

191. For a primer on Bayesian statistics, see Jennifer S. Shoemaker et al., *Bayesian Statistics in Genetics: A Guide for the Uninitiated*, 15 TRENDS GENETICS 354 (1999).

pathways remain without supplementary data, it may be sufficient to document how prosecutors offer a “second opinion” as to the strength of evidence and guilt. This cross-checking, although costly, is socially desirable because it helps us understand the ways in which disparities, regardless of their origins, are narrowed by the state’s due diligence.

Finally, we note several potential sources of endogeneity that could affect our empirical analysis. The first follows from time-invariant, omitted heterogeneity of arrestees. In other words, people differ in ways that are not captured by the data. This heterogeneity lies in either the nuances of their criminal and personal histories, which are legitimate considerations for judicial actors, or other traits, such as physical appearance, which tend to be illegitimate considerations. Because some individuals have repeat arrest observations in ACIS, one solution would be including individual-level fixed effects. Because the focus of this study is on race and gender differences, however, using these fixed effects, which remove the impact of race and gender, would amount to throwing the baby out with the bathwater. It is for this reason that we did not use race or ethnicity in developing individual identifiers for our analysis of ACIS data.

A second source of endogeneity is time-varying, omitted individual arrestee heterogeneity. In this context, the relevant missing data are *changes* in characteristics of the charge or of the offenders themselves as opposed to their levels alone. A clever approach for identifying the effects of race and ethnicity on case disposition might be to exploit changes in race and ethnicity identifiers for the same individual in the data.<sup>192</sup> Then, in principle, we could observe whether the case was resolved differently when the arrestee was identified, say, as a black versus a white male. A deficiency of this seemingly innovative approach is that the changes in race identification are for persons whose appearance approaches

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192. Cf. Daniel E. Ho & Kevin M. Quinn, *How Not to Lie with Judicial Votes: Misperceptions, Measurement, and Models*, 98 CALIF. L. REV. 813, 817 (2010) (“To think of ‘partisan effects’ causally, we must be able, at least in principle, to imagine an experiment that manipulates partisanship. While we might manipulate the language of a brief, the drafting of a statute, or the content of a legislative record, the manipulation of ‘ideology’ stretches plausibility. How could we possibly manipulate a partisan belief system, let alone compare this effect with the impact of law or philosophy?”) (footnote omitted).

the margin of two or more race groups, for example, light-skinned blacks or Hispanics with unaccented English.

Finally, endogeneity may arise because the dependent and explanatory variables are jointly determined. For example, an arrestee may make a deliberate choice to eschew legal counsel, thereby saving litigation costs, and bear the adverse consequences of conviction or a higher sentence. If so, the parameter estimate on the covariate for pro se representation will be biased and inconsistent. The standard solution is use of instrumental variables techniques. A plausible instrumental variable might be the fraction of DWI cases per year in the arrestee's judicial district for which defendants appear pro se. This approach relies upon the assumption that some underlying, district-specific variation exists in judicial decision-making that is observable to the parties, such as a courtroom atmosphere in which defendants without counsel are treated with respect, but unrelated to unobserved characteristics of the offense or offender. This source of endogeneity is worth exploring further in future research.

#### CONCLUSION

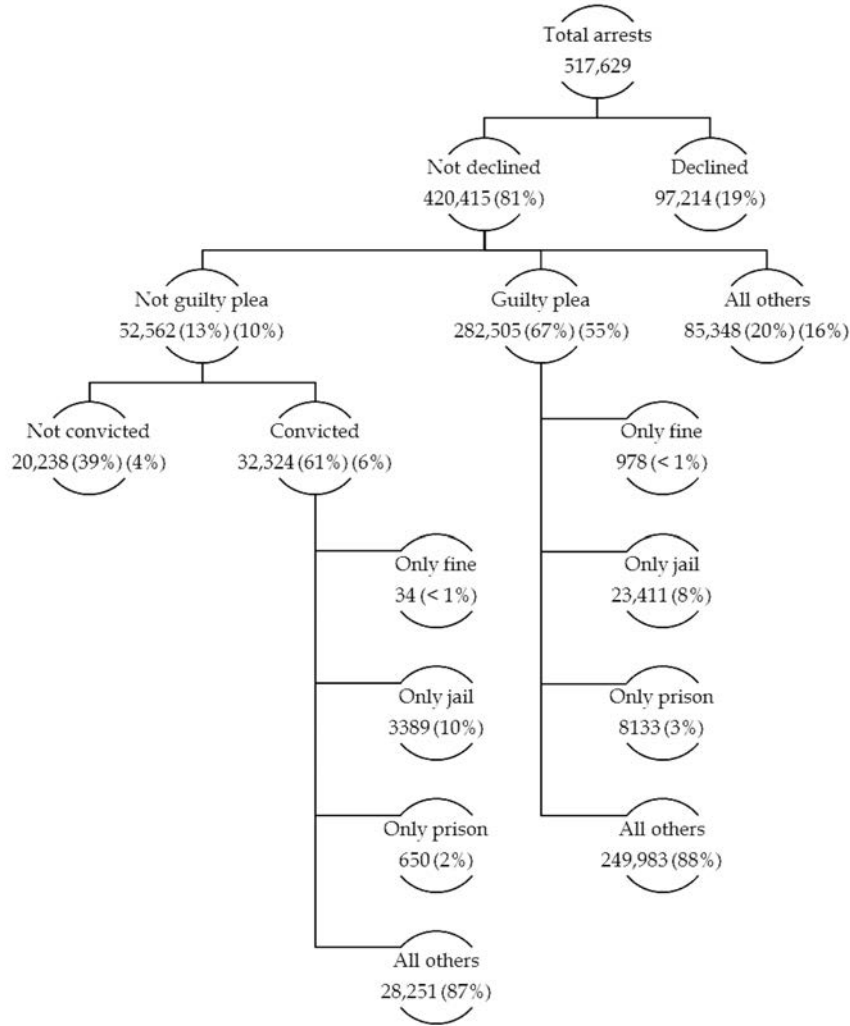
Identifying incongruous judicial outcomes by race and gender surprises very few legal scholars and economists. Even though empirical analysis may not always pinpoint with desired accuracy what causal pathways create those disparities, that they exist remains a stylized fact capable of multiple interpretations. In this Article, we expanded the social scientific understanding of criminal case processing by tracing differentials through major decision points for the defendant, prosecutor, and judge. Differences between blacks and Hispanics on one hand, and whites on the other, tend to follow predicted patterns at each stage. What our findings suggest, though, is that these gaps can taper as: (1) cases are disposed of through non-trial processes; and (2) judicial officers exercise their discretion in ways that counter earlier adverse outcomes. We do not offer a complete narrative for why each disparity emerges or diminishes. Additional methods and supplementary data are necessary to better identify the causal mechanisms, and we have reviewed some of the more promising approaches and techniques.



Necessary and supplementary data that include information on individual arrests are available only in hard copy, such as conditions of pleas at the time plea bargains were reached. In the end, paying attention to multiple outcomes within a single case will help the legal community reduce impermissible differences in judicial outcomes. Moreover, it will burnish the idea that early, adverse determinations can be revised so as to make the U.S. criminal justice system more equitable.

FIGURES AND TABLES

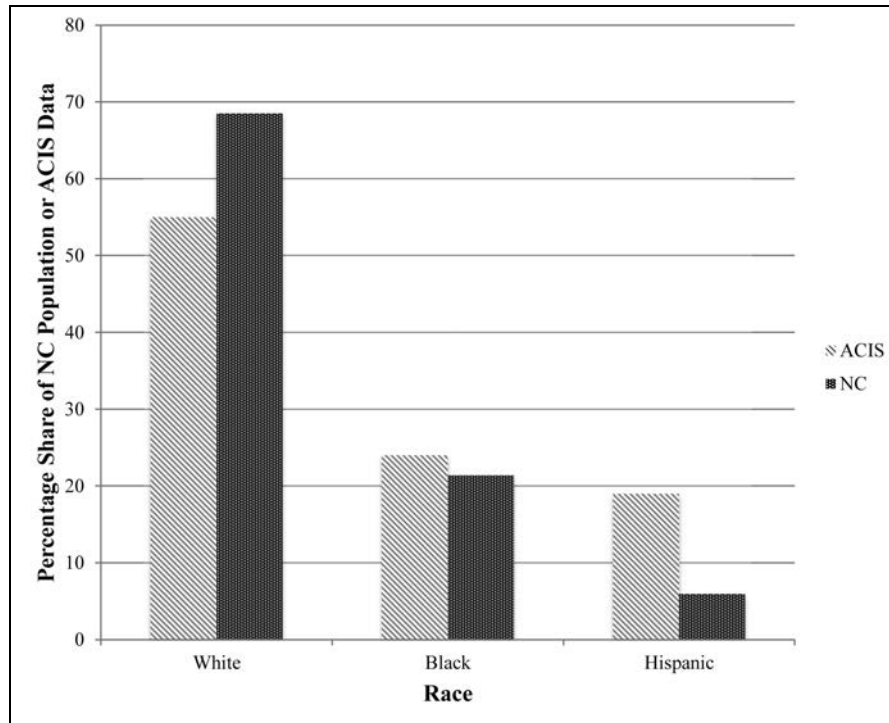
FIGURE 1: SUMMARY OF CASE DISPOSITIONS ACROSS ALL DEFENDANTS



Source: ACIS.

Note: Where two percentages appear, the first represents the share of the immediately preceding category, and the second denotes the share of all defendants in the data. Otherwise, the percentage is only with respect to the immediately preceding category.

FIGURE 2: MEAN POPULATION SHARES BY RACE (2001-2011)



Sources: *Intercensal Estimates of the Resident Population by Sex, Race, and Hispanic Origin for States: April 1, 2000 to July 1, 2010*, U.S. CENSUS BUREAU, <http://www.census.gov/popest/data/intercensal/state/ST-EST00INT-03.html> (last visited Mar. 16, 2014); *State Characteristics: Vintage 2011*, U.S. CENSUS BUREAU, <http://www.census.gov/popest/data/state/asrh/2011/index.html> (last visited Mar. 6, 2014); and ACIS.

TABLE 1: HIGHEST FREQUENCY CRIMES BY SEVERITY LEVEL

Crime Category	Crime Charged in Conjunction with DWI	Frequency
Felony 1	Flee/Elude Arrest with Motor Vehicle	369
	Felony Possession of Cocaine	172
	Felony Hit and Run/Fail to Stop/Person Injured	106
Felony 2	Felony Serious Injury by Vehicle	48
Felony 3	Second Degree Murder	49
	Habitual Felony	34
Misdemeanor 1	Unsealed Wine/Liquor in Passenger Area	2362
	Drinking Beer/Wine While Driving	1673
	Resisting Public Officer	1536
	Marijuana Possession up to 1/2 ounce	1495
Misdemeanor 2	Possession of Drug Paraphernalia	1042
	Misdemeanor Child Abuse	291
Traffic 1	No Operator's License	32,141
	Reckless Driving to Endanger	22,495
	Speeding	18,067
	Under 21 and Driving After Consuming Alcohol	12,258
Traffic 2	Driving While License Revoked	15,465
	Operating Vehicle Without Insurance	2839
	Hit and Run/Leave Scene/Property Damage	2609
Infraction	Driving Left of Center	22,648
	Speeding	11,028
	Failure to Wear Seatbelt (Driver)	6747
	Failure to Stop at Stop Sign	4832

*Source:* ACIS.

*Notes:* Felonies and misdemeanor categories increase in severity with Class 1 including the least severe offenses. Traffic violations reflect a label created by the AOC containing misdemeanor traffic offenses. Traffic 1 and 2 are equivalent to Misdemeanor 1 and 2 in terms of sentencing classes and sentence length. Infractions are non-criminal offenses that do not carry jail time.

TABLE 2: NUMBERS AND PERCENTAGES OF DRIVING FATALITIES (2001-2010)

Race/Gender	2001	2003	2005	2007	2009	2010	Total
White	188 (65.5%)	198 (68.8%)	208 (71.2%)	269 (67.6%)	135 (68.9%)	202 (73.2%)	1200 (69.1%)
Male	156 (54.4%)	164 (56.9%)	177 (60.6%)	225 (56.5%)	117 (59.7%)	170 (61.6%)	1009 (58.1%)
Female	32 (11.1%)	34 (11.8%)	31 (10.6%)	44 (11.1%)	18 (9.2%)	32 (11.6%)	191 (11.0%)
Black	70 (24.4%)	51 (17.7%)	50 (17.1%)	89 (22.4%)	49 (25.0%)	50 (18.1%)	359 (20.7%)
Male	64 (22.3%)	44 (15.3%)	39 (13.4%)	83 (20.9%)	41 (20.9%)	41 (14.9%)	312 (18.0%)
Female	6 (2.1%)	7 (2.4%)	11 (3.8%)	6 (1.5%)	8 (4.1%)	9 (3.3%)	47 (2.7%)
Hispanic	29 (10.1%)	39 (13.5%)	34 (11.6%)	40 (10.1%)	12 (6.1%)	24 (8.7%)	178 (10.2%)
Male	29 (10.1%)	38 (13.2%)	33 (11.3%)	39 (9.8%)	10 (5.1%)	22 (8.0%)	171 (9.8%)
Female	0 (0%)	1 (0.3%)	1 (0.3%)	1 (0.3%)	2 (1.0%)	2 (0.7%)	7 (0.4%)
Total	287	288	292	398	196	276	1737

Source: FARS.

TABLE 3: MEAN VALUES OF SELECT VARIABLES FOR NON-FELONY OFFENSES

	All	White Male	Black Male	Hispanic Male	White Female	Black Female
Promise to appear ( <i>N</i> = 381,150)	0.32	0.35	0.28	0.18	0.41	0.38
Unsecured bond ( <i>N</i> = 381,150)	0.20	0.22	0.19	0.13	0.24	0.23
Cash ( <i>N</i> = 381,150)	0.08	0.05	0.03	0.23	0.04	0.02
Secured bond ( <i>N</i> = 381,150)	0.40	0.37	0.49	0.46	0.31	<b>0.36</b>
Prosecutor declined ( <i>N</i> = 517,629)	0.19	0.17	0.18	0.30	0.16	0.14
Not guilty plea ( <i>N</i> = 517,629)	0.11	0.12	0.10	0.05	0.13	0.11
Conviction   not guilty plea ( <i>N</i> = 517,629)	0.62	0.64	0.61	0.59	0.66	0.62
Prior DWI conviction ( <i>N</i> = 517,629)	0.11	0.11	0.13	0.10	0.10	0.11
Private defense counsel ( <i>N</i> = 473,615)	0.60	0.66	0.51	0.53	0.64	0.53
Pro se ( <i>N</i> = 473,615)	0.17	0.15	0.20	0.22	0.14	<b>0.16</b>
Court-appointed attorney ( <i>N</i> = 473,615)	0.14	0.13	0.17	0.13	0.16	0.19
Public defender ( <i>N</i> = 473,615)	0.09	0.06	0.12	0.12	0.07	0.12
Any fine ( <i>N</i> = 517,629)	0.55	0.57	0.51	0.51	0.61	<b>0.56</b>
Fine amount ( <i>N</i> = 284,629)	\$205.61	\$215.58	\$213.22	\$201.65	\$185.98	\$176.58
Any jail ( <i>N</i> = 517,629)	0.60	0.61	0.57	0.59	0.65	<b>0.61</b>
Any prison ( <i>N</i> = 517,629)	0.02	0.02	0.04	0.00	0.01	0.01
Sentence length ( <i>N</i> = 321,315)	152.97	160.90	173.49	140.62	128.73	129.86
Any supervised probation ( <i>N</i> = 517,629)	0.17	0.17	0.21	0.14	0.16	0.19
Supervised probation length ( <i>N</i> = 517,629)	103.16	107.32	<b>120.42</b>	80.59	100.02	105.4
Median household income (\$100,000s) ( <i>N</i> = 423,894)	0.41	0.43	0.36	0.36	0.44	0.39
Expensive home index ( <i>N</i> = 423,894)	0.28	0.32	0.23	0.22	0.33	0.26
Share with under 12 years schooling ( <i>N</i> = 423,894)	0.21	0.19	0.24	0.26	0.17	0.20

Source: ACIS.

Notes: All means, except those in bold, are significantly different from the means for white males at the 5 percent level. Median household income is expressed in \$100,000 increments; thus, 0.41 represents \$41,000.

TABLE 4: THE PROBABILITY OF PRETRIAL RELEASE CONDITIONS

	Bail/Bond Class	Monetary Amount (1/0)	Monetary Amount (\$)
	(1)	(2)	(3)
Black Male	<b>1.47</b> [1.41, 1.46]	<b>1.19</b> [1.17, 1.21]	330.36*** (124.24)
Hispanic Male	<b>1.86</b> [1.83, 1.89]	<b>1.83</b> [1.81, 1.87]	147.09 (124.84)
White Female	<b>0.77</b> [0.76, 0.79]	<b>0.85</b> [0.84, 0.87]	-74.22 (151.93)
Bail/Bond Category 1			215.75 (296.13)
Bail/Bond Category 2			676.79** (310.40)
Bail/Bond Category 3			821.28*** (283.36)
Felony DWI	<b>5.25</b> [4.63, 5.95]	<b>1.71</b> [1.58, 1.84]	8075.96*** (498.72)
Prior DWI	<b>1.30</b> [1.26, 1.34]	<b>1.11</b> [1.08, 1.15]	237.86 (221.55)
Median HH Income (\$100,000s)	<b>0.41</b> [0.39, 0.44]	0.41 [0.39, 0.43]	777.42* (439.16)
Expensive Home Index	<b>1.02</b> [1.01, 1.03]	<b>1.02</b> [1.02, 1.03]	-22.25 (37.07)
Share with under 12 years schooling	<b>0.72</b> [0.68, 0.77]	<b>0.85</b> [0.80, 0.90]	1926.20*** (491.68)
County Fixed Effects?	N	N	Y
<i>N</i>	382,870	517,629	268,577

Source: ACIS.

Notes: The regressions in Columns 1 and 2 use the ordered logit and logit estimators, respectively, with odds ratios reported above 95 percent confidence intervals in brackets. The ordering in Column 1 from numerical value 0 to 3 is: promise to appear/custodial release/pretrial release; unsecured bond; cash; and secured bond. Column 3 employs an OLS estimator, conditional on non-zero values, with standard errors in parentheses. The dependent variable is the value in nominal dollars. Odds ratios significant at the 5 percent level are highlighted in bold. OLS coefficient estimate significance is denoted as follows: \* =  $p < 0.10$ ; \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ .

Other explanatory variables that are included in the regressions but not shown are: black female, Hispanic female, "other" race male, "other" race female, an indicator for a missing prior DWI value, and an indicator for no match with the Geolytics data.

TABLE 5: THE PROBABILITY OF PUBLICLY PROVIDED COUNSEL OR PRO SE REPRESENTATION

	(1)	(2)	(3)	(4)
Black Male	<b>1.92</b> [1.89, 1.95]	<b>1.92</b> [1.89, 1.95]	<b>1.83</b> [1.80, 1.86]	<b>1.72</b> [1.69, 1.74]
Hispanic Male	<b>1.78</b> [1.75, 1.81]	<b>1.79</b> [1.76, 1.82]	<b>1.70</b> [1.67, 1.73]	<b>1.60</b> [1.58, 1.63]
White Female	<b>1.11</b> [1.08, 1.13]	<b>1.11</b> [1.09, 1.13]	<b>1.15</b> [1.13, 1.17]	<b>1.18</b> [1.15, 1.20]
Felony DWI		<b>3.68</b> [3.39, 3.99]	<b>3.15</b> [2.90, 3.43]	<b>2.70</b> [2.48, 2.93]
Prior DWI				<b>1.27</b> [1.23, 1.31]
Median HH Income (\$100,000s)				<b>0.68</b> [0.65, 0.72]
Expensive Home Index				<b>1.01</b> [1.00, 1.01]
Share with under 12 years schooling				<b>1.86</b> [1.75, 1.99]
Bail/Bond Category?	N	N	Y	Y
Concurrent Violations?	N	N	N	Y
<i>N</i>	473,615	473,615	473,615	473,615

Source: ACIS.

Notes: All estimates use the ordered logit and logit estimators, respectively, with odds ratios reported above 95 percent confidence intervals in brackets, and estimates significant at the 5 percent level are highlighted in bold. For variables that are included in the regressions but not shown, see the note to Table 3.



TABLE 6: THE PROBABILITY OF PROSECUTORIAL DECLINATIONS

	(1)	(2)	(3)	(4)	(5)
Black Male	<b>1.04</b> [1.02, 1.06]	1.01 [0.99, 1.03]	<b>1.04</b> [1.02, 1.06]	1.01 [0.99, 1.03]	1.00 [0.97, 1.02]
Hispanic Male	<b>1.86</b> [1.83, 1.90]	<b>1.62</b> [1.59, 1.66]		<b>1.61</b> [1.58, 1.64]	<b>1.58</b> [1.55, 1.61]
White Female	<b>0.91</b> [0.89, 0.93]	<b>0.92</b> [0.89, 0.94]	<b>0.91</b> [0.89, 0.93]	<b>0.92</b> [0.89, 0.94]	<b>0.93</b> [0.90, 0.95]
Not Guilty Plea	<b>0.20</b> [0.19, 0.21]	<b>0.24</b> [0.23, 0.25]	<b>0.20</b> [0.19, 0.21]	<b>0.24</b> [0.23, 0.25]	<b>0.24</b> [0.23, 0.25]
Felony DWI			0.96 [0.87, 1.05]	0.98 [0.89, 1.08]	0.94 [0.85, 1.04]
Prior DWI					<b>0.84</b> [0.81, 0.88]
Pro Se		<b>0.83</b> [0.82, 0.85]		<b>0.84</b> [0.82, 0.86]	<b>0.82</b> [0.80, 0.84]
Court-Appointed Attorney		<b>1.12</b> [1.09, 1.15]		<b>1.12</b> [1.10, 1.15]	<b>1.12</b> [1.09, 1.14]
Public Defender		<b>1.25</b> [1.21, 1.28]		<b>1.25</b> [1.21, 1.28]	<b>1.21</b> [1.17, 1.24]
Bail/Bond Category 1			<b>1.21</b> [1.18, 1.24]	<b>1.06</b> [1.03, 1.09]	<b>1.08</b> [1.05, 1.10]
Bail/Bond Category 2			<b>1.16</b> [1.13, 1.20]	<b>1.04</b> [1.00, 1.07]	<b>1.04</b> [1.00, 1.07]
Bail/Bond Category 3			1.01 [0.99, 1.03]	0.98 [0.96, 1.01]	0.98 [0.96, 1.00]
Median HH Income(\$100,000s)					1.04 [0.97, 1.12]
Expensive Home Index					1.00 [1.00, 1.01]
Share with under 12 years schooling					<b>1.24</b> [1.15, 1.35]
Concurrent Violations?	N	N	N	N	Y
N	517,629	517,629	517,629	517,629	517,629

Source: ACIS.

Notes: The dependent variable in all regressions takes the value “1” if the prosecutor declined the case and “0” otherwise. All estimates are odds ratios based on a logit regression. Estimates are reported with 95 percent confidence intervals in brackets, and estimates significant at the 5 percent level are highlighted in bold. For variables that are included in the regressions but not shown, see the note to Table 3.

TABLE 7: THE PROBABILITY OF PLEADING NOT GUILTY

	(1)	(2)	(3)	(4)
Black Male	<b>0.82</b> [0.80, 0.84]	<b>0.91</b> [0.88, 0.93]	<b>0.93</b> [0.90, 0.95]	<b>0.95</b> [0.92, 0.97]
Hispanic Male	<b>0.41</b> [0.40, 0.43]	<b>0.45</b> [0.43, 0.46]	<b>0.46</b> [0.44, 0.47]	<b>0.49</b> [0.47, 0.50]
White Female	1.01 [0.98, 1.04]	1.01 [0.98, 1.04]	0.99 [0.97, 1.02]	<b>0.97</b> [0.94, 0.99]
Felony DWI			<b>0.33</b> [0.27, 0.41]	<b>0.33</b> [0.27, 0.41]
Prior DWI				<b>0.88</b> [0.83, 0.92]
Pro Se		<b>0.43</b> [0.41, 0.44]	<b>0.44</b> [0.43, 0.46]	<b>0.44</b> [0.43, 0.45]
Court-Appointed Attorney		<b>0.66</b> [0.64, 0.68]	<b>0.70</b> [0.68, 0.72]	<b>0.73</b> [0.71, 0.75]
Public Defender		<b>0.52</b> [0.49, 0.54]	<b>0.54</b> [0.52, 0.57]	<b>0.54</b> [0.52, 0.56]
Bail/Bond Category 1			<b>0.91</b> [0.88, 0.94]	<b>0.91</b> [0.88, 0.93]
Bail/Bond Category 2			<b>0.81</b> [0.78, 0.85]	<b>0.82</b> [0.78, 0.86]
Bail/Bond Category 3			<b>0.71</b> [0.70, 0.73]	<b>0.72</b> [0.70, 0.73]
Median HH Income (\$100,000s)				<b>0.69</b> [0.63, 0.75]
Expensive Home Index				<b>0.69</b> [0.63, 0.75]
Share with under 12 years schooling				<b>0.24</b> [0.22, 0.27]
Concurrent Violations?	N	N	N	Y
<i>N</i>	418,312	418,312	418,312	418,312

Source: ACIS.

Notes: The dependent variable in all regressions takes the value “1” if the defendant decided to plead not guilty and “0” otherwise. All estimates are odds ratios based on a logit regression. Estimates are reported with 95 percent confidence intervals in brackets, and estimates significant at the 5 percent level are highlighted in bold. For variables that are included in the regressions but not shown, see the note to Table 3.

TABLE 8: THE PROBABILITY OF CONVICTION CONDITIONAL ON A NOT GUILTY PLEA

	(1)	(2)	(3)	(4)
Black Male	0.97 [0.93, 1.02]	<b>0.95</b> [0.90, 1.00]	0.97 [0.92, 1.02]	<b>0.95</b> [0.90, 1.00]
Hispanic Male	<b>1.25</b> [1.16, 1.34]	<b>1.21</b> [1.13, 1.30]	<b>1.17</b> [1.09, 1.26]	<b>1.10</b> [1.02, 1.18]
White Female	1.01 [0.96, 1.06]	1.00 [0.94, 1.05]	0.99 [0.93, 1.04]	1.01 [0.84, 1.22]
Felony DWI			<b>4.77</b> [2.53, 9.01]	<b>4.85</b> [2.55, 9.20]
Prior DWI				<b>1.26</b> [1.15, 1.29]
Pro Se		<b>1.08</b> [1.02, 1.15]	<b>1.06</b> [0.99, 1.12]	<b>1.15</b> [1.08, 1.22]
Court-Appointed Attorney		<b>1.70</b> [1.60, 1.81]	<b>1.77</b> [1.66, 1.88]	<b>1.73</b> [1.62, 1.84]
Public Defender		<b>1.10</b> [1.01, 1.19]	<b>1.14</b> [1.05, 1.24]	<b>1.22</b> [1.12, 1.32]
Bail/Bond Category 1			<b>0.58</b> [0.55, 0.61]	<b>0.55</b> [0.52, 0.58]
Bail/Bond Category 2			1.02 [0.93, 1.12]	1.00 [0.91, 1.10]
Bail/Bond Category 3			<b>0.73</b> [0.69, 0.76]	<b>0.72</b> [0.68, 0.76]
Median HH Income (\$100,000s)				<b>0.82</b> [0.70, 0.97]
Expensive Home Index				<b>0.97</b> [0.95, 0.98]
Share with under 12 years schooling				<b>1.39</b> [1.13, 1.70]
Concurrent Violations?	N	N	N	Y
<i>N</i>	51,676	51,676	51,676	51,676

Source: ACIS.

Notes: The dependent variable in all regressions takes the value “1” if the defendant was convicted following a not guilty plea and “0” otherwise. All estimates are odds ratios based on a logit regression. Estimates are reported with 95 percent confidence intervals in brackets, and estimates significant at the 5 percent level are highlighted in bold. For variables that are included in the regressions but not shown, see the note to Table 3.

TABLE 9: THE PROBABILITY OF RECEIVING MORE SEVERE SENTENCES

	(1)	(2)	(3)	(4)
Black Male	<b>1.47</b> [1.44, 1.50]	<b>1.34</b> [1.31, 1.36]	<b>1.27</b> [1.24, 1.29]	<b>1.15</b> [1.13, 1.17]
Hispanic Male	1.01 [1.00, 1.03]	<b>0.94</b> [0.92, 0.96]	<b>0.85</b> [0.84, 0.87]	<b>0.87</b> [0.85, 0.89]
White Female	<b>0.62</b> [0.61, 0.64]	<b>0.60</b> [0.58, 0.61]	<b>0.63</b> [0.61, 0.64]	<b>0.61</b> [0.60, 0.63]
Not Guilty Plea	<b>0.83</b> [0.82, 0.85]	<b>0.89</b> [0.87, 0.91]	<b>0.94</b> [0.92, 0.97]	<b>0.91</b> [0.89, 0.93]
Prior DWI				<b>15.75</b> [15.14, 16.39]
Pro Se		<b>1.31</b> [1.29, 1.33]	<b>1.23</b> [1.21, 1.26]	<b>1.31</b> [1.28, 1.33]
Court-Appointed Attorney		<b>2.44</b> [2.39, 2.48]	<b>2.09</b> [2.04, 2.13]	<b>1.99</b> [1.95, 2.03]
Public Defender		<b>2.19</b> [2.14, 2.24]	<b>1.93</b> [1.88, 1.98]	<b>1.93</b> [1.88, 1.98]
Bail/Bond Category 1			0.99 [0.96, 1.01]	0.98 [0.96, 1.00]
Bail/Bond Category 2			<b>1.45</b> [1.41, 1.50]	<b>1.41</b> [1.36, 1.46]
Bail/Bond Category 3			<b>2.23</b> [2.19, 2.27]	<b>1.97</b> [1.94, 2.01]
Median HH Income (\$100,000s)				<b>0.72</b> [0.67, 0.77]
Expensive Home Index				<b>0.99</b> [0.99, 1.00]
Share with under 12 years schooling				<b>2.99</b> [2.76, 3.23]
Concurrent Violations?	N	N	N	Y
<i>N</i>	307,116	307,116	307,116	307,116

Source: ACIS.

Notes: All estimates are odds ratios based on an ordered logit regression, where the ordering of the dependent variable is as follows: non-felony Level 5 (1) to Level 1 (5) followed by felony convictions (6). Estimates are reported with 95 percent confidence intervals in brackets, and estimates significant at the 5 percent level are highlighted in bold. For variables that are included in the regressions but not shown, see the note to Table 3.

TABLE 10: FINES IMPOSED

	(1)	(2)	(3)	(4)
Black Male	<b>0.59</b> [0.57, 0.60]	<b>0.71</b> [0.69, 0.73]	<b>0.75</b> [0.73, 0.77]	<b>0.78</b> [0.76, 0.81]
Hispanic Male	<b>0.68</b> [0.66, 0.70]	<b>0.77</b> [0.74, 0.79]	<b>0.78</b> [0.76, 0.81]	<b>0.75</b> [0.72, 0.77]
White Female	<b>1.60</b> [1.54, 1.67]	<b>1.74</b> [1.67, 1.82]	<b>1.68</b> [1.61, 1.76]	<b>1.57</b> [1.50, 1.64]
Not Guilty Plea	<b>0.89</b> [0.86, 0.92]	<b>0.75</b> [0.72, 0.78]	<b>0.71</b> [0.68, 0.73]	<b>0.67</b> [0.65, 0.70]
Felony DWI				<b>0.01</b> [0.01, 0.02]
Prior DWI				<b>0.52</b> [0.49, 0.55]
Pro Se		<b>0.48</b> [0.47, 0.50]	<b>0.51</b> [0.49, 0.52]	<b>0.47</b> [0.46, 0.49]
Court-Appointed Attorney		<b>0.19</b> [0.19, 0.20]	<b>0.21</b> [0.21, 0.22]	<b>0.24</b> [0.23, 0.25]
Public Defender		<b>0.21</b> [0.20, 0.22]	<b>0.23</b> [0.22, 0.24]	<b>0.24</b> [0.23, 0.25]
Bail/Bond Category 1			<b>1.29</b> [1.23, 1.35]	<b>1.33</b> [1.27, 1.40]
Bail/Bond Category 2			<b>1.75</b> [1.63, 1.88]	<b>1.88</b> [1.75, 2.03]
Bail/Bond Category 3			<b>0.52</b> [0.50, 0.53]	<b>0.60</b> [0.58, 0.62]
Median HH Income (\$100,000s)				<b>1.60</b> [1.42, 1.80]
Expensive Home Index				<b>1.02</b> [1.01, 1.03]
Share with under 12 years schooling				<b>0.57</b> [0.51, 0.65]
Concurrent Violations?	N	N	N	Y
<i>N</i>	323,115	323,115	323,115	323,115

Source: ACIS.

Notes: The dependent variable in all regressions takes the value “1” if the defendant received a fine as part of the sentence and “0” otherwise. All estimates are odds ratios based on a logit regression. Estimates are reported with 95 percent confidence intervals in brackets, and estimates significant at the 5 percent level are highlighted in bold. For variables that are included in the regressions but not shown, see the note to Table 3.

TABLE 11: THE PROBABILITY OF BEING SENTENCED TO JAIL OR PRISON

	<i>Jail</i>			<i>Prison</i>	
	(1)	(2)	(3)	(4)	(5)
Black Male	<b>0.59</b> [0.57, 0.62]	<b>0.75</b> [0.72, 0.79]	<b>0.782</b> [0.78, 0.86]	<b>1.75</b> [1.67, 1.82]	<b>1.21</b> [1.15, 1.27]
Hispanic Male	<b>4.86</b> [4.43, 5.32]	<b>5.18</b> [4.72, 5.69]	<b>5.95</b> [5.40, 6.55]	<b>0.13</b> [0.11, 0.15]	<b>0.10</b> [0.09, 0.11]
White Female	<b>2.96</b> [2.72, 3.23]	<b>2.99</b> [2.74, 3.26]	<b>2.76</b> [2.52, 3.01]	<b>0.26</b> [0.23, 0.29]	<b>0.27</b> [0.24, 0.30]
Not Guilty Plea	<b>1.75</b> [1.62, 1.88]	<b>1.50</b> [1.39, 1.62]	<b>1.43</b> [1.32, 1.55]	<b>0.63</b> [0.59, 0.68]	<b>0.82</b> [0.75, 0.89]
Felony DWI			<b>0.06</b> [0.05, 0.07]		<b>18.16</b> [16.36, 20.17]
Prior DWI		<b>0.38</b> [0.34, 0.41]	<b>0.45</b> [0.41, 0.49]		<b>2.62</b> [2.38, 2.90]
Pro Se		<b>0.52</b> [0.49, 0.55]	<b>0.49</b> [0.47, 0.52]		<b>3.00</b> [2.80, 3.19]
Court-Appointed Attorney		<b>0.22</b> [0.21, 0.23]	<b>0.24</b> [0.23, 0.26]		<b>5.92</b> [5.60, 6.27]
Public Defender		<b>0.38</b> [0.36, 0.41]	<b>0.41</b> [0.39, 0.44]		<b>3.36</b> [3.12, 3.62]
Bail/Bond Category 1		<b>0.79</b> [0.73, 0.86]	<b>0.81</b> [0.74, 0.88]		<b>1.19</b> [1.08, 1.31]
Bail/Bond Category 2		0.95 [0.83, 1.09]	<b>0.96</b> [0.84, 1.10]		0.89 [0.75, 1.06]
Bail/Bond Category 3		<b>0.46</b> [0.43, 0.49]	<b>0.49</b> [0.46, 0.52]		<b>2.19</b> [2.04, 2.35]
Median HH Income (\$100,000s)			<b>3.19</b> [2.55, 3.98]		<b>0.31</b> [0.24, 0.40]
Expensive Home Index			1.01 [0.99, 1.03]		1.00 [0.98, 1.02]
Share with under 12 years schooling			<b>0.30</b> [0.24, 0.37]		<b>3.79</b> [2.99, 4.80]
Concurrent Violations?	N	Y	Y	N	Y
<i>N</i>	323,115	323,115	323,115	323,115	323,115

Source: ACIS.

Notes: The dependent variable in Columns 1-3 takes the value "1" if the defendant was sentenced to jail and "0" otherwise; the dependent variables in Columns 4 and 5 are the same but for prison sentences. All estimates are odds ratios based on a logit regression. Estimates are reported with 95 percent confidence intervals in brackets, and estimates significant at the 5 percent level are highlighted in bold. For variables that are included in the regressions but not shown, see the note to Table 3.

TABLE 12: SENTENCE LENGTHS BY INCARCERATION TYPE

	<i>Jail</i>		<i>Prison</i>	
	(1)	(2)	(3)	(4)
Black Male	19.04*** (1.95)	4.18** (1.94)	-32.08*** (5.53)	-24.00*** (5.26)
Hispanic Male	-7.01*** (1.95)	-11.19*** (1.99)	35.79 (14.70)	12.82 (13.69)
White Female	-24.80*** (2.14)	-22.50*** (2.08)	-21.35* (12.48)	-13.58 (11.59)
Not Guilty Plea	-6.30*** (2.38)	-1.59 (2.32)	9.37 (9.63)	15.06* (8.97)
Felony DWI		247.04*** (12.13)		128.31*** (6.91)
Prior DWI		247.56*** (3.68)		121.58*** (10.07)
Pro Se		9.37*** (1.91)		3.89 (7.01)
Court-Appointed Attorney		26.09*** (2.01)		11.09* (5.75)
Public Defender		26.70*** (2.63)		18.68** (9.04)
Bail/Bond Category 1		9.56*** (2.54)		21.06* (11.02)
Bail/Bond Category 2		20.68*** (3.15)		17.67 (18.39)
Bail/Bond Category 3		47.55*** (2.02)		44.20*** (8.16)
Median HH Income (\$100,000s)		-14.48** (6.35)		-22.20 (28.53)
Expensive Home Index		-0.19 (0.56)		-0.30 (2.00)
Share with under 12 years schooling		11.67 (7.58)		2.64 (25.91)
Concurrent Violations?	N	Y	N	Y
<i>N</i>	311,277	311,277	9880	9880

Source: ACIS.

Notes: All estimates are derived from year and county fixed effects OLS regressions. Coefficient significance is denoted as follows: \* =  $p < 0.10$ ; \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ . For variables that are included in the regressions but not shown, see the note to Table 3.