Same Crime, Different Time: Disparities in Judicial Outcomes for DWI Offenders*

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Abstract

We examine disparities in judicial outcomes among people charged with Driving While Intoxicated (DWI), a setting in which legal guilt is objectively determined by breath alcohol content (BrAC). Focusing on first-time offenders with no aggravating circumstances and BrAC above the legal threshold, we find that race, gender, and financial resources strongly predict the likelihood of incarceration and case dismissal. Defendants with greater socioeconomic advantage are more likely to access rehabilitative alternatives and avoid criminal records. We discuss how these outcome differences may reflect not only disparities in options offered by the court, but also in defendants' choices among them.

Keywords: Punishment, sanctions, disparities, systemic bias

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1 Introduction

Social and economic inequalities are deep-rooted in the criminal legal system. Disparities by race, ethnicity, gender, and economic status exist at many stages in the legal process and across many jurisdictions. One candidate explanation for these widespread group differences is that people with different characteristics engage in different criminal conduct. Alternatively, disparities may arise among people with the same criminal conduct. The fundamental challenge to distinguishing these explanations is that objective measures of criminal conduct are rarely observed.

In this paper, we investigate disparities in criminal case outcomes in the context of Driving While Intoxicated (DWI) offenses in Harris County, Texas, the third most populous county in the U.S. and home to Houston, Texas. People, by law, are guilty of DWI if they drive with a breath alcohol content (BrAC) above a set threshold, which is measured and recorded by a precise and standardized testing instrument. By focusing on first-time offenders with no aggravating circumstances and conditioning on BrAC, we compare judicial outcomes for defendants who committed the same offense but who differ on a range of social and economic factors. In addition to the empirical advantages, DWIs are one of the most common ways that people interact with the justice system, representing 10% of all arrests in the U.S. (Federal Bureau of Investigation, 2019).

Among those charged, nearly all face judicial consequences. However, we observe a bifurcation in how justice is administered. Some defendants follow an incarceration track, which entails swift conviction and a short jail sentence with limited follow-up. Others are diverted into a rehabilitative track involving probation or pre-trial diversion. Both alternatives typically require court-mandated treatment, ongoing judicial oversight, and the payment of fees and fines. Yet defendants who comply with court requirements are spared incarceration and, in the case of pre-trial diversion, avoid a criminal conviction.

To examine disparities in placement on these tracks, we first focus on several defen-

dant characteristics in isolation. We consider four primary dimensions along which defendants differ: race/ethnicity, gender, use of a private attorney, and access to economic resources. We find that people from different racial and socioeconomic groups face substantially different outcomes, even after conditioning on BrAC. For example, focusing on defendants just above the legal limit, white defendants are nearly fifty percent more likely to have their case dismissed compared to Hispanic defendants.

The dimensions we consider are not independent, and it may be the case, for example, that disparities by race simply reflect differences in access to economic resources across these groups. However, despite the highly correlated nature of these factors, we find that the disparities across groups aggregate to larger cumulative disparities. To illustrate this, we first provide a striking example. Looking at cases just above the legal limit, a white, female defendant with a private attorney and from a neighborhood in the top half of the income distribution is nearly twice as likely to have her case dismissed than a Hispanic male without a private attorney and from a neighborhood in the bottom half of the income distribution. This relative advantage persists even for defendants whose BrAC is two or three times the legal limit.

We formalize the idea of cumulative disparities by estimating a joint regression including all dimensions at once. We find that each factor contributes to the case outcome, even conditional on all other factors. Put differently, a Hispanic defendant is less likely to have their case dismissed than a white defendant, even when both are male, have the same BrAC, have private attorneys, and are from neighborhoods with similar median income. Similarly, defendants with different economic resources face different outcomes even when they share the same demographic characteristics and have retained private lawyers.

We emphasize that we do not—and cannot—identify the causal effect of race or financial resources on judicial outcomes in our setting. However, we convincingly show that these factors predict differences in punishment for people guilty of a fixed offense.

Whether the difference arises directly from the characteristic itself or from a correlated unobserved factor, our results imply that the experience of criminal justice differs systematically based on characteristics unrelated to the severity of the offense.

While probation and pre-trial diversion are often framed as more lenient or reform-oriented, they are also associated with higher financial burdens, including fines, supervision fees, and treatment costs. Additionally, time spent in pre-trial detention is typically credited against a jail sentence. As a result, a defendant's ability to make bail can materially alter the relative appeal of incarceration versus alternatives. For a person with limited financial means or job flexibility, a short jail sentence may be preferable to a prolonged and costly period of probation.

Even if observed differences in judicial outcomes partly reflect the optimizing decisions of defendants, that does not imply they are fair or non-discriminatory. In such cases, the disparities may reflect preexisting economic and social inequities that lead to systemic disadvantage for certain minority and low-income defendants. This interpretation is consistent with Bohren et al. (2025) who argue that observed differences in economic outcomes may reflect not only direct discrimination but also systemic discrimination, in which individuals' opportunities are constrained by prior disadvantage or discrimination.

Finally, we examine differences across courtrooms, which are staffed by judges and prosecutors. We find that disparities in incarceration and conviction are smallest where courtrooms are harshest—that is, where dismissal rates are lowest and incarceration rates highest. This pattern suggests that although lenient courts may offer more favorable outcomes, those benefits disproportionately accrue to defendants with the resources to capitalize on them. Alternatively, lenient courtrooms may be more likely to reserve favorable dispositions for advantaged defendants. In either case, the findings warn that judicial or prosecutorial discretion may not reliably serve as a mechanism for leveling the playing field across defendants.

2 Related Literature

A large and growing body of research documents how racial and economic inequality shapes outcomes at various stages of the criminal justice process. Prior work has identified disparities in policing practices (Antonovics and Knight, 2009; Horrace and Rohlin, 2016; Goncalves and Mello, 2021; Aggarwal et al., 2022; Feigenberg and Miller, 2022, 2025), prosecutorial discretion (Rehavi and Starr, 2014; Sloan, 2024; Tuttle, 2025), bail decisions (Arnold et al., 2018, 2022; Stevenson, 2018a), conviction rates (Anwar et al., 2012), and sentencing (Rose, 2021).[1] The vast majority of this work proceeds to interpret these disparities as evidence of direct discrimination or bias, usually by taking a stance on the objective function of the decision-maker and/or by imposing assumptions about unobserved criminality (Canay et al., 2023).

We depart from the extant literature on disparities and discrimination in two fundamental ways. First, we examine a setting in which the underlying guilt is objectively and precisely measured. This permits us to answer the fundamental question outlined above: do disparities exist among defendants with the same underlying criminal conduct? We document stark differences among defendants who commit the same offense but who differ along various dimensions. Our second distinction, however, lies in our interpretation of these differences. We elide mapping these conditional disparities to a formal notion of discrimination by decision-makers, and instead adopt a more systemic perspective. We outline how these disparities may be the result of differential treatment by prosecutors and judges or the result of plea decisions made by defendants optimizing under different constraints. Our descriptive evidence does not distinguish between these competing explanations, yet we highlight that the latter explanation is consistent with systemic or structural disadvantage (Small and Pager, 2020; Bohren et al., 2025).

Our paper is most similar to the work of Aggarwal et al. (2022), who condition on

[1] Related work also examines disparities in a wide array of other outcomes (e.g., drug-testing:Sloan 2025).

detailed driving behavior to show that race affects the likelihood of being stopped and fined among Lyft drivers. We differ in several ways from this existing paper. First, we examine disparities in one of the single most common *criminal* offenses. DWI cases are a high-stakes setting where defendants are exposed to misdemeanor and felony convictions, as opposed to civil offenses such as speeding or other traffic violations. Second, our focus is on a different set of actors, those involved in courts rather than police officers. Third, we further differ by considering disparate outcomes by defendant sex, use of a private attorney, and access to economic resources. Moreover, we show that these group disparities persist when simultaneously controlling for all other factors. Finally and significantly, our setting uniquely allows defendants to influence their outcomes through plea bargaining and attorney representation, and we discuss how these opportunities for agency may influence the observed disparities.

Kunitz et al. (2006) also examine predictors of DWI conviction and sentencing in a New Mexico county, finding heterogeneity in punishment severity conditional on a linear term in blood alcohol content. Our study builds on and extends this work in several key ways. First, we use a much larger recent dataset from Texas, allowing for greater statistical power. Our data additionally permit us to consider important dimensions, such as the use of a private attorney and defendant's economic resources, that are not included in their analysis. Second, we restrict attention to first-time offenders with BrAC above the legal threshold and no aggravating circumstances, creating a tightly controlled comparison group that holds offense severity constant. Finally, we describe how gaps vary on average across the judge leniency spectrum.

3 Institutional Setting

DWI is one of the most prevalent and deadly offenses in the United States. According to the Centers for Disease Control and Prevention (2023), approximately 18.5 million people drove while impaired by alcohol during 2020, representing 7.2 percent of people 16 years

or older. This led to 11,654 deaths in alcohol-related crashes, which is roughly half as many as the number of homicides during the same period. In addition to the human cost of this behavior, it also led to high levels of interaction between drivers and the criminal justice system. According to the Federal Bureau of Investigation (2019), over 1 million people were arrested under suspicion of DWI in 2018. This is nearly twice as many as all violent crimes and about 60 percent as large as all drug-related offenses.

DWI cases are a valuable setting for examining disparities in sentencing outcomes because of the wide distribution of driver characteristics and the clear and objective legal standard used to determine guilt. Arrests span all demographic groups, affecting people across a wide range of racial, economic, and social backgrounds. Under Texas law, drivers with a breath alcohol concentration (BrAC) of 0.08 or higher are *per se* intoxicated, creating a uniform and objective basis for guilt (Texas Legislature, 2023b). Below this threshold, guilt can be established through evidence of impairment, but those determinations are less standardized. By restricting attention to first-time offenders above the legal limit and without aggravating circumstances, we can compare defendants who have committed legally identical offenses and better isolate the role of extralegal characteristics such as race, gender, or socioeconomic status in sentencing.

The criminal justice process for people suspected of DWI begins with police observation. An officer may initiate a traffic stop either due to a separate traffic violation, such as speeding or running a red light, or because of specific indicators of impairment, like swerving, erratic driving, or delayed reaction times.[2] During the stop, additional cues such as the odor of alcohol or an open container in the vehicle may further raise suspicion. The officer may administer field sobriety tests to assess physical and cognitive impairment. Upon establishing probable cause, the officer can request a chemical test, typically a breathalyzer or blood draw, to measure the driver's alcohol concentration. Under Texas Penal Code § 49.04 (Texas Legislature, 2023b), it is a criminal offense to op-

[2]In Texas, DWI checkpoints are banned, and so deterrence through these salient and uncertain stops is not allowed (Banerjee et al., 2021; Matsuzawa, 2025).

erate a motor vehicle in a public place while intoxicated, defined in § 49.01(2) as lacking the normal use of mental or physical faculties due to alcohol or drugs, or having a BrAC of 0.08 or higher. Refusing a chemical test results in automatic administrative license suspension and may be used as evidence at trial. In such cases, officers frequently obtain a warrant to collect a blood sample.[3]

Once chemical test results are available, the case is referred to the district attorney, who determines whether to formally charge the driver with DWI. Once charged, defendants appear before a judge for a bail hearing. Those who post bail await further proceedings out of custody, while others remain incarcerated. All defendants are entitled to legal representation.

4 Data

Our study focuses on defendants who underwent a breath alcohol test in Harris County, Texas, in 2004 and from 2009 through the first half of 2015.[4,5] These records were obtained via a public records request to the state of Texas. We restrict attention to people with BrAC measures in excess of 0.08, the statutory cutoff for DWI, who appear in Harris County court records. Figure A.1 shows the probability of a formal DWI charge as a function of BrAC. Some drivers below the 0.08 threshold are still charged, likely due to behavioral evidence of impairment or the presence of non-alcohol substances. Above the 0.08 threshold for *per se* intoxication about 90 percent of drivers are charged. Since charging rates appear unrelated to BrAC beyond this point, the remaining cases are likely missing at random, possibly due to data merge errors.

We further limit our sample in two important ways. First, we restrict our sample to

[3]According to Jones and Nichols (2012), approximately 20 percent of defendants refuse to undergo a breath test. We do not observe such individuals in our dataset.

[4]We also requested breath tests for the years 2005-2008, years earlier than 2004, and years after 2015. Ultimately, only records for 2004 and 2009-2020 were available. The records from 2016-2020 do not contain the driver's first name.

[5]This window includes a period in which driver responsibility fees were held constant in Texas (Finlay et al., 2023).

drivers with a first-time DWI offense, with no prior criminal convictions, and with no aggravating circumstances (such as a minor being present in the car).[6] For a subset of 760 defendants, we collected additional detailed information on case outcomes directly from the case dockets on the Harris County Courts website. Second, we remove people who are not U.S. citizens per the court records.[7] These restrictions yield an analysis sample of 12,887 defendants. Additional details about the sample and data construction are available in Appendix 8.

Table A.1 presents summary statistics for our sample, highlighting substantial racial and socioeconomic diversity among DWI defendants. Defendant characteristics also vary systematically across sentencing outcomes. Incarceration, for example, falls disproportionately on disadvantaged groups, including Hispanic men. Legal representation is another important dimension of inequality. Counsel plays a central role in plea negotiations, and although defendants retain the right to trial, fewer than 1 percent of cases proceed that far; nearly all are resolved through plea bargaining. In our sample, about one fifth of defendants rely on court-appointed attorneys while the remainder are represented by private counsel.

5 Criminal Justice Consequences

Among people charged with DWI, the majority follow one of three mutually exclusive tracks: incarceration, probation, or dismissal. Each path differs in terms of severity, duration, financial burden, and long-term implications. Table 1 describes the frequency and severity of judicial outcomes by disposition type in our Harris County analysis sample.

One common outcome is immediate incarceration, typically involving a short jail sen-

[6] We can reliably observe prior DWIs and all other convictions in Harris County for 14 years. However, if a defendant has prior offenses outside of Harris County, we do not observe them. In supplemental analyses, we further remove defendants who match to the statewide convictions database, on the basis of name and age, at any point prior to the focal DWI case.

[7] We do not consider this group in our main analyses because of the distinct incentives faced by undocumented immigrants and the ambiguity surrounding their legal protections in criminal proceedings. We report results including this population in Appendix 8.

Table 1: Case Outcomes by Disposition Type

	Dismissed	Probation	Incarcerated
Panel A. Full Sample			
Time to Disposition (Months)	12.790	4.442	3.755
	(4.925)	(3.260)	(3.822)
Probation Duration (Months)	0	12.501	0.024
	-	(2.404)	(0.483)
Any Fine	0	0.934	0.487
	-	(0.249)	(0.500)
Fine Amount	0	526.724	380.008
	-	(655.776)	(468.752)
Suspended Sentence (Months)	0	7.202	0
	-	(2.674)	-
Immediate Sentence (Months)	0	0	0.588
	-	-	(0.740)
Observations	2,812	5,834	4,241
Panel B. Detailed Sample			
License Suspension	0	0.048	1
	-	(0.213)	-
Driving School	0	0.969	0.003
	-	(0.173)	(0.055)
Ignition Interlock	0.308	0.637	0.274
	(0.463)	(0.482)	(0.447)
Observations	144	346	270

Notes: Entries display means and standard deviations for case outcomes by disposition type in our Harris County analysis sample. Panel A reports statistics for outcomes observed in our full sample. Panel B reports statistics for the subset of outcomes observed in the sample for which we obtained detailed information directly from individual case dockets.

tence. In our Harris County sample, a third of first time DWI offenders are incarcerated with an average sentence of about two weeks. In practice, actual time served may be less than the formal sentence due to overcrowding in jail facilities. To minimize disruption to employment, sentences may be structured to allow weekend-only incarceration. Incarcerated individuals may also be required to pay court fines. About half of defendants sentenced to incarceration pay a fine, and the average *unconditional* fine is $380. These cases are resolved quickly on average with the time to final disposition averaging only 3.75 months from the time of the incident.

A second group of defendants is sentenced to supervised probation, which imposes ongoing obligations for up to 24 months (Texas Legislature, 2023a). Forty-five percent of the defendants in our sample are subjected to probation. In addition to fines that average $527 in our sample, probation requires monthly community supervision fees (which range from $25 to $60 in Texas, Texas Legislature (2023a)). Defendants must demonstrate progress toward a court-mandated rehabilitation plan, which may include participation in programs such as driving school and Alcoholics Anonymous. In our sample, nearly all defendants who receive probation are required to attend driving school. Most also install an ignition interlock device on their car. According to Harber Law (2025), these normally cost $70 to $150 to install and between $60 to $80 each month to rent. Probation sentences typically include a suspended jail term that will not be imposed if the defendant successfully completes the probation period. However, if a defendant fails to meet the terms of supervision, probation may be revoked, and the suspended jail sentence enforced. The suspended jail sentence averages over one year in our sample.

Twenty-two percent of cases in the sample are ultimately dismissed. At least 62 percent of these dismissals are resolved through pre-trial diversion, which closely resembles probation in terms of conditions and oversight but carries a key advantage: successful completion does not result in a criminal conviction.[8] Like probation, diversion often involves supervision fees, though these costs can be waived or reduced for low-income defendants. The defendant must also engage in regular interaction with the court for over a year on average until their case is ultimately dismissed.

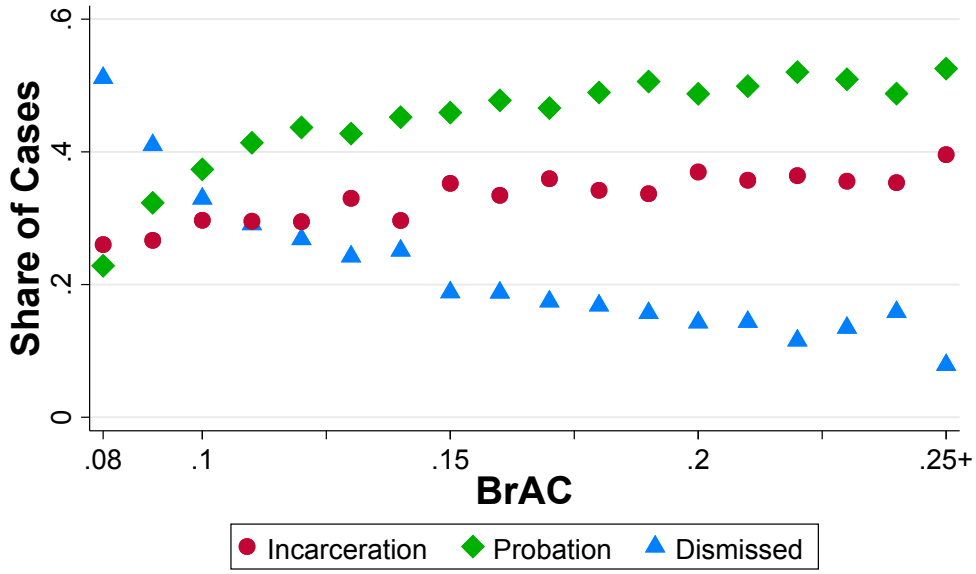
While immediate incarceration primarily serves a punitive and deterrent function, probation and pre-trial diversion incorporate explicit rehabilitative goals. These latter alternatives aim to reduce recidivism by addressing underlying issues such as substance abuse, while still maintaining accountability through structured judicial supervision.

Figure 1 shows the probability of dismissal, probation, and incarceration at each level

[8] In our sample, 8 percent of case dismissals occur for reasons which are not reported in court records.

of BrAC in our sample. We observe that as the severity of the offense increases, as measured by BrAC, the probability of dismissal falls from over 40 percent for individuals just above the legal limit to less than 10 percent for individuals with BrAC in excess of 0.25. Conversely, the probability of incarceration increases from about 26 percent to 40 percent over the same range. This relationship suggests that prosecutors view incarceration as a harsher penalty, fit for a more serious offense than either probation or pre-trial diversion. Conversely, pre-trial diversion is disproportionately reserved for comparatively minor offenses.

Figure 1: Case Outcomes by BrAC



Notes: Figure displays the share of cases in each disposition category at every level of BrAC.

6 Disparities in Criminal Justice Outcomes

While it seems both fair and intuitive that more serious offenses should result in more severe sanctions, defendant characteristics unrelated to the offense are also strongly predictive of outcomes. We begin by comparing dismissal and incarceration rates across groups defined by a single characteristic, and then show—both visually and with multivariate regression—that the disadvantages associated with race, gender, income, and

legal representation layer on one another.

Panel A of Figure 2 plots dismissal probabilities across demographic and socioeconomic groups at different BrAC levels.[9] The top left subfigure displays dismissal rates by race. White and Asian defendants experience the highest dismissal rates, although the estimates for Asian defendants are less precise. At every BrAC level, Black and Hispanic defendants have systematically lower dismissal probabilities than white defendants. Just above the 0.08 threshold, white defendants are 50 percent more likely than Black and Hispanic defendants to have their cases dismissed.

Disparities extend beyond race. Defendants with private attorneys just above the threshold are three times as likely to have their cases dismissed as those with court-appointed counsel. A defendant with a private attorney and a BrAC twice the legal limit has a similar likelihood of dismissal as a defendant with a court-appointed attorney just above the threshold. Dismissal rates also increase with neighborhood income: defendants from census tracts in the top within-sample income quartile are significantly more likely to have their cases dismissed than those from the bottom quartile. Female defendants generally have higher dismissal rates than males.

Panel B of Figure 2 shows that similar disparities appear in incarceration. Hispanic defendants are about 10 percentage points more likely to be incarcerated than defendants of other races with the same BrAC. The gap between individuals represented by private attorneys and those represented by court-appointed attorneys is even larger at about 30 percentage points. The incarceration rate declines monotonically with neighborhood income. Men are substantially more likely to be incarcerated than women.

Of course, the characteristics we consider are likely correlated with each other. For example, race may be correlated with access to a private attorney, which represents one channel through which a defendant might experience disadvantage. Even if the observed disparities across demographic groups operate entirely through correlated factors—such

[9]While the main-text results focus on citizens, Appendix Figure A.5 and Table A.4 show that disparities are even wider when non-citizens are included.

as differences Black and Hispanic defendants being less likely to have private counsel—they still reveal that some groups systematically lack access to the most favorable criminal justice outcomes.

However, the disadvantages associated with race, income, gender, and representation do not merely overlap—they accumulate. The bottom-right subfigure of each panel contrasts two illustrative groups: white female defendants with private attorneys from high-income neighborhoods and Hispanic male defendants with court-appointed counsel from low-income neighborhoods. Just above the legal limit, the advantaged group has about a 70 percent likelihood of dismissal, roughly twice that of the disadvantaged group. An advantaged defendant with a BrAC of 0.25 faces higher odds of dismissal than a disadvantaged defendant with a BrAC of 0.10. The same pattern appears for incarceration: women in the advantaged group face rates below 20 percent across the BrAC distribution, while men in the disadvantaged group exceed 60 percent. These patterns show that each source of advantage independently improves outcomes, and that the effects accumulate to produce stark and systematic inequities.

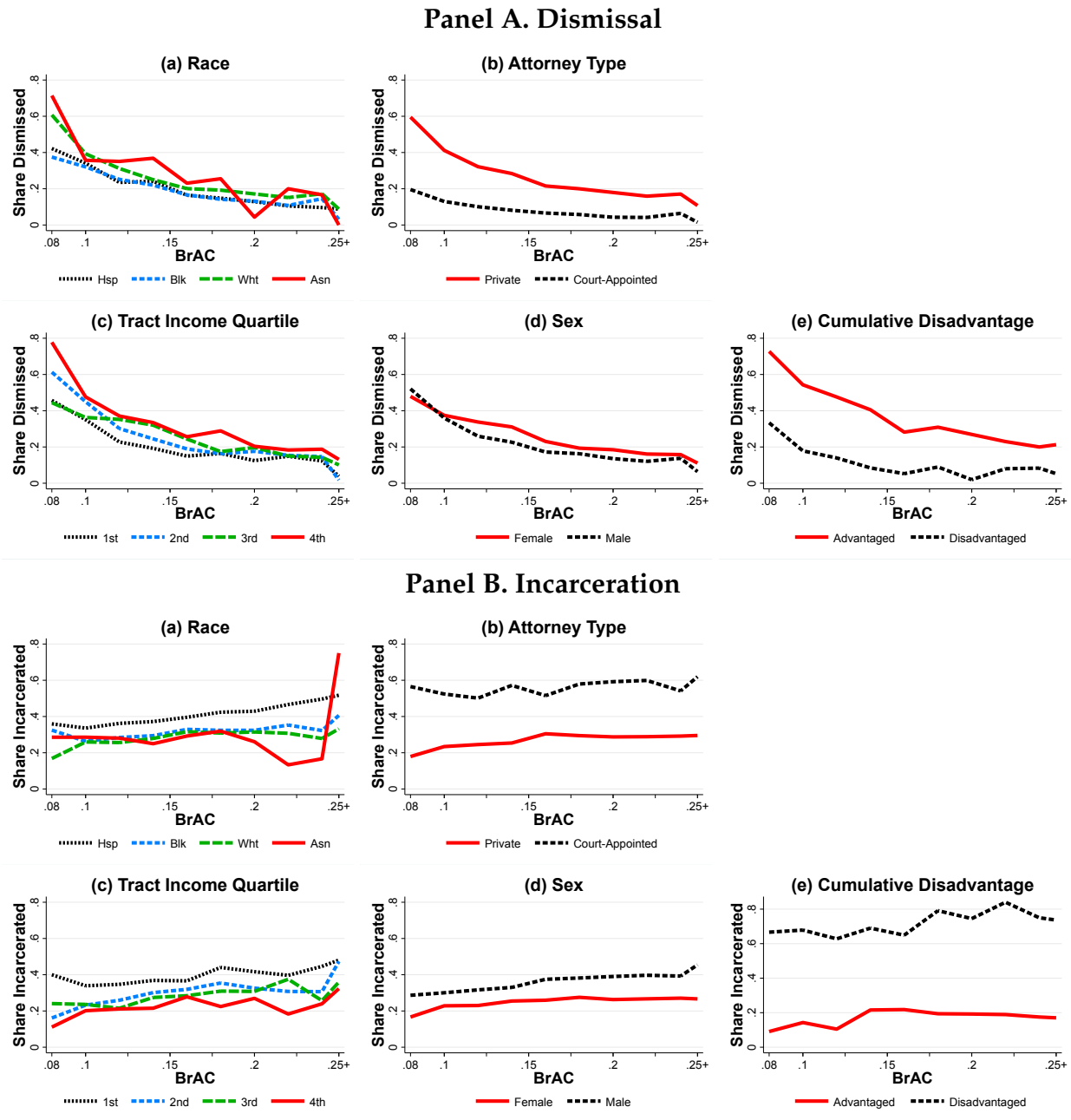
To fully characterize the multivariate relationships between defendant characteristics and case outcomes, we estimate the following regression model:

$$Y_{i,b,d,t,c,a} = \beta X_i + \omega_b + \mu_d + \gamma_t + \phi_c + \chi_a + \epsilon_{i,b,d,t,c,a} \tag{1}$$

where Y is the case outcome for defendant i (dismissal, probation, or incarceration), and X is a set of defendant or case characteristics (e.g., race, sex, etc.). The specification includes BrAC fixed effects (ω_b) to compare defendants at identical levels of intoxication, along with day-of-week (μ_d) and month-year (γ_t) controls. We test robustness to adding courtroom-by-month-year fixed effects (ϕ_c) and arresting officer fixed effects (χ_a).

Table 2 shows the results. For dismissals, the disparities mirror the univariate patterns in Figure 2. Black and Hispanic defendants are less likely to have their cases dismissed

Figure 2: Probability of Dismissal and Incarceration by Defendant Characteristics



Notes: This figure shows the dismissal and incarceration rates of defendants within the indicated group as a function of BrAC. In sub-figure (c) of each panel, the groups are constructed based on the within-sample quartile of census tract median household income. In sub-figure (e) of each panel, the advantaged group is constructed of defendants who are white female defendants with private attorneys living in neighborhoods in the top half of the within-sample distribution of census tract median household income. The disadvantaged group is composed of defendants who are Hispanic male defendants with court-appointed attorneys living in neighborhoods in the bottom of the within-sample distribution of census tract median household income.

than white defendants, while Asian defendants are more likely. Having a private attorney is positively associated with dismissal. Finally, dismissal rates increase along the tract income distribution.[10] All of these coefficients are estimated jointly and conditional on one's level of intoxication. This implies, for example, that the differences for Hispanic and white defendants do not reflect differences in sex, citizenship, access to private attorney, or economic resources, nor are they due to differences in underlying intoxication.

Column 2 of Table 2 shows that the results are robust to including courtroom-by-month-year fixed effects and arresting officer fixed effects. The courtroom to which one's case is assigned is a crucial determinant of the outcome because in a given month-year courtrooms are staffed by a fixed set of judges and prosecutors (Mueller-Smith, 2015). Arresting officers also play an important role in the outcome; an officer's failure to adhere to legal standards or inability to appear in court can compromise the prosecution's case. Yet, when we control for these two major factors, the estimated disparities are virtually unchanged.

Next, we examine differences in probation and incarceration by defendant characteristics. In general, we find disparities that move in the same direction in terms of punishments that trade off swift, harsh sanctions versus rehabilitative approaches that, while less punitive, may entail significant costs in terms of time, fines, and cognitive load. For example, Hispanic defendants are less likely to have their cases dismissed than white defendants, and similarly, are less likely to have a sentence of probation but more likely to have a sentence of incarceration. This monotonic shift from dismissal and probation into incarceration or vice versa characterizes nearly all groups we consider. The sole exception is Black defendants, who are both less likely to have their cases dismissed than white defendants and less likely to have a sentence of incarceration. As before, all results are robust to the inclusion of courtroom-by-month-year and arresting officer fixed effects.

[10]The coefficients for the second through fourth quartiles are all statistically distinguishable from the first quartile. Testing the equality of coefficients for the fourth and third quartiles yields a p-value = 0.0009 and testing the equality of the coefficients for the third and second quartiles yields a p-value = 0.2750.

Table 2: Jointly Estimated Group Disparities

	Dismissed		Probation		Incarcerated	
	(1)	(2)	(3)	(4)	(5)	(6)
Hispanic	–0.016*	–0.019*	–0.055***	–0.052***	0.071***	0.070***
	(0.008)	(0.010)	(0.010)	(0.013)	(0.010)	(0.012)
Black	–0.032***	–0.042***	0.040***	0.047***	–0.008	–0.005
	(0.010)	(0.013)	(0.013)	(0.017)	(0.012)	(0.015)
Asian	0.031	0.036	–0.038	–0.050	0.008	0.014
	(0.024)	(0.029)	(0.027)	(0.035)	(0.025)	(0.030)
Female	0.033***	0.035***	0.034***	0.019	–0.067***	–0.054***
	(0.008)	(0.010)	(0.010)	(0.012)	(0.009)	(0.011)
Age, 26–39	0.012	–0.003	–0.028***	–0.016	0.016*	0.019*
	(0.008)	(0.010)	(0.010)	(0.012)	(0.009)	(0.011)
Age, 40+	0.007	–0.004	–0.019	–0.010	0.012	0.014
	(0.009)	(0.012)	(0.012)	(0.015)	(0.011)	(0.013)
Private Attorney	0.150***	0.164***	0.104***	0.096***	–0.254***	–0.260***
	(0.007)	(0.010)	(0.011)	(0.014)	(0.011)	(0.013)
Tract Inc., 2nd Qntl.	0.035***	0.045***	0.030*	0.018	–0.065***	–0.063***
	(0.012)	(0.015)	(0.016)	(0.019)	(0.014)	(0.017)
Tract Inc., 3rd Qntl.	0.048***	0.054***	0.015	0.007	–0.063***	–0.061***
	(0.012)	(0.015)	(0.015)	(0.019)	(0.014)	(0.017)
Tract Inc., 4th Qntl.	0.086***	0.095***	0.008	–0.011	–0.094***	–0.084***
	(0.012)	(0.016)	(0.015)	(0.019)	(0.014)	(0.017)
Tract Inc., Missing	0.029**	0.036**	–0.054***	–0.071***	0.025	0.035*
	(0.014)	(0.018)	(0.017)	(0.021)	(0.016)	(0.019)
Dep. Var. Mean	0.218	0.218	0.453	0.453	0.329	0.329
R-squared	0.145	0.353	0.047	0.294	0.115	0.365
Observations	12,887	11,029	12,887	11,029	12,887	11,029
Court-Month-Year FEs	No	Yes	No	Yes	No	Yes
Arresting Officer FEs	No	Yes	No	Yes	No	No

Notes: Entries display coefficients and standard errors from regressions of case outcomes on defendant and case characteristics. Columns 1 and 2 present results on case dismissal, columns 3 and 4 on probation, and columns 5 and 6 on incarceration. Odd-numbered columns include BrAC fixed effects, day-of-week fixed effects, month-year fixed effects, and a linear control for the time of day the breath test occurred. Even-numbered columns include those variables and courtroom-month-year fixed effects and arresting officer fixed effects. We lose observations in these more detailed specifications because some arresting officers in our data only have one arrest. The following categories are omitted to avoid perfect collinearity with the included regressors: non-Hispanic whites, males, individuals aged 21-25 years old, individuals with court-appointed attorneys, and individuals from the first quartile of tract income. ***, ** and * denote statistical significance at the 1%, 5%, and 10% levels.

7 Justice Disparities: Differences in Menus or Differences in Choices?

One of the central challenges in interpreting disparities in judicial outcomes is distinguishing between differences in the options available to defendants—the "menu"—and differences in how defendants choose among those options. Outcomes in DWI cases are typically negotiated between prosecutors and defense attorneys. As a result, when one defendant is incarcerated and another receives probation or diversion, the contrast may reflect either a distinct plea offer or different selections from a common set of offers.

7.1 Defendants Making Tradeoffs

Defense attorney websites indicate that defendants can make deliberate choices among available punishment options. Perhaps, the first tradeoff lies in the choice to acquire a private attorney (Wilder Law Firm, 2025). The Wilder Law Firm estimates these costs can range from $2,000 to $10,000. The same law firm notes defendants face choices and emphasizes that "each case is unique" and that the firm works with clients to pursue sentencing alternatives such as probation, DWI court, or alcohol education programs (Wilder Law Firm, 2025). Similarly, the Doug Murphy Law Firm describes probation as potentially burdensome, noting that it often entails hundreds of dollars in monthly costs, restrictions on alcohol consumption, mandatory classes, community service, and the risk of jail time upon noncompliance. The site makes clear that for some clients, "the lengthy requirements of the probation system are not worth it," and that a short jail sentence, while more stigmatized, may be the more manageable option (Doug Murphy Law Firm, 2025).

These descriptions suggest that part of the observed disparity in outcomes may reflect rational selection across a shared menu of sanctions. Defendants with limited financial resources, unstable employment, or inflexible schedules may reasonably prefer jail over probation, even when both options are available. For those detained pre-trial, the incentive to plead guilty quickly is especially strong: a guilty plea may yield credit for time served and immediate release, even if the conviction carries longer-term costs (Leslie and

Pope, 2017; Dobbie et al., 2018; Stevenson, 2018b). In this way, economic constraints can push disadvantaged defendants toward incarceration over supervision.

The presence of this tradeoff between supervision and incarceration is supported by qualitative evidence. A 2010 *Texas Tribune* investigation found that many first-time DWI defendants in Harris County chose jail time rather than probation because of the financial and administrative burdens of community supervision, including monthly fees, alcohol monitoring, and frequent check-ins (Grissom, 2010). Consistent with this, Table 1 shows that incarceration is associated with shorter jail sentences but significantly lower fines than probation. Defendants who serve time pay less than half as much in fines as those receiving probation, and additional costs such as ignition interlock devices or driving school are rarely imposed on the incarcerated. These patterns imply that incarceration is the less financially costly option, while probation and diversion exchange money and supervision for reduced jail exposure and a cleaner record.

The same tradeoff appears within the set of incarcerated people. Figure A.8 shows that among defendants sentenced to jail, those with higher fines tend to serve shorter sentences—a relationship that persists even after controlling for BrAC and defendant characteristics. This inverse relationship fits a bargaining framework in which prosecutors and defendants trade time for money. Defendants with private attorneys typically pay higher fines and serve shorter sentences, suggesting that their lawyers do not necessarily help them achieve more leniency across all dimensions, but rather help them select outcomes that better align with their preferences or constraints.

Finally, the direction of disparities across demographic groups is consistent with defendants making tradeoffs. Defendants from low-income neighborhoods or without private attorneys—those least able to absorb financial penalties—are significantly more likely to receive incarceration. This pattern is consistent with rational sorting across a shared menu: when punishment options implicitly trade financial cost for reduced jail time, resource-constrained defendants may favor the lower-cost, higher-incarceration outcome.

It is also possible that attorneys or prosecutors anticipate these constraints and are less likely to extend more demanding, financially costly alternatives to such defendants.

7.2 Variation in the Menu of Options Across Courtrooms

We also see evidence that the "menu" of choices itself is not identical across courtrooms, even conditional on BrAC. Prosecutors retain broad discretion in the plea offers they extend, and judges can influence the process in ways that tilt outcomes toward harsher or more lenient sanctions. We observe such patterns directly in the data. In Harris County, prosecutors and judges are generally paired within courtrooms, and our dataset records the courtroom in which each case was adjudicated. This allows us to identify the likely judge–prosecutor combination handling each case and to measure systematic differences across courtrooms.

To quantify this variation, we estimate courtroom-by-year fixed effects from regressions of dismissal and incarceration indicators on BrAC fixed effects. Because these estimates include sampling noise, we use a split-sample approach: within each courtroom–year, we randomly divide cases in half, estimate leniency separately in each split, and compute the covariance of the two estimates. This method-of-moments approach provides a measure of the latent variance in courtroom leniency. We find that the latent variance is 0.0072 for the probability of dismissal and 0.0102 for the probability of incarceration. This implies that a courtroom one standard deviation stricter than average is associated with a 8.5 percentage point reduction in dismissal probability or a 10 percentage point increase in incarceration probability. These findings underscore that a substantial fraction of variability in criminal justice outcomes stems from prosecutorial and judicial behavior outside the control of defendants themselves.

We next ask how this variation in courtroom leniency relates to disparities across groups. A simple regression is problematic, as courtroom-level gaps are mechanically related to overall generosity measures. To overcome this, we use our split-sample method-

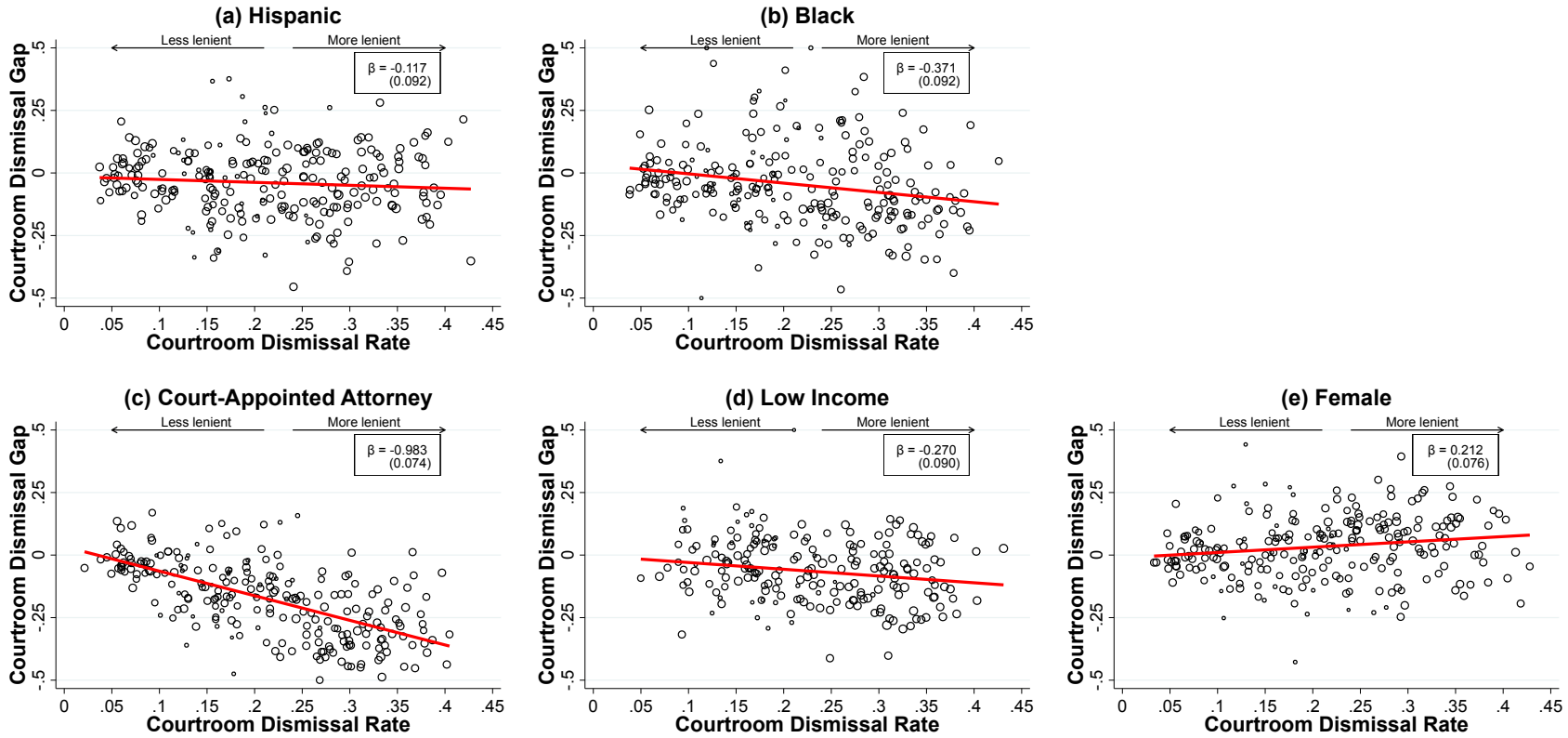
ology: for each courtroom–year, we calculate group gaps in one split and relate them to an empirical Bayes estimate of courtroom leniency from the other split. This design eliminates mechanical correlation and yields a clean estimate of how leniency shapes disparities. Figure 3 presents the relationship between dismissal gaps and courtroom dismissal rates.[11] Both the gaps and the leniency measures are normalized to have population means equal to the overall average.

The results show that gaps in dismissal between advantaged and disadvantaged groups are smallest in the strictest courtrooms and largest in the most lenient. For example, the dismissal gap between defendants with and without private attorneys is close to zero in courtrooms with dismissal rates near zero. By contrast, in more lenient courtrooms with high overall dismissal rates, the gap expands substantially. The regression coefficient is –0.983 and highly significant. Results are similar, though somewhat weaker, for other dimensions of advantage. Figure A.7 reports analogous findings for incarceration. Once again, leniency is associated with larger disparities, though the relationship is less pronounced. Significantly however, the incarceration gap between defendants with and without private attorneys is largest among the most lenient courtrooms.

Taken together, the evidence shows that, in this setting, courtroom leniency tends to magnify, not mitigate, inequality. While we cannot know whether leniency plays the same role outside of this set of objectively guilty defendants, here we see a case where more generous "menus" of plea options may disproportionately benefit defendants with the resources or representation to take advantage of them, while less advantaged defendants remain constrained by financial and practical limitations. Alternatively, lenient prosecutors and judges may be more likely to offer the most favorable justice outcomes to advantaged defendants. In either case, judicial discretion interacts with defendants' resources in ways that compound existing social and economic inequalities, echoing the broader patterns documented throughout this paper.

[11] Defendants are randomly assigned into splits separately for each panel of the figure, stratified to ensure balance on the reference characteristic.

Figure 3: Relationship between Courtroom Leniency and Group Disparities



Notes: This figure shows the relationship between overall courtroom-level leniency and the courtroom-level gap in dismissal between defendants in the indicated group and an omitted reference category. Courtroom is defined as the interaction between court ID and year, to account for turnover in prosecutors, judges, etc. over time (Mueller-Smith, 2015). In sub-figures (a) and (b), the gaps are calculated relative to white defendants. In sub-figure (c), the gap is calculated relative to defendants with a privately retained attorney. In sub-figure (d), the gap is calculated relative to defendants who live in tracts in the top two quartiles of the census tract median household income distribution. Finally, in sub-figure (e), the gap is calculated relative to male defendants. For data visualization purposes, we winsorize the gap at 0.5 and -0.5. The slope is estimated on the raw data, pre-winsorization.

8 Conclusion

We find that DWI defendants who commit legally identical offenses experience markedly different judicial outcomes. Race, sex, and access to resources are all strongly predictive of punishment severity, and these disparities persist even after conditioning on an objective measure of guilt and restricting to first-time offenders without aggravating circumstances.

Our evidence points to two complementary mechanisms. Disparities likely reflect both differential treatment by prosecutors or judges and differences in defendants' ability to navigate the same set of plea options. Defendants facing financial hardship, unstable employment, or housing insecurity may find it impractical to meet the costs and logistical demands of probation or pre-trial diversion and may therefore rationally choose incarceration. In this case, differences in outcomes reflect systemic disadvantage rather than differential treatment. Yet these constraints carry enduring consequences. Prior research shows that prosecutorial and sentencing decisions in misdemeanor cases shape long-term criminal trajectories (Agan et al., 2023) and that access to diversion reduces recidivism and improves labor market outcomes relative to incarceration (Mueller-Smith and Schnepel, 2020). Thus, differences in how defendants are sentenced, whether driven by prosecutorial discretion or by defendants' constrained choices, may themselves generate persistent disparities in future criminal justice involvement.

Whether disparities arise from discriminatory treatment or from unequal capacity to avoid the harshest sanctions, the result is the same: punishment is not solely a function of legal guilt. Rather, it reflects a complex interaction between state discretion and individual constraint, filtered through a criminal legal system in which privilege shapes the nature of punishment and rehabilitation. This insight aligns with the framework articulated by Bohren et al. (2025), who distinguish between *direct discrimination*, in which decision-makers treat individuals differently conditional on observables, and *systemic dis-*

crimination, in which individuals face different outcomes because prior disadvantage constrains their choices. In our setting, prosecutors may offer more favorable plea deals to advantaged defendants, or disadvantaged defendants may be unable to select rehabilitative alternatives. Both channels produce disparate outcomes and both point to a system in which equal guilt does not imply equal punishment.

References

Agan, A., Doleac, J. L., and Harvey, A. (2023). Misdemeanor prosecution. *The Quarterly Journal of Economics*, 138(3):1453–1505.

Aggarwal, P., Brandon, A., Goldszmidt, A., Holz, J., List, J. A., Muir, I., Sun, G., and Yu, T. (2022). High-frequency location data shows that race affects the likelihood of being stopped and fined for speeding. SSRN Working Paper No. 4298671.

Antonovics, K. and Knight, B. G. (2009). A new look at racial profiling: Evidence from the boston police department. *The Review of Economics and Statistics*, 91(1):163–177.

Anwar, S., Bayer, P., and Hjalmarsson, R. (2012). The impact of jury race in criminal trials. *The Quarterly Journal of Economics*, 127(2):1017–1055.

Arnold, D., Dobbie, W., and Hull, P. (2022). Measuring racial discrimination in bail decisions. *American Economic Review*, 112(10):2992–3028.

Arnold, D., Dobbie, W., and Yang, C. S. (2018). Racial bias in bail decisions. *The Quarterly Journal of Economics*, 133(4):1885–1932.

Banerjee, A. V., Duflo, E., and Keniston, D. (2021). The value of police: Evidence from a randomized drunk driving crackdown in india. *American Economic Review: Insights*, 3(2):175–190.

Bohren, J. A., Hull, P., and Imas, A. (2025). Systemic discrimination: Theory and measurement. Working Paper.

Canay, I. A., Mogstad, M., and Mountjoy, J. (2023). On the use of outcome tests for detecting bias in decision making. *The Review of Economic Studies*, 91(4):2135–2167.

Centers for Disease Control and Prevention (2023). Impaired driving facts. `https://www.cdc.gov/impaired-driving/facts/index.html`. Accessed: 2025-05-24.

Dobbie, W., Goldin, J., and Yang, C. S. (2018). The effects of pretrial detention on conviction, future crime, and employment: Evidence from randomly assigned judges. *American Economic Review*, 108(2):201–40.

Doug Murphy Law Firm (2025). Probation v. jail v. fighting your dwi case: What's best for you and your texas dwi case? `https://www.dougmurphylaw.com/probation-versus-jail-for-texas-dwi`. Accessed: 2025-07-19.

Federal Bureau of Investigation (2019). Table 29: Estimated number of arrests, united states, 2018. `https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/topic-pages/tables/table-29`. Accessed: 2025-05-24.

Feigenberg, B. and Miller, C. (2022). Would eliminating racial disparities in motor vehicle searches have efficiency costs? *The Quarterly Journal of Economics*, 137(1):49–113.

Feigenberg, B. and Miller, C. (2025). Class disparities and discrimination in traffic stops and searches. Working Paper 33629, National Bureau of Economic Research.

Finlay, K., Gross, M., Luh, E., and Mueller-Smith, M. (2023). The impact of financial sanctions: Regression discontinuity evidence from driver responsibility fee programs in michigan and texas. Technical report.

Goncalves, F. and Mello, S. (2021). A few bad apples? racial bias in policing. *American Economic Review*, 111(5):1406–41.

Grissom, B. (2010). Go directly to jail. https://www.texastribune.org/2010/09/28/many-choosing-jail-time-over-probation/. Accessed: 2025-07-22.

Harber Law (2025). Texas dwi ignition interlock laws. https://harberlaw.com/dwi/ignition-interlock/. Accessed: 2025-10-17.

Horrace, W. C. and Rohlin, S. M. (2016). How dark is dark? bright lights, big city, racial profiling. *The Review of Economics and Statistics*, 98(2):226–232.

Jones, R. K. and Nichols, J. L. (2012). Breath test refusals and their effect on dwi prosecution. Technical Report DOT HS 811 551, United States National Highway Traffic Safety Administration, Office of Behavioral Safety Research, Mid-America Research Institute.

Kunitz, S. J., Zhao, H., Wheeler, D. R., and Woodall, W. G. (2006). Predictors of conviction and sentencing of dwi offenders in a new mexico county. *Traffic Injury Prevention*, 7(1):6–14.

Leslie, E. and Pope, N. G. (2017). The unintended impact of pretrial detention on case outcomes: Evidence from new york city arraignments. *The Journal of Law and Economics*, 60(3):529–557.

Matsuzawa, K. (2025). The deterrent effect of targeted and salient police enforcement: Evidence from bans on checkpoints for driving under the influence. *The Journal of Law and Economics*, 68(2):311–360.

Mueller-Smith, M. (2015). The criminal and labor market impacts of incarceration. Working Paper.

Mueller-Smith, M. and Schnepel, K. T. (2020). Diversion in the criminal justice system. *The Review of Economic Studies*, 88(2):883–936.

Rehavi, M. M. and Starr, S. B. (2014). Racial disparity in federal criminal sentences. *Journal of Political Economy*, 122(6):1320–1354.

Rose, E. K. (2021). Who gets a second chance? effectiveness and equity in supervision of criminal offenders. *The Quarterly Journal of Economics*, 136(2):1199–1253.

Sloan, C. (2024). Do prosecutor and defendant race pairings matter? evidence from random assignment. Working Paper.

Sloan, C. (2025). Managerial discretion and racial disparities: Evidence from military drug screening. Working Paper.

Small, M. L. and Pager, D. (2020). Sociological perspectives on racial discrimination. *Journal of Economic Perspectives*, 34(2):49–67.

Stevenson, M. T. (2018a). A decomposition of racial disparities in pretrial detention. *SSRN Electronic Journal*.

Stevenson, M. T. (2018b). Distortion of justice: How the inability to pay bail affects case outcomes. *The Journal of Law, Economics, and Organization*, 34(4):511–542.

Texas Legislature (2023a). Texas code of criminal procedure chapter 42a: Community supervision. `https://statutes.capitol.texas.gov/docs/CR/htm/CR.42A.htm`. Accessed: 2025-07-22.

Texas Legislature (2023b). Texas penal code chapter 49: Intoxication and alcoholic beverage offenses. `https://statutes.capitol.texas.gov/docs/pe/htm/pe.49.htm`. Accessed: 2025-05-24.

Tuttle, C. (2025). Racial disparities in federal sentencing: Evidence from drug mandatory minimums. Working Paper.

Wilder Law Firm (2025). Alternative sentencing options for dwi offenders in texas. `https://wilderfirm.com/alternative-sentencing-options-for-dwi-offenders-in-texas/`. Accessed: 2025-07-19.

Online Appendix A: Supplementary Tables and Figures

Appendix Table A.1: Summary Statistics

	All Cases	Dismissed	Probation	Incarceration
Case Outcomes				
Dismissed	0.218	1	0	0
	(0.413)	-	-	-
Probation	0.453	0	1	0
	(0.498)	-	-	-
Incarceration	0.329	0	0	1
	(0.470)	-	-	-
Defendant Characteristics				
Hispanic	0.326	0.289	0.292	0.396
	(0.469)	(0.454)	(0.455)	(0.489)
White	0.496	0.536	0.518	0.438
	(0.500)	(0.499)	(0.500)	(0.496)
Black	0.148	0.133	0.161	0.140
	(0.355)	(0.339)	(0.368)	(0.347)
Asian	0.025	0.034	0.024	0.021
	(0.157)	(0.181)	(0.154)	(0.145)
Female	0.267	0.305	0.293	0.207
	(0.442)	(0.460)	(0.455)	(0.405)
Age	33.260	32.921	33.231	33.526
	(11.173)	(10.903)	(11.154)	(11.369)
Private Attorney	0.801	0.934	0.836	0.663
	(0.400)	(0.249)	(0.370)	(0.473)
Med. Household Inc. (Tract-Level, $k)	58.015	62.163	58.337	53.911
	(26.417)	(27.270)	(25.689)	(26.186)
BrAC	0.157	0.142	0.161	0.160
	(0.044)	(0.040)	(0.044)	(0.044)
Observations	12,887	2,812	5,834	4,241

Notes: Entries display means and standard deviations for case outcomes and defendant characteristics. Column 1 reports these statistics for the full sample. Columns 2-4 report these statistics, respectively, for cases that end in dismissal, probation, or incarceration. We observe tract-level median income for 74% of our sample ($n = 9,534$); the mean and standard deviation for that variable are thus based on those observations.

Appendix Table A.2: Sentencing Outcomes by Defendant Type

Defendant Type	**Proportion of Defendants**			***n***
	Dismissed	Probation	Incarceration	
Private attorney				
Asian female	0.333	0.417	0.250	60
Asian male	0.303	0.447	0.250	228
Hispanic female	0.289	0.459	0.253	558
White female	0.287	0.502	0.210	1,816
White male	0.264	0.468	0.268	3,450
Black female	0.249	0.502	0.249	414
Black male	0.233	0.503	0.263	1,025
Hispanic male	0.213	0.453	0.334	2,710
Court-appointed attorney				
Hispanic female	0.136	0.466	0.398	103
Hispanic male	0.074	0.210	0.716	828
White male	0.067	0.400	0.533	777
Black male	0.067	0.445	0.488	344
Black female	0.065	0.520	0.415	123
White female	0.058	0.541	0.401	344

Notes: Entries display the share of defendants by disposition type within demographic-by-attorney cells for all cells with greater than 50 cases. We organize the table into two main groups: (1) defendants who have a private attorney and (2) defendants who do not have a private attorney. Within each group, we report the share of cases that end in dismissal, probation, or incarceration by race/ethnicity and sex. The last column reports the number of cases in each cell.

Appendix Table A.3: Jointly Estimated Group Disparities, Strict Prior Conviction Filter

	Dismissed		Probation		Incarcerated	
	(1)	(2)	(3)	(4)	(5)	(6)
Hispanic	–0.028**	–0.020	–0.043***	–0.044**	0.071***	0.065***
	(0.011)	(0.016)	(0.014)	(0.020)	(0.013)	(0.018)
Black	–0.045***	–0.044**	0.061***	0.074***	–0.016	–0.031
	(0.013)	(0.021)	(0.018)	(0.025)	(0.016)	(0.022)
Asian	0.008	–0.003	–0.023	–0.054	0.015	0.056
	(0.030)	(0.040)	(0.037)	(0.053)	(0.035)	(0.048)
Female	0.035***	0.044***	0.028**	–0.003	–0.063***	–0.041**
	(0.011)	(0.016)	(0.014)	(0.019)	(0.012)	(0.016)
Age, 26–39	0.016	0.012	–0.030**	–0.031	0.014	0.019
	(0.011)	(0.015)	(0.014)	(0.019)	(0.013)	(0.017)
Age, 40+	0.006	–0.005	–0.009	–0.010	0.003	0.014
	(0.013)	(0.019)	(0.016)	(0.023)	(0.015)	(0.020)
Private Attorney	0.151***	0.179***	0.110***	0.099***	–0.260***	–0.277***
	(0.009)	(0.015)	(0.015)	(0.021)	(0.014)	(0.020)
Tract Inc., 2nd Qntl.	0.033*	0.022	0.053**	0.037	–0.086***	–0.058**
	(0.018)	(0.025)	(0.022)	(0.030)	(0.020)	(0.027)
Tract Inc., 3rd Qntl.	0.048***	0.025	0.053**	0.052*	–0.101***	–0.077***
	(0.017)	(0.025)	(0.021)	(0.029)	(0.019)	(0.025)
Tract Inc., 4th Qntl.	0.078***	0.084***	0.026	–0.011	–0.104***	–0.073***
	(0.017)	(0.026)	(0.021)	(0.029)	(0.019)	(0.026)
Tract Inc., Missing	0.042**	0.044	–0.031	–0.053	–0.011	0.009
	(0.019)	(0.029)	(0.024)	(0.033)	(0.023)	(0.030)
Dep. Var. Mean	0.213	0.213	0.452	0.452	0.334	0.334
R-squared	0.156	0.455	0.054	0.403	0.124	0.461
Observations	7,245	5,740	7,245	5,740	7,245	5,740
Court-Month-Year FEs	No	Yes	No	Yes	No	Yes
Arresting Officer FEs	No	Yes	No	Yes	No	No

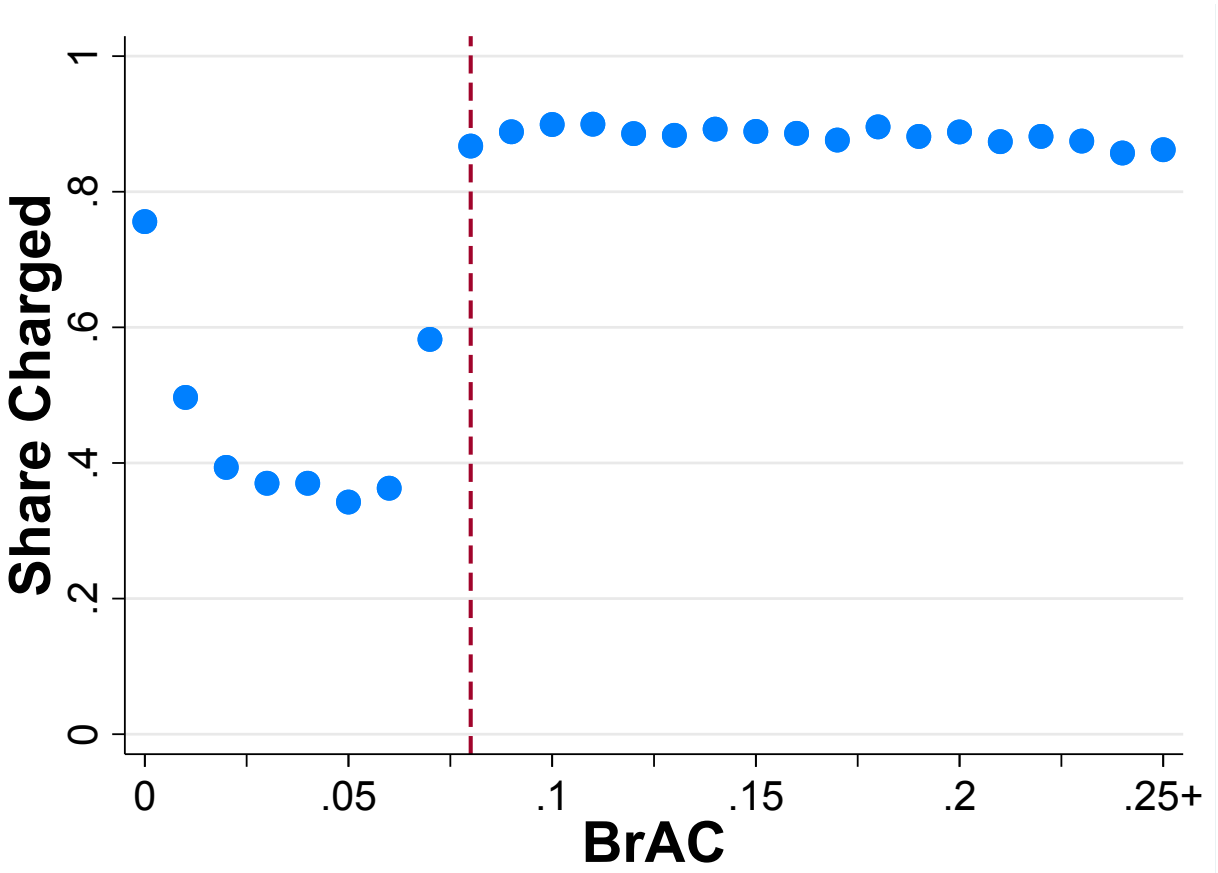
Notes: Entries display coefficients and standard errors from regressions of case outcomes on defendant and case characteristics. In this table, we remove individuals who link, on the basis of name and age, to a record in the Texas-wide conviction database that occurs prior to their case in Harris County. Columns 1 and 2 present results on case dismissal, columns 3 and 4 on probation, and columns 5 and 6 on incarceration. Odd-numbered columns include BrAC fixed effects, day-of-week fixed effects, month-year fixed effects, and a linear control for the time of day the breath test occurred. Even-numbered columns include those variables and courtroom-month-year fixed effects and arresting officer fixed effects. We lose observations in these more detailed specifications because some arresting officers in our data only have one arrest. The following categories are omitted to avoid perfect collinearity with the included regressors: non-Hispanic whites, males, individuals aged 21-25 years old, individuals with court-appointed attorneys, and individuals from the first quartile of tract income. ***, ** and * denote statistical significance at the 1%, 5%, and 10% levels.

Appendix Table A.4: Jointly Estimated Group Disparities, Including Non-Citizens

	Dismissed		Probation		Incarcerated	
	(1)	(2)	(3)	(4)	(5)	(6)
Hispanic	–0.021***	–0.023***	–0.060***	–0.053***	0.082***	0.075***
	(0.007)	(0.008)	(0.009)	(0.010)	(0.008)	(0.009)
Black	–0.025**	–0.030**	0.054***	0.059***	–0.030**	–0.029**
	(0.010)	(0.012)	(0.013)	(0.015)	(0.012)	(0.014)
Asian	0.044**	0.046*	–0.016	–0.023	–0.028	–0.023
	(0.021)	(0.024)	(0.025)	(0.029)	(0.023)	(0.026)
Female	0.034***	0.034***	0.052***	0.044***	–0.086***	–0.078***
	(0.008)	(0.009)	(0.009)	(0.011)	(0.009)	(0.010)
Age, 26–39	0.008	0.005	–0.022***	–0.022**	0.014*	0.017**
	(0.006)	(0.007)	(0.008)	(0.009)	(0.007)	(0.009)
Age, 40+	0.011	0.006	0.006	0.009	–0.017*	–0.015
	(0.007)	(0.009)	(0.009)	(0.011)	(0.009)	(0.010)
Citizen	0.046***	0.047***	0.130***	0.134***	–0.176***	–0.181***
	(0.006)	(0.008)	(0.008)	(0.010)	(0.008)	(0.009)
Private Attorney	0.134***	0.142***	0.183***	0.182***	–0.317***	–0.324***
	(0.005)	(0.006)	(0.008)	(0.009)	(0.008)	(0.009)
Tract Inc., 2nd Qntl.	0.026***	0.030***	0.026**	0.028**	–0.051***	–0.058***
	(0.008)	(0.010)	(0.010)	(0.012)	(0.010)	(0.012)
Tract Inc., 3rd Qntl.	0.043***	0.042***	0.030***	0.029**	–0.074***	–0.071***
	(0.009)	(0.011)	(0.011)	(0.013)	(0.011)	(0.012)
Tract Inc., 4th Qntl.	0.087***	0.086***	0.017	0.007	–0.104***	–0.094***
	(0.010)	(0.012)	(0.012)	(0.014)	(0.011)	(0.013)
Tract Inc., Missing	0.019**	0.022**	–0.047***	–0.051***	0.028**	0.029**
	(0.009)	(0.011)	(0.011)	(0.013)	(0.011)	(0.013)
Dep. Var. Mean	0.175	0.175	0.361	0.361	0.464	0.464
R-squared	0.146	0.307	0.122	0.303	0.261	0.430
Observations	18,802	16,545	18,802	16,545	18,802	16,545
Court-Month-Year FEs	No	Yes	No	Yes	No	Yes
Arresting Officer FEs	No	Yes	No	Yes	No	No

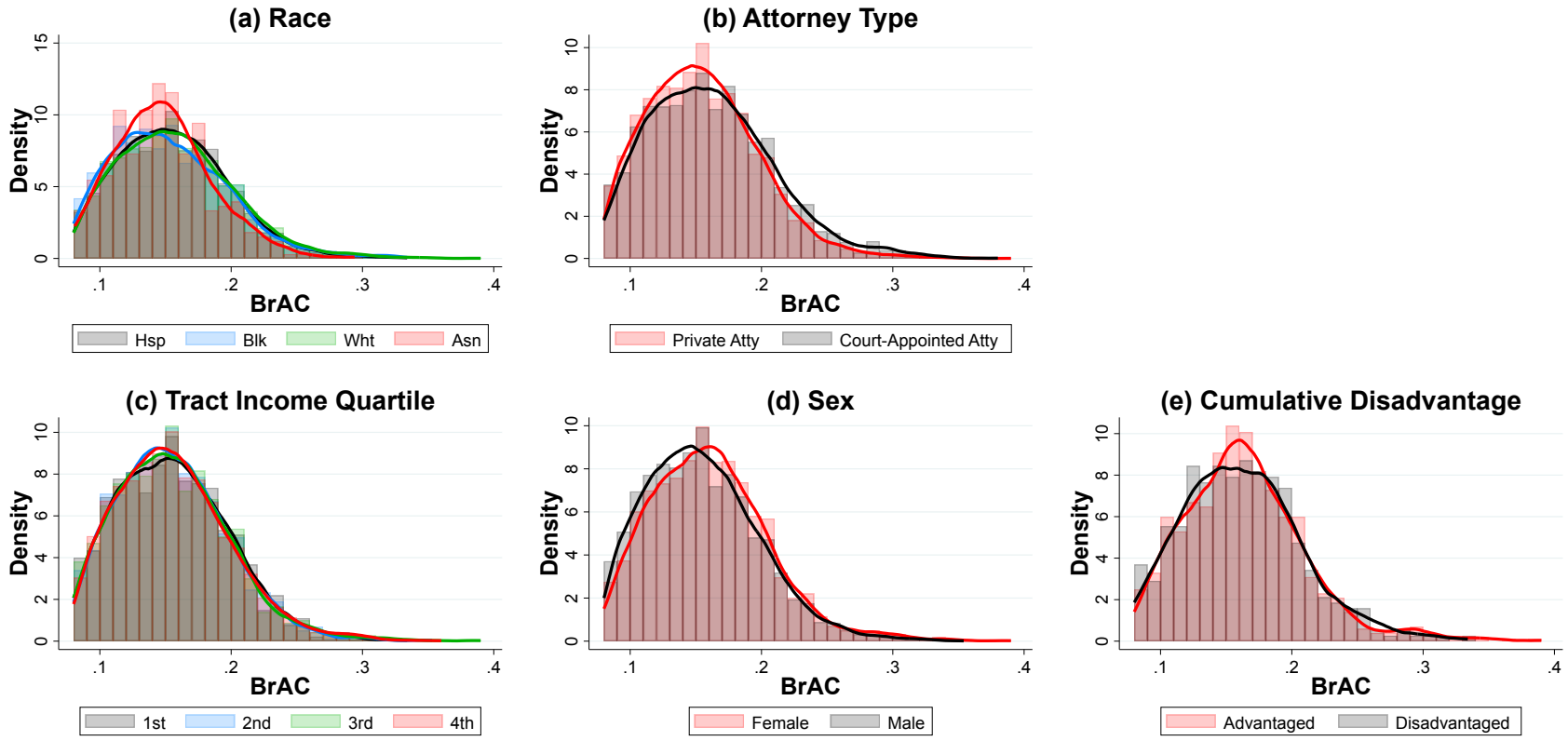
Notes: Entries display coefficients and standard errors from regressions of case outcomes on defendant and case characteristics. In this table, we include defendants who are flagged as non-U.S. citizens in the court records. Columns 1 and 2 present results on case dismissal, columns 3 and 4 on probation, and columns 5 and 6 on incarceration. Odd-numbered columns include BrAC fixed effects, day-of-week fixed effects, month-year fixed effects, and a linear control for the time of day the breath test occurred. Even-numbered columns include those variables and courtroom-month-year fixed effects and arresting officer fixed effects. We lose observations in these more detailed specifications because some arresting officers in our data only have one arrest. The following categories are omitted to avoid perfect collinearity with the included regressors: non-Hispanic whites, males, individuals aged 21-25 years old, non-citizens, individuals with court-appointed attorneys, and individuals from the first quartile of tract income. ***, ** and * denote statistical significance at the 1%, 5%, and 10% levels.

Appendix Figure A.1: Share of Incidents Charged with DWI by BrAC



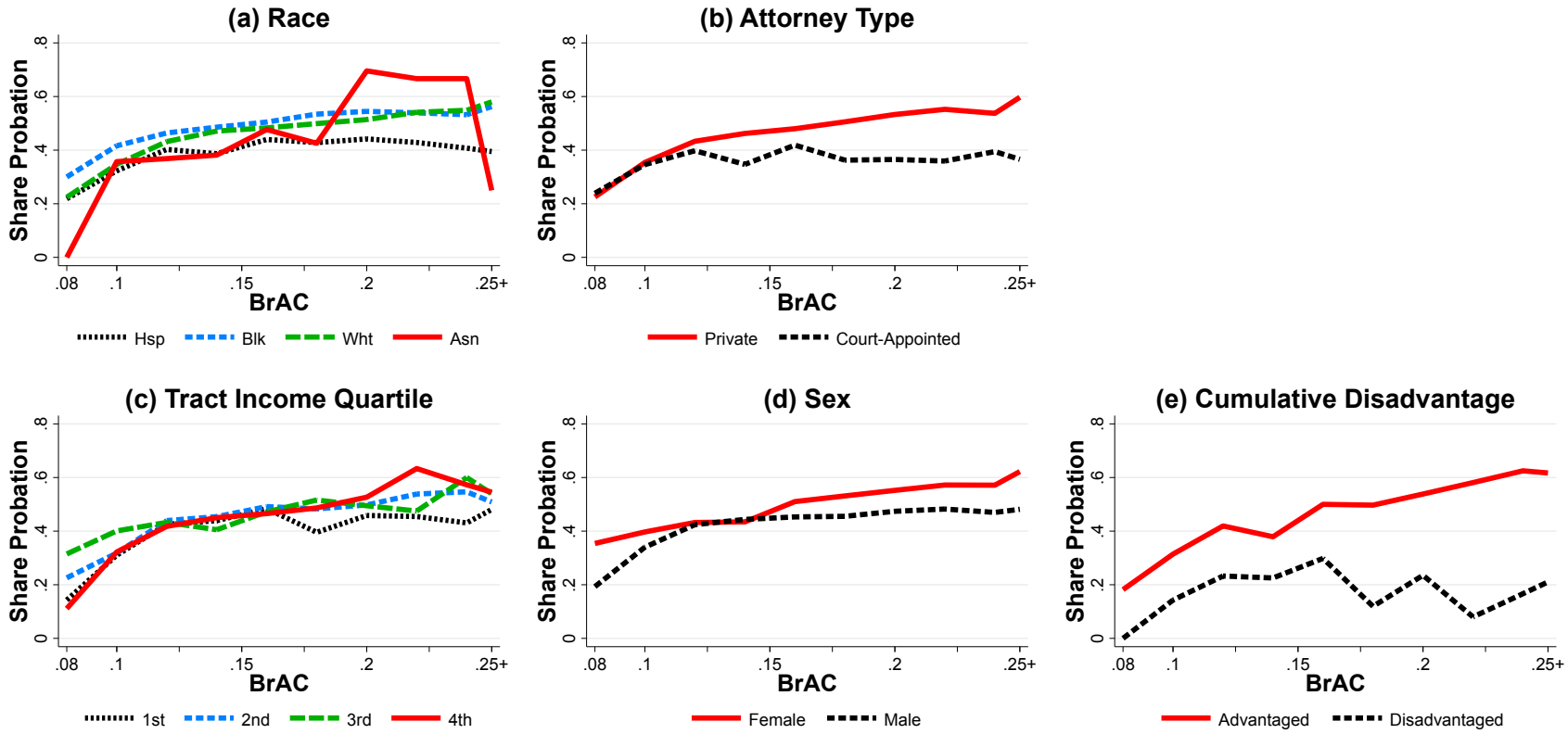
Notes: Figure displays the share of breath test incidents in Harris County that result in a charge in Harris County Courts by BrAC. The legal limit of 0.08 is marked by the red dashed line. Approximately 90% of cases above the legal limit result in a charge, and above that cutoff, the likelihood of a charge is uncorrelated with severity of the offense. Cases below the legal limit may result in a charge, and often do, because a driver can be found legally guilty of DWI if it is determined alcohol or drugs impaired their driving ability, regardless of their BrAC.

Appendix Figure A.2: BrAC Distributions by Defendant Characteristics



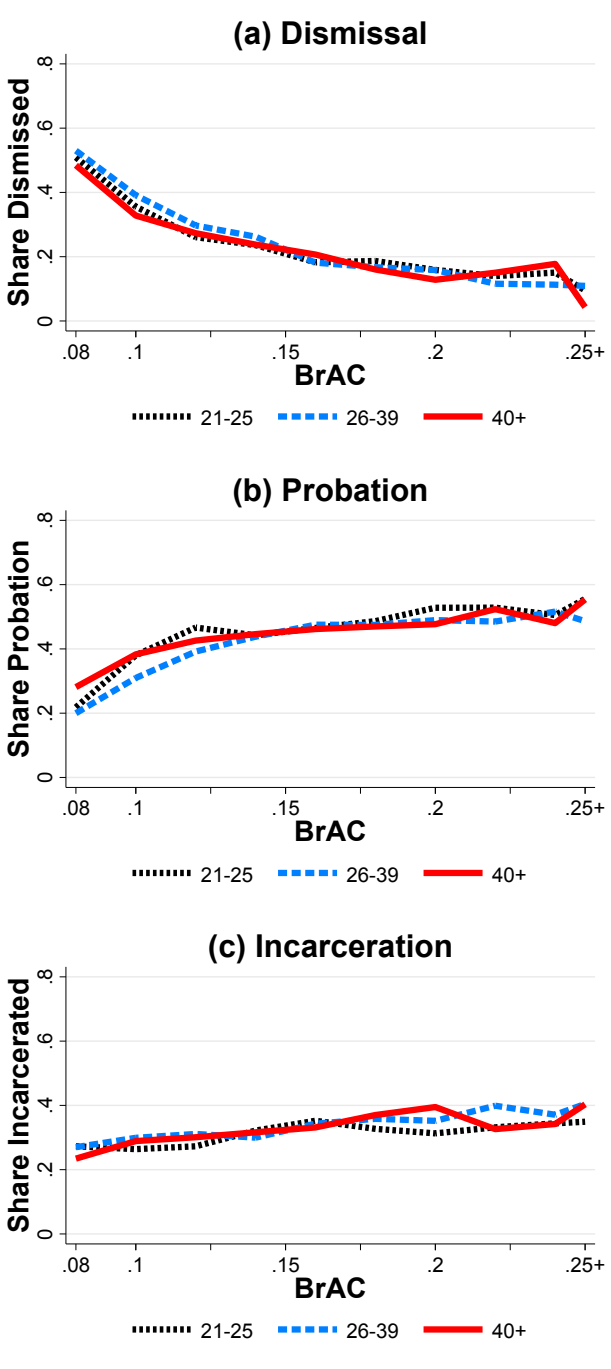
Notes: Figure displays the distribution of BrAC in incidents above the legal limit by defendant characteristics. Panel (a) displays these distributions by race, panel (b) by attorney type, panel (c) by quartiles of tract-level median income and panel (d) by sex. Panel (e) displays these distributions for the defendant groups we use to illustrate cumulative disadvantage: white females from the top half of the tract-income distribution and with a private attorney (in red) versus Hispanic males from the bottom half of the tract-income distribution and with a court-appointed attorney (in black).

Appendix Figure A.3: Probability of Probation by Defendant Characteristics



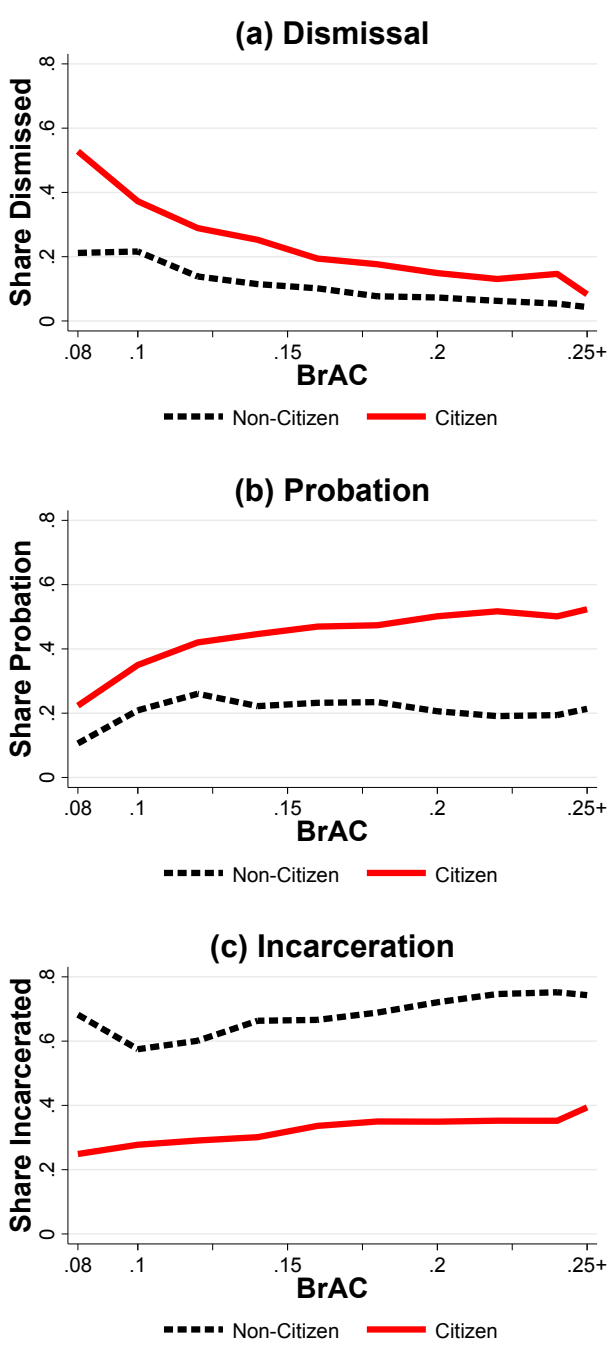
Notes: This figure shows the probation rate of defendants within the indicated group as a function of BrAC. In the bottom left panel of the figure, the groups are constructed based on the within-sample quartile of census tract median household income. In the bottom right panel, the advantaged group is constructed of defendants who are white females with private attorneys living in neighborhoods in the top half of the within-sample distribution of census tract median household income. The disadvantaged group is composed of defendants who are Hispanic males with court-appointed attorneys living in neighborhoods in the bottom of the within-sample distribution of census tract median household income.

Appendix Figure A.4: Probability of Disposition Types by Defendant Age



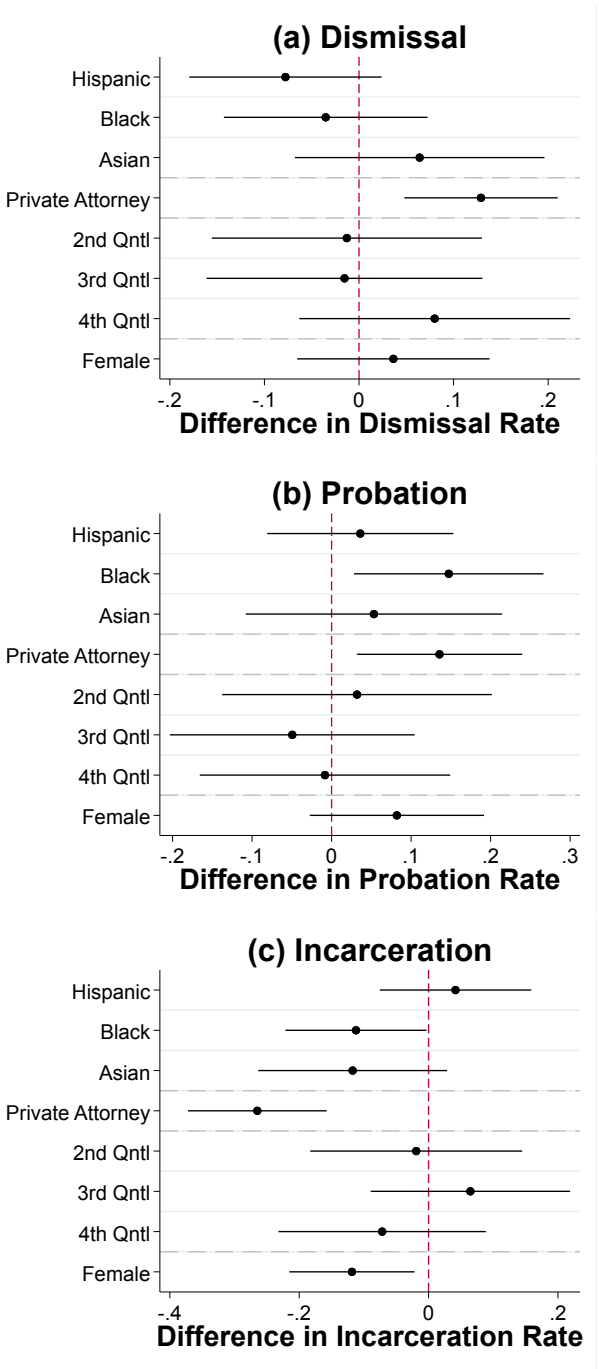
Notes: Figure displays the dismissal, probation, and incarceration rates for defendants by age group and as a function of BrAC. 21-25 year olds represent about 25% of the sample, 26-39 year olds represent about 50% of the sample, and 40+ year olds represent the remaining 25%.

Appendix Figure A.5: Probability of Disposition Types by Defendant Citizenship



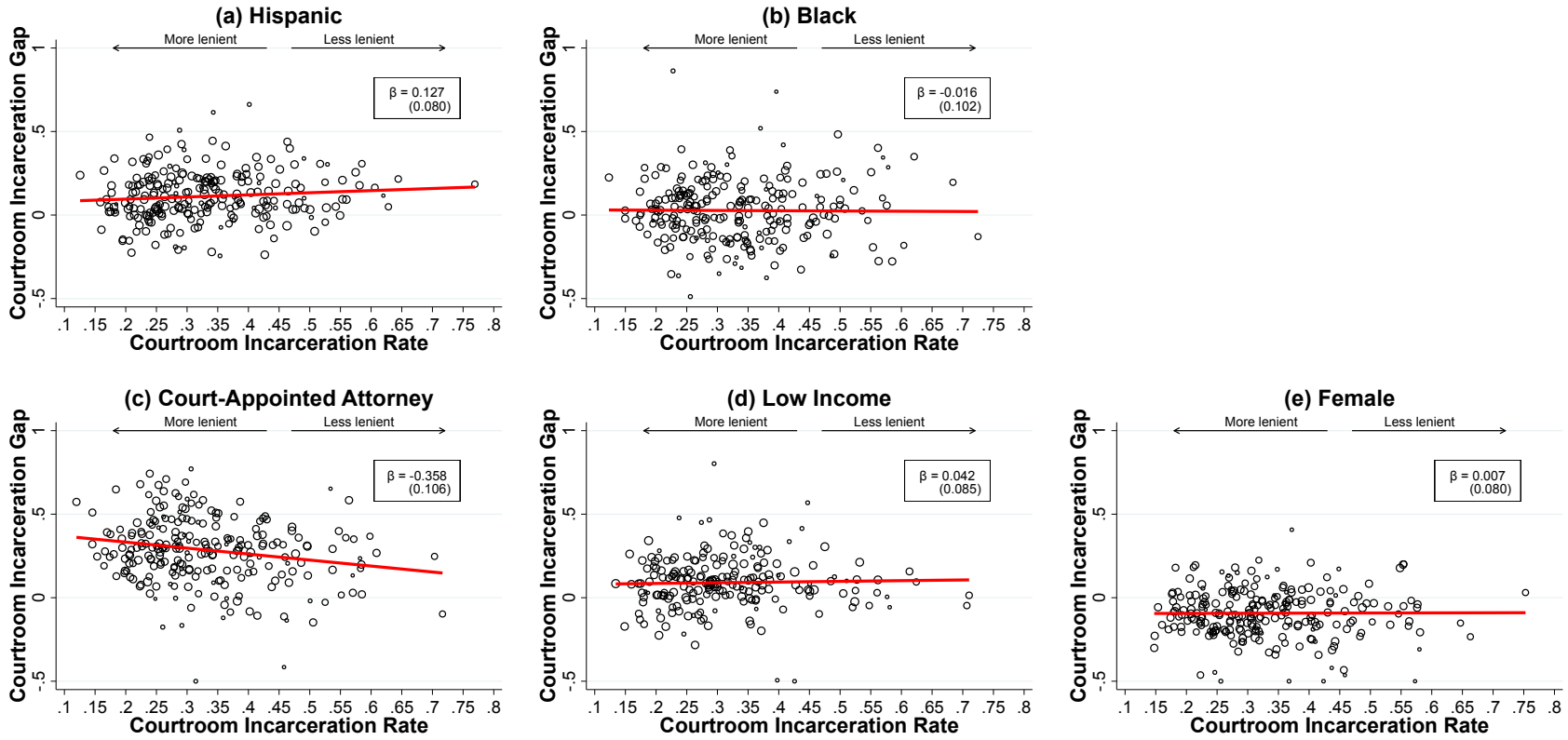
Notes: Figure displays the dismissal, probation, and incarceration rates for defendants by citizenship status and as a function of BrAC. Citizens represent about 60% of the sample, non-citizens and individuals missing citizenship information represent about 40% of the sample.

Appendix Figure A.6: Raw Disparities in Outcomes for Detailed Sample



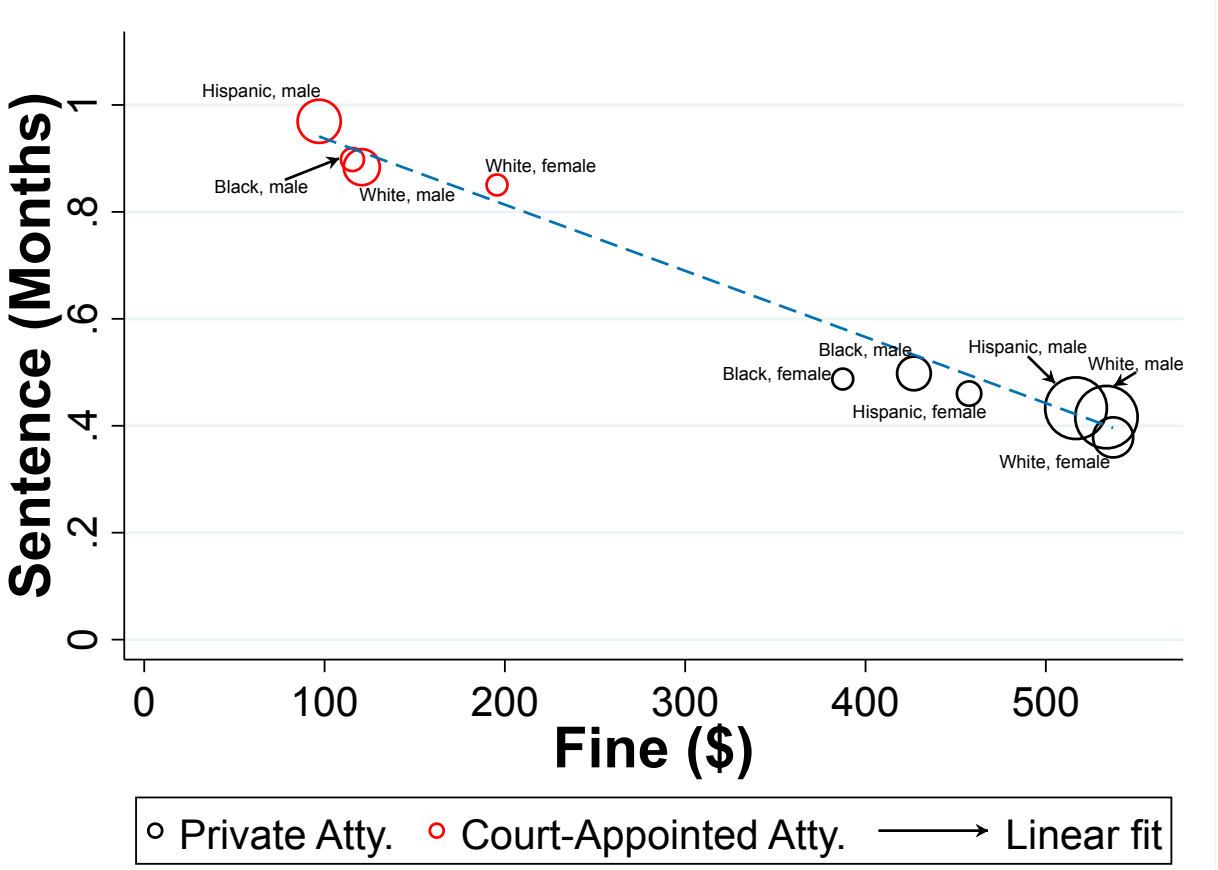
Notes: In this figure, we restrict attention to the subset of cases for which we collected information directly from case dockets, and for which we can confirm that there is no mention of prior criminal history at any point in the docket. Then, we estimate mean differences by defendant characteristics, controlling linearly for defendant age, time of day of the breath test and including BrAC, month-year, and day-of-week fixed effects. Given the small sample, we estimate these regressions separately for race, attorney type, tract-level median income, and sex. In each panel, we plot the coefficients and 95% confidence intervals from these five regressions. The top panel examines disparities in dismissal, the middle panel examines disparities in probation, and the bottom panel examines disparities in incarceration.

Appendix Figure A.7: Relationship between Courtroom Leniency and Group Disparities



Notes: This figure shows the relationship between overall courtroom-level leniency and the courtroom-level gap in incarceration between defendants in the indicated group and an omitted reference category. Courtroom is defined as the interaction between court ID and year, to account for turnover in prosecutors, judges, etc. over time (Mueller-Smith, 2015). In sub-figures (a) and (b), the gaps are calculated relative to white defendants. In sub-figure (c), the gap is calculated relative to defendants with a privately retained attorney. In sub-figure (d), the gap is calculated relative to defendants who live in tracts in top two quartiles of the census tract median household income distribution. Finally, in sub-figure (e), the gap is calculated relative to male defendants. For data visualization purposes, we winsorize the gap at 1.0 and -0.5. The slope is estimated on the raw data, pre-winsorization.

Appendix Figure A.8: Fine and Sentence Length across Defendant Characteristics



Notes: In this figure, we restrict attention to the subset of cases that end in incarceration. Then, we construct the average incarceration length and fine amount within defendant race/ethnicity, sex, and attorney type cells. We plot these means for cells with more than 100 cases. We also plot the linear fit between average sentence length and average fine amount. The linear fit and the scatter plot markers are both weighted by the number of cases in each cell.

Online Appendix B: Data and Matching Procedure

B.1 Harris County Court Records

We rely on detailed records from Harris County District Courts to examine defendant characteristics and case outcomes. These data were obtained via a public records request, and they cover all cases disposed in Harris County District Courts from 1990 to the beginning of 2021. These records contain case details, such as the charged offense and the type of attorney representing the defendant (i.e., private versus court-appointed); case outcomes, such as case disposition (i.e., dismissal, probation, or incarceration), sentence length, and fine amount; and defendant characteristics, such as race/ethnicity, sex, citizenship, and full residential address.

Crucially for our purposes, the records also include the full name of the defendant, their exact date of birth, and the date on which the case was filed. We use these details in our matching procedure outlined below. We also leverage the long time-span of the data to construct detailed criminal histories for each defendant. For example, for cases filed in 2004, we can observe all prior charges in Harris County District Courts over the last fourteen years. Finally, we supplement this dataset with data on tract-level median household income from the American Community Survey (ACS). Specifically, we are able to geocode and assign a tract for approximately 74% of addresses from the court records. We then link each defendant to tract-level median income from ACS, based on the year their case was filed. For cases filed in 2004, we use pooled ACS data from 2004-2005; for cases in 2009-2013, we use pooled ACS data from 2009-2013; and for cases in 2014-2015, we use pooled ACS data from 2014-2015.

B.2 Breath Test Incidents

We also obtained data on all breath test incidents in Texas from 2004 and 2009 through the middle of 2015. These records do not capture portable breathalyzer tests that occur

during traffic stops. In fact, such portable tests are not admissible as evidence in Texas. Instead, these records comprise incidents in which the driver was detained, brought to a testing facility, and submitted to a breath test using a standardized and calibrated testing instrument named an "Intoxilyzer." The testing instrument outputs two readings for the individual's breath alcohol content (BrAC). We observe both readings, and although we focus on the lower of the two, the correlation between them is 0.97 and the readings are exactly the same in 95% of incidents.

In addition to exact BrAC readings, the data we received via public records request also include the driver's full name, date of the test, driver's age at the time of the test, and the county in which the test occurs. Given the date of the test and the driver's age at the time of the test, we can construct a one-year range of plausible birth dates for each driver. Since we aim to link these incidents with the detailed court records in Harris County, we restrict attention to the 48,316 breath tests that occur in Harris County over this period.

B.3 Linking Breath Tests to Court Records

Initially, we conduct a cross-product merge of the breath test records from Harris County to the court records on the basis of first and last name. Matching on name alone will yield many false positives, so we implement a series of restrictions to ensure our matched records correctly link drivers to defendants. First, we eliminate any "match" for which the defendant's exact birth date does not fall within the plausible range of birth dates for the driver. Second, we drop any match for which the case filing date is before the test date or more than two days after the test date. Next, we use additional name information such as middle initial and suffix to further filter out matches that are likely false positives. For example, we remove matches where the middle initial of the defendant is not the same as the middle initial of the driver. The resulting file contains a match for 79% of the 48,316 breath test incidents in Harris County, and we view these as high-quality matches since they pass all of our restrictions outlined above.

Next, we attempt to link the unmatched breath test incidents by relaxing the exact name matching implemented above. We conduct a cross-product merge of the unmatched breath test incidents to the court records on the basis of the first three letters of the individual's first name and the first three letters of the individual's last name. We again require that the defendant's exact birth date fall in the range of plausible birth dates for the driver, and again remove any matches for which the case file date occurs before the test date or more than two days after. Finally, we calculate the Jaro-Winkler string distance between the full name of the defendant and the full name of the driver, and remove matches that are very dissimilar. We find an additional 1,649 high-quality matches from this process, increasing our overall match rate to approximately 83%. Figure A.1 displays the match rate (i.e., "share charged") by BrAC.

B.4 Constructing our Analysis Sample

The matched file contains any DWI breath test incident from Harris County that results in a charge in Harris County District Courts. For the purposes of this paper, we want to narrow the incidents under consideration to make our comparisons across defendant characteristics as exact as possible. The primary way we do this is by controlling for the individual's BrAC in each case. However, there are other legally relevant factors that we control for by restricting our sample.

First, we limit our sample to individuals without a prior criminal history. Sanctions for DWI are explicitly a function of prior DWIs, and judges or prosecutors may take into account one's broader criminal history. We focus on first-time offenders by removing all cases where we identify a prior charge in Harris County going back at least fourteen years. We also drop cases in which the offense string indicates the charged offense is a "2ND" or "3RD" DWI.[1]

Second, we only consider cases in which the breath test incident results in a single DWI

[1] We explore robustness to more stringent criminal history controls in Table A.3 and Figure A.6.

charge. This excludes, for example, individuals who are charged with DWI and "reckless driving." We also eliminate cases in which the charged offense is "DWI with child passenger" and cases in which the defendant is below the age of 21. Finally, we remove individuals who are not U.S. citizens per the court records, to avoid conflating disparities by race/ethnicity with immigration status. These four restrictions remove cases with various aggravating circumstances.

Last, we remove all cases in which the individual's BrAC is below the legal limit or is missing. In these cases, we do not have an objective measure of guilt. In the small number of cases in which BrAC is missing, we do not know the individual's level of intoxication. When BrAC is below the legal limit, guilt may be determined by other toxicology results, by more subjective witness testimony, or other unobserved factors. It is only in cases above the legal limit where we can say definitively that the individual meets the legal standard for guilt. The resulting file, after these restrictions, contains 12,887 first-time DWI cases above the legal limit and with no aggravating factors.