

# Attorney Value-Added and Racial Disparities in the Criminal Justice System

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## Abstract

Racial disparities permeate the criminal justice system, yet indigent defense attorneys remain understudied despite representing 80% of defendants. Using quasi-randomly court-appointed attorneys in a large Texas county, we show that higher-quality attorneys are less experienced and attended lower-quality law schools. Low-quality representation disproportionately harms Black defendants: a one-standard-deviation increase in quality raises Black dismissal rates nearly twice that of Whites' (7.1% versus 3.9%), and top-10% representation increases dismissals by 12–17% and reduces jail by 13–22% relative to Whites. Back-of-the-envelope calculations suggest if half of court-appointed attorneys were top-10% quality, the racial gap in jail sentencing would decline by 11%.

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# 1 Introduction

Racial disparities are pervasive throughout the U.S. criminal justice system. In an attempt to trace out the sources of these disparities, a large and growing literature has examined the role of actors at every stage of the criminal justice process, including police, prosecutors, judges, and juries. Yet one actor in this system has received remarkably little scrutiny: the indigent defense attorney. This omission is striking. The Sixth Amendment guarantees every defendant the right to counsel, and roughly 80 percent of criminal defendants rely on publicly appointed attorneys to exercise that right (Wolf Harlow, 2000). In addition, legal scholars have expressed significant concern about the indigent-defense system. According to one legal scholar, “There is broad agreement that indigent-defense delivery systems in this country are grossly inadequate...The result is an assembly line into prison, mostly for poor people of color, with little check on the reliability or fairness of the process.” (Primus, 2016). Yet there is little empirical evidence on the importance of attorney quality in shaping conviction and incarceration outcomes, or the extent to which low-quality legal representation generates or exacerbates racial disparities.

This paper addresses these questions using data from a large Texas county in which court-appointed attorneys are quasi-randomly assigned to defendants facing misdemeanor charges. We first construct a measure of attorney value-added, estimating each attorney’s contribution to the likelihood the case is dismissed. After verifying this measure of value-added is uncorrelated with observed case characteristics—as it should be, given our understanding of the case assignment mechanism—we then quantify the extent to which higher-quality attorneys impact case dismissals. We also estimate the effect of attorney quality on incarceration, and whether effects differ by defendant race.

Results indicate that a one standard deviation increase in attorney quality is associated with a 2.4 percentage point (5%) increase in the likelihood the case will be dismissed. Going from the 10th to 90th percentile attorney is associated with a 6 percentage point (11%) increase in the likelihood of a case dismissal. Perhaps counterintuitively, we show that

higher-quality attorneys are less experienced and are less likely to have attended a top law school. That finding, along with the fact that observed attorney characteristics collectively explain relatively little of the variation in attorney value-added, suggests it is difficult to improve attorney quality by focusing on observed attorney characteristics.

Results also indicate that being assigned a low-quality attorney has a disparate impact on Black defendants. The reason is that a one standard deviation increase in quality improves dismissal rates by twice as much for Black defendants as for White defendants (4 versus 2 percentage points). Effects are particularly heterogeneous in the right tail of the attorney quality distribution, where it is clear that top-quality attorneys benefit Black defendants more than White defendants. Results from a difference-in-differences approach indicate that Black defendants are 12-17% more likely to have their case dismissed when represented by a top-10% attorney, compared to White defendants. Similarly, Black defendants are 13-22% less likely to be sentenced to jail when they are represented by top-10% attorneys. Put differently, Black defendants disproportionately benefit when they are represented by the best attorneys they could reasonably hope for under the current system, and are disproportionately harmed, relative to Whites, when their attorney falls short of that standard. Additional findings suggest these results are consistent with differential attorney skill during pre-trial activities, such as interactions with prosecutors, and are driven by cases in which there is more legal ambiguity.

These findings suggest that at least in this setting, low-quality legal representation has a disparate impact on Black defendants not only because Black defendants are disproportionately present in the criminal justice system, but also because attorney quality itself matters more for Black defendants. A back-of-the-envelope calculation indicates that if half of all court-appointed attorneys in this setting were of top-10% quality, the racial gap in incarceration rates would be reduced by 11%.

This study makes two contributions to the existing literature. The first is that by quantifying value-added across individual publicly-appointed attorneys, we can assess the

importance of individual attorney effort and skill in this context, as well as identify the correlates of attorney value-added. To our knowledge there is only one other (working) paper that estimates attorney value-added in the context of indigent defense. The advantage of our setting is that all of the empirical evidence in our setting is consistent with the random assignment of cases, which contrasts with Landon (2024).<sup>1</sup> Our estimates of the importance and correlates of indigent defense value-added contributes to a larger literature on the effects of different *types* of attorneys on defendant outcomes. Cohen (2014) and Roach (2014) show descriptive evidence that defendants have better outcomes when represented by public defenders than by court-appointed private attorneys. Iyengar (2007) performs the same comparison in a context with random case assignment and shows that the improved outcomes are in fact causal: public defenders achieve better outcomes for their clients than court-appointed private attorneys. Agan, Freedman and Owens (2021) compare the performance of publicly-appointed versus privately-retained lawyers and find outcomes are better with the latter, and conclude the difference is more likely due to moral hazard than adverse selection. Mikdash and Oh (forthcoming) use a difference-in-differences approach and find that compared to Black attorneys, White attorneys secure better outcomes for Black versus White defendants. Similarly, Hoag (2021) shows that being assigned a lawyer who looks like a “better match” does not lead to better case outcomes.

More generally, by quantifying the variation in attorney value-added, our study contributes to a broader literature estimating the importance of value-added in education (Staiger and Rockoff, 2010; Chetty, Friedman and Rockoff, 2014a,b; Petek and Pope, 2023), medicine (Ginja, Riise, Willage and Willén, 2025), and policing (Weisburst, 2022; Hoekstra and Sloan, 2022). One advantage of our setting is that we are able to use the quasi-random assignment of attorneys to cases to distinguish between selection and value-added, which is more difficult in other settings, such as education (Rothstein, 2009).

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<sup>1</sup>We additionally note that a major component of Landon’s (2024) study is a difference-in-differences analysis of the effect of a statewide reduction in hourly pay, which is associated with a 5.5 percent reduction in the likelihood of dismissal and a 6.5 percent increase in the likelihood of incarceration.

The second contribution of our study is to show that low-quality legal representation has a disparate impact on Black defendants, and thus improvements in attorney quality would substantively reduce the Black-White incarceration gap. Our study thus complements the broader literature alluded to earlier on the role of race and discrimination in the criminal justice system. These studies include those that examine the role of race in police use of force (Hoekstra and Sloan, 2022; Fryer Jr, 2019); police traffic stops and citations (Goncalves and Mello, 2021; Ba, Knox, Mummolo and Rivera, 2021; West, 2018; Horrace and Rohlin, 2016; Antonovics and Knight, 2009; Knowles, Persico and Todd, 2001; Anwar and Fang, 2006); prosecution (Sloan, 2026; Tuttle, 2019; Rehavi and Starr, 2014; Gazal-Ayal and Sulitzeanu-Kenan, 2010); bail (Arnold, Dobbie and Hull, 2022; Arnold, Dobbie and Yang, 2018); parole (Anwar and Fang, 2015; Mechoulan and Sahuguet, 2015; Godfrey, Tan and Zapryanova, 2022); and jury decisions (Anwar, Bayer and Hjalmarsson, 2022; Flanagan, 2018; Anwar, Bayer and Hjalmarsson, 2012; Hoekstra, Oh and Tangvatcharapong, 2025). Our study contributes to this literature by providing evidence that at least in this setting, higher-quality legal representation may meaningfully reduce the large racial disparities in criminal outcomes.

## **2 Institutional Background**

### **2.1 The indigent defense system**

The 1963 Supreme Court decision in *Gideon v. Wainwright* established the right to counsel for indigent defendants in the United States, guaranteeing legal representation for those unable to afford it and reinforcing the right to a fair trial. Indigent defense is delivered through three primary models: assigned counsel, contract-based systems, and public defenders. Under assigned counsel and contract-based systems, private attorneys voluntarily join court-maintained lists, commonly known as the “wheel,” from which they are assigned to represent indigent defendants. These two systems differ in how attorneys are compensated.

In the assigned counsel model, attorneys are compensated using hourly payments or flat fees per case, while in the contract-based system, attorneys contract to represent a set number of cases for a given amount of money. In contrast, public defenders are government employees who receive a monthly salary to represent indigent defendants.

While the public defender model is the most prevalent form of state-administered indigent defense in the United States (Strong, 2016), the majority of Texas counties use an assigned counsel system.<sup>2</sup> Data for this project come from Travis County, home to Austin, Texas and 1.4 million residents.<sup>3</sup> Travis County had relied on assigned counsel for both misdemeanors and felonies until 2021, when they established a public defender’s office to assist court-appointed attorneys with the high caseloads. During our sample period, almost all cases with indigent defendants were handled by court-appointed attorneys.

Attorneys interested in joining the indigent defense wheel submit an application to the program administrator. To be accepted, attorneys must hold a valid license to practice law in Texas, reside in Travis County or an adjoining county, and demonstrate substantial experience in criminal law. The level of experience required depends on the panel they are interested in joining. For example, attorneys who are interested in joining the misdemeanor panel should have at least one year of experience in practicing criminal law, while those who wish to join the felony panel should demonstrate a minimum of two years of experience (Texas Indigent Defense Commission, 2025).

## **2.2 Case assignment in Travis County**

In Texas, a defendant qualifies for assigned counsel (also referred to as a court-appointed attorney) if they are financially unable to hire private counsel and are accused of a crime that may result in incarceration. Defendants are interviewed by pretrial services at the time of booking to determine bond and indigency status. Defendants automatically qualify for

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<sup>2</sup>As of 2024, 30% of Texas counties have a public defender program ((Gammell, Meeks and De La Garza, 2024)).

<sup>3</sup>According to the U.S. Census Bureau, Travis County’s population is estimated to be 1,389,670 as of July 2025.

indigent representation if they receive government assistance, such as food stamps, Medicaid, temporary assistance for needy families (TANF), Social Security assistance, or public housing. Otherwise, indigency is determined by comparing their financial situation to federal poverty guidelines, based on income, assets, and the number of dependents in the household. For example, according to the standards and procedures for the appointment of counsel in Texas, a defendant is deemed indigent if their net household income does not exceed 125 percent of the poverty guidelines established by the U.S. Department of Health and Human Services and the value of their assets is no more than \$2,500. Defendants are also presumed to be indigent if they are currently incarcerated or confined to a mental health institution.

After indigency is determined, the defendant is asked whether they wish to be represented by appointed counsel. If so, their application is forwarded to the appointing authority, which reviews their case and assigns counsel. In Travis County, a managed assigned counsel program was implemented in 2015 to ensure that appointments are distributed impartially among qualified attorneys.<sup>4</sup>

Felony cases with indigent defendants are assigned based on the initial offense degree, which allows for different assignments for cases initially charged as first, second, or third-degree felonies. However, because initial offense degree is not available in the data, we cannot condition on it in order to exploit the as-good-as-random assignment of felony cases.<sup>5</sup> Instead, we focus entirely on misdemeanor cases, for which assignment was not conditional on initial offense degree. In practice, our focus on misdemeanors in which defendants were eligible for court-appointed counsel means we include misdemeanor cases of sufficient severity that they can result in jail time.

Counsel appointments for misdemeanor cases are made only through a rotating wheel system, which follows an alphabetical listing of the names of eligible attorneys. The eligibility of an attorney depends on factors such as their caseload at the time of case filing, offense type, special needs, and language requirements. For example, some attorneys qualify to handle

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<sup>4</sup>Prior to 2015, judges had the authority to assign counsel using the wheel system.

<sup>5</sup>We observe only final offense degree, which could be reduced or enhanced as the case progressed.

only misdemeanor cases, while others sign up to represent defendants with special needs, including mental-health-related cases and cases where the defendant speaks only Spanish.

There are only two case characteristics used to assign attorneys to cases that we do not observe directly in our data. The first is whether the defendant requested a Spanish-speaking attorney. To address this, we restrict the sample to White and Black defendants, thereby excluding Hispanic defendants who may be nonrandomly assigned to attorneys based on language needs. The second unobserved characteristic is whether it is a mental-health-related case. We address this by conditioning on the assigned court, which serves as a proxy for mental health-related cases. While cases are randomly assigned to courtrooms in Travis County, a small subset of courts hears mental health-related cases.<sup>6</sup> Hence, by including month-by-year-by-court fixed effects, attorney assignment should be as good-as-random.<sup>7</sup>

### 3 Data

Our analysis utilizes two major datasets from Travis County, Texas. The first includes all misdemeanor charges that were filed between 2013 and 2022. We obtained these data from the Travis County Clerk’s Office. As noted in section 2, our analysis focuses on misdemeanor cases where counsel assignment is as-good-as-random. The second data set is the wheel data, which allows us to observe the attorney assignment in each case. These data were obtained from the Travis County Criminal Court Administrator’s Office.

#### 3.1 Misdemeanor charges

The administrative records from the clerk’s office show that 132,337 misdemeanor charges (129,679 unique cases) were filed between 2013 and 2022.<sup>8</sup> The court records allow us to

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<sup>6</sup>For example, county court #9 supervises the Mental Health Docket, and county court #8 supervises the Special Reduction Docket. See: <https://www.traviscountytexas.gov/courts/criminal/county>

<sup>7</sup>In Table B6, we also show that the results are robust to simply dropping all of the cases in the mental health court.

<sup>8</sup>A case is defined as all misdemeanor charges filed against the same individual on the same date and that are handled by the same attorney.

observe the charge description (e.g., theft, assault, etc.), defendant information, including race as recorded by law enforcement, filing date, the court that handles the case, disposition (whether the charge was dismissed or not), and sentencing information. If a case is not dismissed, a defendant can either be sentenced to jail, probation (or deferred adjudication), or receive a fine.

We define a case as indigent if we are able to match it to a court-appointed attorney using the wheel data. Among these charges, 40 percent were assigned to a court-appointed attorney, which is consistent with statewide data on the fraction of misdemeanors that can result in jail time, and thus eligible for court-appointed counsel.<sup>9</sup> For the vast majority of indigent cases (91 percent), we observe one assigned attorney from the date a case was filed until its disposition. Based on conversations with the county, attorneys have no discretion over which misdemeanor cases to accept and which cases to reject. In rare instances (9 percent in our sample), an attorney can be replaced for reasons related to conflicts of interest or if the attorney leaves the practice. In our main analysis, we use the first attorney assigned to the case, which, conditional on the prerequisite covariates, should be quasi-randomly assigned via the wheel system. In Table B6 and Table B7, we show that our results are robust to dropping cases where we observe multiple attorneys.

Appendix A provides a detailed explanation of how we select our sample, which we also summarize here. First, we drop cases where attorneys were non-randomly assigned by a judge. Prior to 2015, judges had the ability to overturn the wheel decision and non-randomly assign an attorney of their choice to cases. Using the wheel data, we identify and drop those 11 percent of cases to avoid selection bias. Second, we attempt to drop all Hispanic defendants who could have requested a (non-randomly-assigned) Spanish-speaking attorney. While the data allow us to observe the race of each defendant, they do not identify ethnicity, and thus do not distinguish between non-Hispanic and Hispanic White defendants.

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<sup>9</sup>See Chart 3 on page 17 of the Annual Report for Fiscal Year 2020 of the Texas Indigent Defense Commission found at [https://www.tidc.texas.gov/media/kajgysgo/tidc'annual report'fy20.pdf](https://www.tidc.texas.gov/media/kajgysgo/tidc%20annual%20report%20fy20.pdf), which shows that the misdemeanor indigent defense appointment rate across all of Texas ranged from 40 to 49 percent from 2013 through 2020.

Hence, we use the R-package *predictrace* in order to identify Hispanic defendants using their last names.<sup>10</sup> We then drop individuals identified as “most likely Hispanic” (40 percent) and focus on Black and White defendants only.

Third, according to conversations with the county, misdemeanor assault charges are more likely to be coupled with higher-level, felony charges, which some court-appointed attorneys on the misdemeanor panel are not eligible to represent. This means that including these charges in our analysis will cause the non-random assignment of attorneys to cases. Hence, we drop these charges from our sample (12 percent). While we believe that dropping these cases is the prudent course of action, given the identification strategy, in Table B6 we show that the results are robust to including these charges in the analysis. Finally, we drop cases that are still active (i.e., that have no disposition recorded) (7 percent), and we drop attorneys that handle less than 29 charges, which is the median number of charges per attorney in our sample. This leaves us with 20,895 unique charges.

In Table 1, we show the summary statistics for our main sample. Column (1) shows that 53 percent of these charges are resolved with a dismissal, while 33 percent of them result in a jail sentence, with an average sentence length of 12 days. Comparing across Black (Column (2)) and White (Column (3)) defendants, Black defendants’ cases are slightly more likely to be dismissed (56 percent vs 51 percent), but Black defendants are also slightly more likely to receive a jail sentence (36 percent relative to 31 percent).

As for the defendants, 33 percent of them are Black, and 20 percent are female. The average defendant age is 34 years old, and the average number of previous charges for a given defendant is one, both of which are similar across Black and White defendants. Finally, 20 percent of charges are driving while intoxicated, 16 percent are drug-related charges, and 43 percent are classified as “other”. Other misdemeanor charges include less common types of crimes, such as criminal trespass, arrest evasion, obstruction of highway, and violating a protective order.

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<sup>10</sup>This package predicts the race of a last name or first name using data from the U.S. Census data and the Social Security Administration.

## 3.2 Court-appointed attorneys

As mentioned earlier, we focus on attorneys that handle more than 29 charges throughout the sample period, which represents the median number of charges per attorney. In Table B6 and Table B7, we show that results are robust to choosing an alternative threshold. Our final sample consists of 180 attorneys. We supplement the wheel data with information about the attorneys that we manually collected from the State Bar of Texas, including graduation date and law school attended. We link these data to law school rankings from the US News & World Report website released in 2023. The summary statistics in Table 1 show that an average attorney has 21 years of experience. The average law school ranking is 70, with 43 percent of attorneys graduating from a top 20 law school.

Finally, while the race of the attorneys is not a focus of our study, we supplement our data with information about their race as observed through online searches of their images (e.g., on the State Bar website or other platforms such as their law firm or LinkedIn). In doing so, we identify the race of about 80 percent of the attorneys in our sample. Conditional on observing race, 60 percent of the attorneys are White and 3 percent are Black. Consistent with the plausible quasi-random assignment of cases to attorneys, Columns (2) and (3) show no meaningful differences in observed attorney characteristics across Black and White defendants.

# 4 Attorney Value-Added

## 4.1 Empirical strategy

### 4.1.1 Estimating attorney value-added

A key challenge in estimating attorney quality is that attorneys are often selected by, or assigned to, defendants in non-random ways. The appointed counsel system in Travis County helps overcome this concern, as court-appointed attorneys are quasi-randomly assigned to

misdemeanor cases through a wheel system, as described in section 2. This setting is particularly relevant given that most criminal defendants rely on assigned counsel for legal representation.

In the U.S. legal system, defense attorneys have a legally defined objective to represent their clients' interests and achieve the best outcome possible in each case. For that reason, we define indigent defense quality as the ability to achieve favorable outcomes for the defendant. More specifically, we define attorney quality as the ability to achieve a case dismissal, whether pre-trial or via an acquittal. We define attorney value-added in this way because case dismissal is the most favorable outcome from the defendant's perspective.<sup>11</sup> Dismissal represents a definitive resolution of the case: once charges are dismissed, legal proceedings are terminated, and prosecutors cannot pursue the charges any further. From the defendant's perspective, this outcome not only avoids incarceration but also prevents having a conviction on their criminal record, which could lead to adverse effects on subsequent socioeconomic outcomes (e.g., Agan and Starr (2017)).

Some attorneys may be more able to achieve case dismissals than others for several reasons. For example, some attorneys may be able to acquire and assess exculpatory evidence better than others. Alternatively, some attorneys may be more skilled in using pre-trial motions or in negotiating with prosecutors. Finally, some attorneys may simply put forth more effort than others, such as by being more willing to take the case to trial.

To construct attorney value-added, we follow the methodologies used in the teacher value-added literature (Kane and Staiger, 2008; Chetty, Friedman and Rockoff, 2014a; Gilraine and Pope, 2021). These methods have been adopted to estimate value-added of agents in other contexts, such as academic advisers (Canaan, Deeb and Mouganie, 2022) or doctors (Ginja, Riise, Willage and Willén, 2025). Our main value-added measure is based on the ability of the attorney to secure a case dismissal for their defendant.

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<sup>11</sup>We note that society's interests with respect to defense attorney quality may be more multifaceted, though the success of the adversarial legal system in achieving just outcomes depends in part on a vigorous and effective legal defense by the accused.

A charge “c”, filed in period “t”, where a period is a month-by-year, and handled by attorney “a” has a probability of dismissal,  $D_{cta}$ , represented by the following equation:

$$D_{cta} = \beta X_c + \text{MonthYearCourt}_c + \mu_{at} + \epsilon_{cta} \quad (1)$$

where  $X_c$  is a set of case and defendant characteristics, including dummy variables for charge description (property, drug, DWI, invalid license, weapon, other misdemeanor), defendant sex, age, and number of previous arrests, and filing day of the week.  $\text{MonthYearCourt}_c$  is a set of month-by-year-by-court fixed effects required to achieve quasi-random assignment of attorneys to misdemeanor cases, and  $\mu_{at}$  is attorney value-added, which varies by month.

Since attorneys are quasi-randomly assigned to cases conditional on the time and court (i.e., year-month-court fixed effects), then other case characteristics ( $X_c$ ) should be uncorrelated with attorney value-added ( $\mu_{at}$ ). In subsection 4.2, we provide empirical evidence that supports this assumption. We estimate  $\mu_{at}$  following three steps. First, we regress case dismissal ( $D_{cta}$ ) on case characteristics ( $X_c$ ) and month-year-court fixed effects, as in Equation 1, and we compute the residuals  $D_{cta}^*$ , where:

$$D_{cta}^* = D_{cta} - \beta X_c = \mu_{at} + \epsilon_{cta} \quad (2)$$

Second, we calculate attorney value-added ( $Q_{at}$ ) for attorney “a” in period “t” using a leave-month-out (jackknife) method to avoid correlation arising from using the same observations to calculate the outcome and the explanatory variables. Specifically, for every period, t, we compute:

$$Q_{at} = \frac{1}{N_a - N_{at}} \cdot \sum_{s \neq t} \sum_{c=1}^{N_{acs}} D_{csa}^* \quad (3)$$

$N_{at}$  is the number of charges assigned to attorney “a” in period “t,”  $N_{acs}$  is the number of charges assigned to attorney “a” in period  $s \neq t$ , and  $N_a$  is total number of charges per attorney.

Third, we apply an empirical Bayes shrinkage procedure to adjust for sampling error, which may arise due to the variation in the number of cases each attorney handles (Kane and Staiger (2008)). To do so, we multiply the estimated measure of attorney quality ( $Q_{at}$ ) by a shrinkage factor as follows:

$$\mu_{at} = \lambda_a \times Q_{at} \tag{4}$$

and

$$\lambda_a = \frac{\sigma_u^2}{\sigma_u^2 + \sigma_\epsilon^2/N_a} \tag{5}$$

where  $\sigma_u^2$  is between-attorney variance,  $\sigma_\epsilon^2$  is within-attorney variance, and  $N_a$  is the number of cases per attorney “a.” Intuitively, this procedure shrinks noisier estimates of value-added, such as those arising from attorneys with fewer cases, toward the mean, while leaving estimates for high-volume attorneys whose performance is measured more precisely largely unchanged.

$\mu_{at}$  represents attorney value-added, and it can be interpreted as the propensity of an attorney to secure a dismissal on any given case. To avoid small-sample bias, we focus on attorneys that handle a minimum of 29 charges throughout the sample period, which is the median number of charges per attorney. We show that the results are robust to choosing a different threshold in Table B6. We also show robustness to using the unadjusted (unshrunk) measure of attorney value-added ( $Q_{at}$ ) in Table B6. Finally, we show robustness to using the leave-year-out method to estimate attorney value-added instead of the leave-month-out method in Table B6. Lastly, we rescale the measure of value-added to have a mean of zero and a standard deviation of one.

After defining attorney value-added as the ability to achieve case dismissals for their clients, we show the importance of value-added by quantifying the variation across attorneys. We do so both for the full sample of defendants, as well as separately by defendant race. We quantify the standard deviation in attorney value-added and assess the extent to which being

assigned an attorney that is higher in the value-added distribution increases the likelihood that the defendant’s case will be dismissed.

#### 4.1.2 Effect of attorney value-added on other outcomes: Jail and jail sentence length

In addition to quantifying the importance of attorney value-added with respect to case dismissals, we also assess whether that same dismissal-based value-added measure impacts other outcomes. In particular, we exploit the quasi-random assignment of attorneys to cases to estimate the effect of attorney value-added on the likelihood of being sentenced to jail and sentence length. We do so by estimating the following equation:

$$Y_{cta} = \alpha_0 + \alpha_1 \times \mu_{at} + X_c + MonthYearCourt_c + e_{cta} \quad (6)$$

where  $Y_{cta} = \{Jail_{cta}; Jail\ Sentence\ Length_{cta}\}$ . In all our regression equations, we control for month-year-court fixed effects ( $MonthYearCourt_c$ ), and we two-way cluster our standard errors at the defendant and attorney level to account for correlations across cases filed against the same defendants and handled by the same attorneys, respectively. For robustness, we control for  $X_c$ , which is a set of defendant and case characteristics (crime type, defendant race, sex, age, and number of previous arrests). The coefficient estimate of interest is  $\alpha_1$ , which represents the effect of a one standard deviation increase in attorney value-added on the likelihood of incarceration and sentence length.

## 4.2 Balance tests

Given the assignment process of attorneys to cases in the county, there is *ex ante* reason to believe that attorney assignment to cases is quasi-random conditional on time and court. This is important because it allows us to obtain unbiased estimates of attorney value-added, and thus how an increase in attorney quality impacts case outcomes. Here, we provide

empirical evidence supporting this identifying assumption using three methods.

First, we test whether case characteristics and defendant characteristics predict attorney value-added. To do so, we use an F-test from a regression in which we regress attorney value-added on a set of case and defendant characteristics, including dummy variables for charge type, defendant sex, age and number of previous charges. We report the results in Table 2, where we also show the F-statistic and its corresponding p-value. Column (1) shows the results without conditioning on any time or court fixed effects, while Columns (2) and (3) control for month-year fixed effects and month-year-court fixed effects, respectively.

All three columns show that none of the coefficient estimates are statistically significant at conventional levels and that these characteristics do not jointly predict attorney value-added. For instance, Column (1) shows that the F-statistic is 0.669, with a p-value of 0.736, which indicates that even without conditioning on the minimum set of controls required to achieve quasi-random assignment, case characteristics and defendant characteristics do not jointly predict attorney value-added.

Second, we show that none of these characteristics are correlated with attorney value-added. We regress each defendant and case characteristic separately on attorney value-added, and we report the coefficient estimates in Appendix Table B1, where each column is a separate regression. Panel A shows the results without conditioning on time or court fixed effects, Panel B controls for month-year fixed effects, and Panel C controls for month-year-court fixed effects (our preferred specification). In all three panels, we show that none of the coefficient estimates are statistically significant at conventional levels, which again is supportive of our identifying assumption of the quasi-random assignment of attorneys to cases.

Third, we show that predicted dismissal is not correlated with attorney value-added, for each racial group separately. To do so, we regress each case outcome, including dismissal, jail, and jail sentence length, on month-year-court fixed effects, and we save the residuals. Next, we regress these residuals on case and defendant characteristics, including crime type,

defendant sex, age, race, and previous arrests and use the resulting coefficient estimates to predict case outcomes. Under the identifying assumption of our approach, we expect to see no correlation between predicted outcomes and attorney value-added as well.

We report the results in Figure 3, where we plot each predicted outcome against the continuous measure of attorney value-added, separately for Black and White defendants. In addition to the averages, we show the fitted line for each racial group. As can be seen in all three figures, predicted outcomes are not correlated with attorney value-added. This is true for all three outcomes and for Black and White defendants.

### 4.3 Results: Attorney value-added

Results showing the distribution of attorney value-added,  $\mu_{at}$ , are shown in Figure 1. The standard deviation of attorney value-added is 0.024, indicating that a one standard deviation increase in attorney value-added increases the likelihood of case dismissal by about 2 percentage points, which is approximately a 5 percent increase in case dismissal relative to the outcome mean of 52.8 percent. Furthermore, going from the 10th percentile to the 90th percentile increases the likelihood of case dismissal by 6 percentage points (11 percent relative to the outcome mean).

Given the large disparities by race, we also show the distributions of attorney value-added separately by race. Results are shown in Figure 2a. It shows that attorney quality matters substantively more for Black defendants, compared to White defendants. In particular, the standard deviation for Black defendants is 0.04, implying that a one standard deviation increase in value-added for Black defendants increases the likelihood of dismissal by four percentage points, or 7.1 percent relative to the mean. In contrast, the standard deviation for White defendants is 0.02 (3.9 percent), or approximately half that of Black defendants.

Put differently, Figure 2a indicates that going from the 10th to the 90th percentile attorney for Black defendants increases the likelihood of dismissal by about 10 percentage

points. By comparison, going from the 10th to 90th percentile for White defendants increases the likelihood of dismissal by about 6 percentage points.

Figure 2a also shows that the distribution of attorney quality is skewed in that some attorneys are especially effective at achieving dismissals for their Black clients. This suggests that not being assigned a top tier attorney—that is, the type of attorney who can achieve the best outcome possible given the reality of the case—is more costly for Black defendants than for White ones. This conclusion is also consistent with Figure 2b, which shows the within-attorney difference in value-added for Black versus White defendants. That distribution is also skewed to the right, which again suggests that there are some attorneys who are particularly effective at achieving dismissals for Black defendants, even relative to their own ability to achieve dismissals for their White defendants.

Interestingly, we also find that attorneys who are particularly effective at helping Black (White) defendants are no better than average at helping White (Black) defendants. This is demonstrated by Figure 2c, which graphs attorney value-added for White defendants against attorney value-added for Black defendants. The result shows there is little correlation between the two value-added measures. The slope indicates that attorneys who improve dismissal rates by 10 percentage points for Black defendants only improve dismissal rates by 0.6 percentage points for White defendants.

#### **4.4 Predictors of attorney value-added**

One important question for policy is whether observable attorney characteristics can be used as proxies for attorney quality. For example, to the extent defense attorneys from top-ranked law schools are more effective counsel for their clients, it suggests that policymakers can prioritize hiring such individuals. On the other hand, if observed measures are poor proxies for attorney quality, it suggests that alternative methods must be used to improve the quality of indigent defense.

In this section, we test empirically whether observable attorney characteristics are good

predictors of attorney quality. In Figure 4, we plot attorney characteristics, including attorney race, years of experience, law school ranking, and whether they graduated from a top-20 law school, against attorney value-added.

Results indicate that while there is little difference in attorney quality by attorney race (Figure 4a) or overall law school ranking (Figure 4c), attorneys with higher value-added have less years of experience (Figure 4b) and are less likely to have graduated from a top-20 law school (Figure 4d). These facts suggest that selection into becoming a court-appointed defense attorney is important. In addition, the results indicate that the obvious pathways for improving indigent defense quality—like recruiting more experienced attorneys, or attorneys from top law schools— are unlikely to be effective.<sup>12</sup>

In addition to these figures, we also test whether observed attorney characteristics can jointly predict attorney value-added. We regress attorney value-added on attorney race, years of experience, and whether they graduated from a top-20 law school. Similar to Figure 4, results in Table 3 show that observable attorney characteristics, such as race, experience, and law school ranking, are correlated with attorney value-added. However, they collectively explain little of the variation in attorney quality, with an  $R^2$  of only 0.08. Again, this implies strategies focused on observable attorney characteristics are unlikely to improve the quality of indigent defense.

## **4.5 Effect of attorney value-added on other case outcomes: jail and jail sentence length**

We now turn to examining the impact of attorney quality on case outcomes. We first show effects across the full sample, and then show effects by defendant race.

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<sup>12</sup>As shown in Table B2, except for attorney race, attorney observable characteristics have no effect on the likelihood of case dismissal.

### 4.5.1 Full sample

We begin by descriptively examining whether case outcomes are correlated with attorney value-added. We do this by plotting the outcomes of interest against attorney value-added, without controlling for month-year-court fixed effects.

Figure 5a and Figure 5b show that an increase in attorney value-added is associated with a decrease in the likelihood of incarceration, and perhaps in jail sentence length, respectively. Results are also suggestive of a somewhat nonlinear relationship between attorney value-added and the outcomes of interest, particularly in the right tail of the distribution. Attorneys whose value-added exceeds 1.5 standard deviations above the mean are associated with substantially lower incarceration rates relative to the rest of the distribution.

Next, we estimate the causal effect of attorney value-added on case outcomes using Equation 6. We present the results in Table 4. Odd-numbered columns show the results using only month-year-court fixed effects, while even-numbered columns show the results by additionally controlling for case and defendant characteristics, including indicator variables for crime type, defendant race, sex, age, and number of previous arrests. In all columns, standard errors are two-way clustered at the defendant and attorney level.

The results are in line with Figure 5, whereby an increase in attorney value-added decreases the likelihood of incarceration. The estimates in Columns (1) and (2) indicate that a one standard deviation increase in attorney quality is associated with a 0.7 and 0.8 percentage point reduction (2.0 and 2.4 percent) in the likelihood of incarceration, which are statistically significant at the 10 and 5 percent levels, respectively. By comparison, while estimates for the effect on jail sentence length in Columns (3) and (4) are also negative, they are statistically indistinguishable from zero. These results indicate that on average, higher-quality attorneys generate a small but statistically significant reduction in the likelihood that their clients are incarcerated.

Average treatment effects may mask important heterogeneity in the returns to attorney quality. We therefore turn to examining whether the impact of attorney value-added differs

by the race of the defendants. We focus on race given the large racial disparities in convictions and incarceration per population.

#### **4.5.2 Effects by defendant race**

We also estimate the effect of attorney quality on jail and jail sentence length separately by race. The raw data in Figure 6a and Figure 6b also show some suggestive evidence that attorney quality is associated with better jail outcomes for Black defendants, compared to White defendants.

Regression estimates by race are shown in Table 5, where Panels A and B show the effect of attorney value-added on case outcomes for Black and White defendants, respectively. Odd-numbered columns show estimates when only controlling for month-year-court fixed effects, while even-numbered columns additionally control for case characteristics.

The results mirror the raw data shown in Figure 6 in showing a somewhat stronger (linear) relationship between attorney quality and jail outcomes for Black defendants, compared to White defendants. For example, estimates for the likelihood of incarceration in the first two columns of Panel A for Black defendants are approximately three times as large as the estimates for Whites in Panel B, though only one of the two estimates is significant at the 10 percent level. Columns (3) and (4) show no effects on jail sentence length for either Black defendants (Panel A) or White defendants (Panel B).

## **4.6 Robustness**

In this section, we test the robustness of our main finding that a one standard deviation increase in attorney quality generates a 5 percent increase in the likelihood of case dismissal overall. Similarly, we test the robustness of our finding that a one standard deviation increase in attorney quality benefits Black defendants twice as much as White defendants (4 versus 2 percentage point increase in dismissals). Below, we discuss the results shown in Online Appendix Table B6, which indicate that these findings are robust across multiple alternative

model specifications and data sets.

One potential concern is that in rare cases—9 percent of our sample—an attorney may be replaced for reasons such as conflicts of interest or departure from practice. To address that issue, our main analysis focuses on the first assigned attorney, who should be quasi-randomly assigned given our understanding of case assignment. In Column (1) of Table B6, we show our baseline estimate of the effect of a one standard deviation increase in attorney quality. In Column (2), we test the robustness of these results to dropping charges involving multiple attorneys. Column (2) of Table B6 shows that results are similar when we restrict the sample to cases that had only one court-appointed attorney from filing to disposition. Column (3) shows robustness to our decision to focus on attorneys who handle more than 29 charges throughout the sample period, which is the median number of charges per attorney. Column (3) of Table B6 shows that the results are robust to including only attorneys who have handled more charges than the mean (63), whereas our main analysis included all attorneys who handled more than the median (29) number of charges.

Column (4) shows results using an alternative method to calculate attorney value-added. In our main analysis shown in Column (1), we use a leave-month-out (jackknife) method to calculate each attorney’s value-added in a given year. As a robustness check, in Column (4) we adopt a leave-year-out method instead. The results are consistent with our main findings.

In Column (5) of Table B6, we show robustness to including assault charges in the sample. Based on conversations with the county, misdemeanor assault charges are more likely to be coupled with higher-level felony charges, which some attorneys on the misdemeanor panel are ineligible to represent. To avoid potential non-random attorney assignment, our main analysis excludes assault charges. Results in Column (5) indicate that the results are robust to including these charges.

Finally, in Column (6) we show that our results are robust to dropping charges heard in the mental health court. As noted earlier, one of the two case characteristics used to assign attorneys to cases that is not observed in our data is whether a case is mental health-related.

In our main analysis, we address this by conditioning on the assigned court, which serves as a proxy for mental health cases, since a designated court supervises all mental health misdemeanor dockets alongside regular dockets. One potential concern would be that within this court, some attorneys could receive systematically different cases than others. While this concern is inconsistent with results shown in Column (1) of Table 2, which suggests there was no nonrandom sorting of cases across attorneys, we nevertheless address it by dropping all charges heard in the mental health court. Results are shown in Column (6) of Table B6. The results follow a similar pattern in that a one standard deviation in quality is associated with a 2.6 percentage point increase in dismissals across the full sample, and a 5 and 3 percentage point increase in dismissals among Black and White defendants, respectively.

In our main analysis, we focus on a measure of value-added based on an attorney's ability to achieve a case dismissal. We do so because case dismissal is common (Table 1 shows that 52.8 percent of charges are dismissed), because it is the best possible outcome for the defendant, and because increased dismissals likely mechanically impact the other outcomes of incarceration and sentence length. We note, however, that the various measures of value-added are highly correlated. This fact is shown in Online Appendix Figure B2, which shows the strong correlation between attorney value-added based on the ability to generate case dismissals, and alternative measures based on helping defendants avoid jail time, or minimizing the length of jail time. In Online Appendix Table B3, we also estimate the standard deviation of attorney quality based on these alternative measures of attorney performance. Results in Table B3 show that a one standard deviation in attorney value-added based on jail sentencing reduces the likelihood of a jail sentence by 2.5 percentage points, or 8 percent relative to the mean. A one standard deviation in attorney value-added based on jail sentence length reduces sentence length by about 2 days, or 13 percent relative to the mean. When estimated separately by defendant race (Panels B and C), results indicate the standard deviation in attorney value-added based on the likelihood of a jail sentence is 36 percent larger for Black defendants than White defendants.

## 5 Disparate Impact of Attorney Quality

### 5.1 Empirical strategy

The results in the previous section demonstrated that higher-quality representation generates more case dismissals Black defendants than for White defendants. That finding motivates a complementary approach that focuses on access to high-quality representation—that is, the best indigent defense attorney one could reasonably hope for in the current system—and any disparate impacts on Black defendants that occur from having lower-quality counsel.

To answer this question, we identify the top-10% of the attorney quality distribution as the “best possible attorneys” in the sample. We then estimate a difference-in-differences equation, where we compare case outcomes for Black defendants represented by top-quality attorneys versus non-top-quality attorneys, relative to White defendants. The intuition of this design is that in the absence of disparate impact, the gap between outcomes for Black and White defendants with top-quality versus non-top-quality attorneys would be the same. Put differently, this design asks whether being assigned an attorney that is not top-quality, compared to getting a top-quality attorney, hurts Black defendants more than White defendants.

Formally, we estimate the disparate impact of attorney quality on case outcomes using the following equation:

$$Y_{ct} = \beta_0 + \beta_1 \cdot Top10_{at} \cdot Black_c + \beta_2 \cdot Top10_{at} + \beta_3 \cdot Black_c + MonthYearCourt_c + X_c + u_{cta} \quad (7)$$

$Top10_{at}$  is an indicator variable that takes the value 1 if the attorney falls within the top-10% of the attorney quality distribution, and zero otherwise,  $Black_c$  is a binary variable that takes the value 1 if the defendant is Black (and zero otherwise), and  $Y_{ct}$  is the outcome variable for a given charge  $c$  at period  $t$ . We include month-by-year-by-court fixed effects and control for a vector of case characteristics (charge type, day of the week, defendant age,

defendant sex, and number of previous charges) for robustness. In all regressions, standard errors are clustered at the attorney-level and the defendant-level, to account for correlations within cases that are handled by the same attorney and correlations between charges against the same defendant, respectively.

The primary coefficient of interest,  $\beta_1$ , is the difference in case outcomes within Black defendants who are represented by top-quality versus non-top-quality attorneys, minus the difference in case outcomes within White defendants who are represented by top-quality versus non-top-quality attorneys. This difference-in-differences estimate captures the disparate impact of attorney quality under the assumption that there is no nonrandom sorting of attorney quality across Black and White defendants. Given our understanding of case assignment described in section 2, along with the balance tests in Figure 3 and Table 2 that show attorney quality is uncorrelated with case and defendant characteristics, we have every reason to believe that assumption holds in this context.

## 5.2 Results

Results are shown in Table 6, where each column represents a separate regression. Panels A, B, and C show the effect of having a top-10% quality attorney as a Black defendant versus a White defendant, relative to a non-top-10% attorney. Results in Column (1) of Panel A indicate that having a top-10% quality attorney increases the likelihood of earning a dismissal by 8 percentage points, which is a 15 percent increase relative to the control mean. This increase in case dismissal is accompanied by a 6 percentage points (19 percent) decrease in the likelihood of being incarcerated and a 2.4 days decrease in jail sentence length (20 percent). Put differently, results in Panels A and B of Table 6 indicate that being represented by non-top-quality indigent defense counsel causes a disparate impact on Black defendants by lowering their case dismissal rate by 15 percent, and increasing the likelihood they go to jail by 19 percent. These effects are in line with what is observed in Figure 6, and are robust to controlling for case and defendant characteristics, as shown in Column (2).

Next, we test whether this disparate impact is due to observable factors correlated with race, rather than race. For example, consider the fact that, as shown in Table 1, White defendants are more likely to be facing DWIs than Black defendants. Suppose that it were true that attorney skill is much more important in securing dismissals for non-DWI cases than for DWIs. Along with the fact that DWIs are more common among White defendants, that could explain the positive coefficient for the interaction term  $Top10\% \times BlackDef$  in Table 6.

To test whether the disparate impacts are driven by other observed factors correlated with race, rather than race itself, we control for interactions of case and defendant characteristics with attorney quality. This includes interacting charge type dummies, defendant sex, age, and number of previous arrests, with attorney quality. Results in Column (3) of Table 6 show that even when including these interaction terms, the coefficient estimates remain large and statistically significant. As a result, to the extent that these observable characteristics are good proxies for case and defendant characteristics, then other factors correlated with race cannot explain the estimated disparate impact.

Similarly, it is possible that other attorney characteristics that are correlated with quality matter differentially across Black and White defendants. For instance, Mikdash and Oh (forthcoming) show that White attorneys secure more dismissals for Black defendants relative to Black attorneys. To address that, we control for interaction terms of attorney race, law school ranking, and years of experience with defendant race. Again, as shown in Column (4) of Table 6, the estimates remain statistically significant. Specifically, results in Column (4) in Panel A indicate that top-quality attorneys are 6 percentage points more likely to secure a dismissal for Black defendants versus White defendants, relative to other attorneys. Similarly, Panel B indicates that top-quality attorneys reduce the likelihood of incarceration by 4 percentage points more for Black versus White defendants, relative to other attorneys, even though the coefficient estimate becomes less precise. Finally, Column (4) in Panel C shows that top-quality attorneys reduce sentence length by approximately 3

days for White versus Black defendants, relative to non-top quality attorneys. Again, the robustness of these results to the inclusion of interactions with attorney characteristics and defendant race indicates that the disparate impact is not driven by the differential skill of certain observed attorney characteristics and defendant race.

In short, results thus far show that attorney quality matters, it matters differentially across Black and White defendants, and that disparate impact cannot be explained by observable differences across racial groups or observable differences in attorney characteristics across attorneys of different quality. The results show that top-quality attorneys are 12-17% better at achieving case dismissals, 13-22% better at avoiding jail sentences, and decrease jail sentence length by 18-21%, for Black versus White defendants relative to other attorneys.

We also test the robustness of these results to alternative thresholds for defining “top-quality” attorneys. In particular, we estimate disparate impact using our difference-in-differences model for attorneys who are in the top 25%, 20%, 15%, 10% (as used in our main analysis), and 5%. Results are shown in Columns (1) through (5), respectively, of Table B5.

Column (1) of Panel A of Online Appendix Table B5 shows that failing to be represented by top-25% attorneys is associated with a disparate impact on Black defendants representing a 3 percentage point (6%) reduction in the likelihood of case dismissal, even though the coefficient estimate is not statistically significant at conventional levels. Columns (2) through (5) show increasing disparate impacts of 10, 12, 17, and 31 percent when using thresholds of top-20%, top-15%, top-10%, and top-5%, respectively, each of which is significant at the five or the one percent level. Estimates in Panel B of Table B5 show that the disparate impact on Black defendants from having an attorney outside the top 25%, 20%, 15%, 10%, and 5%, respectively, is associated with increases in the likelihood of being sentenced to jail of 1, 8, 13, 22, and 35 percent, respectively. Estimates corresponding to the thresholds of 10% and 5% are statistically significant at the five percent and one percent levels, respectively.<sup>13</sup>

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<sup>13</sup>In Table B7, we demonstrate robustness across the same set of model specifications as in Table B6, including four alternative approaches to sample construction or attorney value-added calculation. The results are consistent with the main findings, showing that top-quality attorneys significantly secure more favorable outcomes for Black defendants. For instance, estimates in Table B7 using case dismissal as the outcome

These results show that the disparate impact on Black defendants of being represented by a non-top-quality attorney is robust to using thresholds of 5% to 25% for case dismissal, and 5% to 15% for the likelihood of being sentenced to jail.

Overall, these results indicate that being represented by attorneys outside the upper tail of the value-added distribution disproportionately harms Black defendants relative to White defendants.

### 5.3 Mechanisms

In the previous section, we showed that the disparate impact of high-quality attorneys on Black versus White defendants cannot be explained by other observed defendant characteristics or their correlates that are correlated with defendant race and that may matter differentially across attorney quality, such as crime type. We also showed that the results cannot be explained by other observed attorney characteristics and their correlates that are correlated with attorney quality and that may matter differentially across defendant race, such as attorney race. We now turn to other possible explanations, including attorney effort and attorney-prosecutor interactions.

We first perform a test of whether non-top-quality attorneys exert less effort on behalf of Black defendants compared to White defendants, potentially reflecting discrimination. While we cannot directly observe attorney effort, we examine outcomes that arguably serve as proxies. In particular, we test whether top-quality attorneys are more likely to file motions for Black defendants relative to White defendants. The difference-in-differences, reported in Panel A of Table 7, show no evidence of differential motion filing, although the estimates are imprecise.

Similarly, we also assess whether the disparate impact we observe in Table 6 can be explained by non-top-quality attorneys being differentially willing to take the case all the way to trial for Black versus White defendants, rather than perhaps encouraging the defendant

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range from 0.06 to 0.10 across specifications, remaining close to the main estimate (0.09) and statistically significant at one or ten percent level.

to take a plea. For example, if non-top-quality attorneys were less willing to push cases to trial for Black defendants, compared to White ones, even while top-quality attorneys treated both groups the same, that could explain the disparate impact. However, results in Panel B of Table 7 show no evidence that this mechanism is in fact driving the results.

We then assess whether the disparate impact is due to outcomes that capture the effectiveness of attorney pretrial skill, including attorney-prosecutor interactions that can result in a pretrial dismissal of the case. To do so, we examine the differential effect of assigning a top-quality attorney to a Black defendant on both whether a case is dismissed before trial and on the length of the case. Panel C shows that assignment to a top-quality attorney increases the likelihood of a pretrial dismissal for Black defendants relative to White defendants by about 9 percentage points, or 18 percent. This indicates that it is unlikely that the effects are driven by interactions with judges or jurors. Consistent with this, Panel D shows that top-quality attorneys reduce case length for Black defendants by 25 to 36 days, or 7 to 10 percent relative to the control mean.

Taken together, the results in Table 7 suggest that top-quality attorneys help resolve Black defendants' cases more quickly relative to non-top-quality attorneys, primarily through an increase in pretrial dismissals. In contrast, we find no evidence that the disparate impact on Black defendants is due to differential attorney effort, as reflected by filing more motions or an increased willingness to push the case to trial.

The disparate impact of attorney skill during the pretrial period, including in attorney-prosecutor interactions that result in case dismissal, is also consistent with the disparate impact estimates being driven by cases that are harder to prove. This finding is shown in Table B4, which classifies charges in our data as harder to prove, or easier to prove, based on Dube, MacArthur and Shah (2025a). Cases that are easier to prove include those where the evidence is often objective and clear, such as drug possession, invalid license, or accident involving damage to vehicle. Cases that are more difficult to prove are those that require proof of intent, such as false alarm or false report, or involve a more subjective judgment,

such as disorderly conduct. Table A1 shows the full list of charges under each category.

Column (1) of Table B4 shows disparate impact for easier-to-prove offenses, while Column (2) shows estimates for offenses that are harder to prove. Results show that the disparate impact effects of attorney quality are driven by cases that are more difficult to prove. In particular, Column (2) shows that, conditional on a more-difficult-to-prove charge, assignment to a top-quality attorney increases the likelihood of dismissal for a Black defendant by 15 percentage points, or nearly 32 percent, relative to White defendants. As a result, the likelihood of receiving a jail sentence falls by 13 percentage points, or about 34 percent. These effects are 2-3 times as large as the disparate impact estimates for easier-to-prove cases shown in Column (1), which are statistically indistinguishable from zero.

Overall, these findings suggest the disparate impact of non-top-quality attorneys on Black defendants is consistent with differential attorney skill with respect to pre-trial activities, including interactions with prosecutors. Moreover, results suggest that this differential attorney skill manifests itself primarily in cases in which there is more legal ambiguity about whether a charge will be sustained based on the evidence.

## 5.4 Discussion

These results indicate that Black defendants can benefit more than White defendants from top-quality legal representation. Conversely, Black defendants are disproportionately harmed by non-top-quality attorneys. As shown in Table 6, this disparate impact manifests itself both in a 12-17 percent lower probability of case dismissal and a 13-22 percent increase in the likelihood of being sentenced to jail.

These findings suggest that one avenue for reducing racial gaps in conviction and sentencing may be to improve the quality of attorneys. In this section, we perform a back-of-the-envelope calculation to quantify the extent to which an improvement in attorney quality would reduce the Black-White gap in jail sentences. We begin by calculating the Black-White incarceration gap in Travis County, Texas between 2013 and 2022 using our sample

data. We calculate that the number of jail sentences for Black (misdemeanor) defendants per 100,000 population is 1,208, or approximately three times the rate of 411 per 100,000 population for White defendants.

Next, we perform a thought experiment in which half—rather than 10%—of all indigent defense attorneys were of similar quality as the top-10% attorneys in our sample. Given the average disparate impact estimate of 18 percent shown in Table 6, we calculate that increasing indigent defense quality in this way would reduce the Black-White jail sentencing gap by 10.9 percent.<sup>14</sup>

## 6 Conclusion

Indigent defense attorneys represent 80 percent of defendants nationwide (Wolf Harlow, 2000). In this study, we document the impact of higher- versus lower-quality attorneys with respect to their ability to achieve case dismissals, which is the best possible outcome for their clients. We do so in the context of Travis County, Texas, where as in most of Texas indigent defendants facing misdemeanors are assigned to private attorneys.

Our measure shows that there is considerable variation in attorney quality. Across the entire sample, we show that a one standard deviation increase in attorney quality is associated with a 2.4 percentage point (5 percent) increase in the likelihood of a case dismissal. The distribution of attorney quality also implies that going from the 10th percentile to the 90th percentile attorney is associated with a 6 percentage point (11 percent) increase in the likelihood of a case dismissal. Results also indicate that a one standard deviation increase in quality increases dismissals by approximately twice as much for Black defendants as White ones (4 versus 2 percentage points, or 7.1 versus 3.9 percent).

Results also indicate that the observed characteristics of attorneys such as race, years of

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<sup>14</sup>If 40 percent of Black defendants with below-top-10% attorneys would have their likelihood of sentencing reduced by 18 percent, the Black jail sentencing rate per 100,000 population would fall from 1,208 to 1,121 per 100,000 population. That represents a 10.9 percent reduction in the Black-White gap, given the White jail sentencing rate of 411 per 100,000 population.

experience, and law school ranking are poor proxies for attorney quality. Collectively, those characteristics explain less than 10 percent of the variation in attorney quality. Moreover, the relationship between some factors and attorney quality is the opposite of what many would expect. In particular, higher-quality attorneys are slightly less experienced and are less likely to have graduated from a top-20 law school. Together, these results indicate that proxies for attorney quality are unlikely to be useful in increasing the quality of indigent defense.

Consistent with the finding that Black defendants benefit more from attorney quality than White defendants, results also indicate that Black defendants benefit more when represented by top-quality attorneys. Conversely, results show that Black defendants are disproportionately worse off when represented by a non-top-tier attorney. We quantify this disparate impact with a difference-in-differences model that defines top-quality attorneys as those that rank in the top-10% of the value-added distribution. Results indicate that being assigned to a non-top-quality attorney reduces the likelihood of case dismissal by 12-17 percent, and increases the likelihood of a jail sentence by 13-22 percent, compared to White defendants. We further show that while this effect is inconsistent with effort—as measured by the number of motions or likelihood of pushing the case to trial—it is consistent with higher-quality pre-trial activity such as attorney-prosecutor interactions that result in increased pretrial dismissals and reduced case length.

Finally, a back-of-the-envelope calculation indicates that improving attorney quality would substantially reduce the Black-White gap in jail sentences per population. We estimate that if half of all defendants were represented by top 10% attorneys, the Black-White jail sentencing gap for misdemeanors would be reduced by 11%. While it is an open question as to whether results found here extend to other contexts, this finding offers some reason to believe that improvements in indigent defense may reduce the large racial disparities in the criminal justice system.

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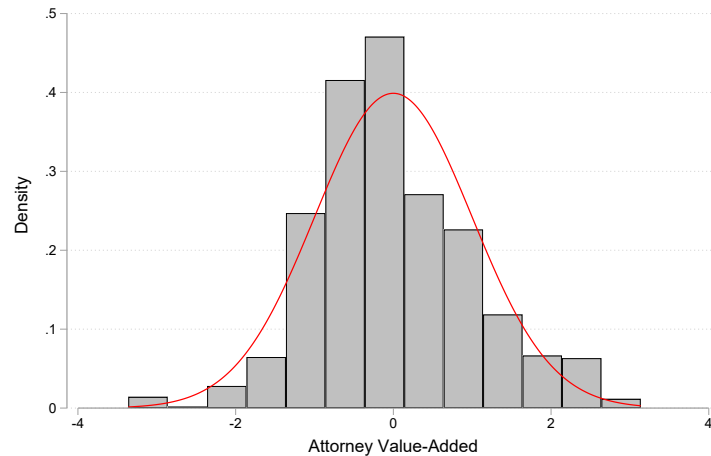
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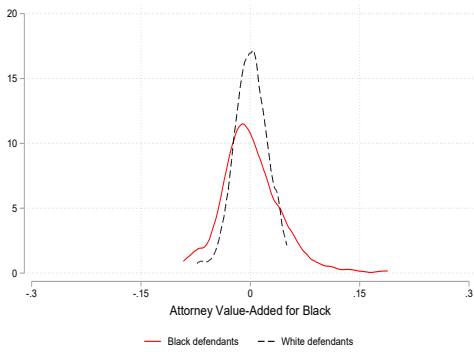
## 7 Tables and Figures

Figure 1: Distribution of Attorney Value-Added

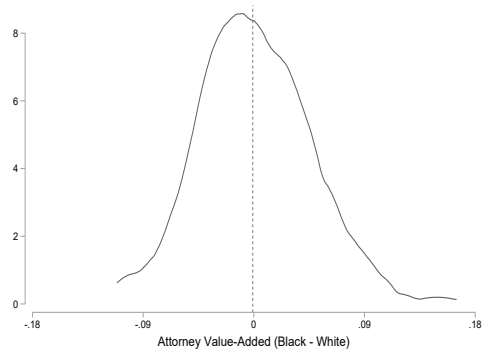


Notes: This figure shows the distribution of attorney value-added. In calculating attorney value-added, we apply an empirical Bayes shrinkage procedure to adjust for sampling error, accounting for the variation in the number of cases each attorney handles. We then standardize the value-added measure such that an average attorney value-added is zero and the standard deviation of value-added is one.

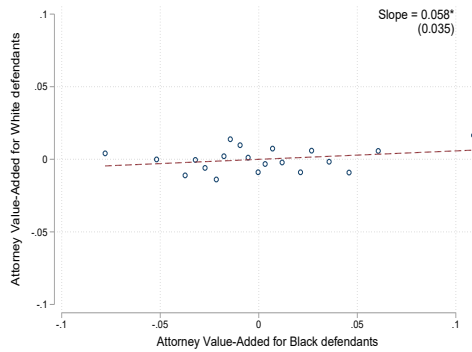
Figure 2: Attorney Value-Added by Defendant Race



(a) Attorney Value-Added by Defendant Race



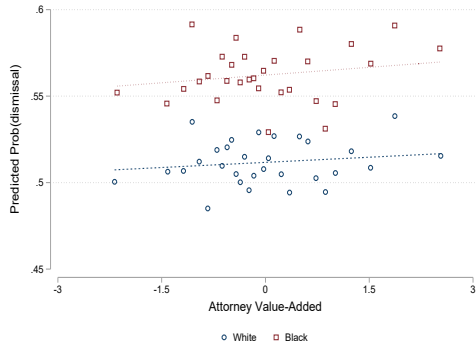
(b) Within-Attorney Difference between Black and White Value-Added



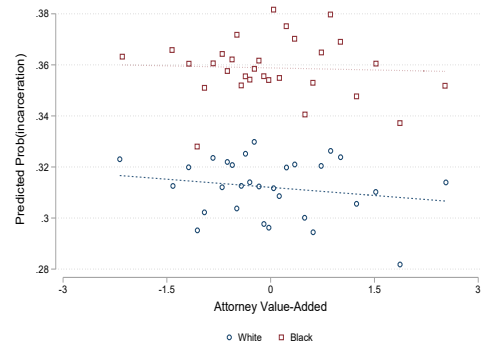
(c) Within-Attorney Correlation between Black and White Value-Added

Notes: Subfigure (a) shows the distribution of (shrunk) attorney value-added estimated separately by defendant race. Subfigure (b) shows the within-attorney difference between Black and White value-added, with the vertical line representing the median difference. Subfigure (c) shows the within-attorney correlation between their Black and White value-added measures.

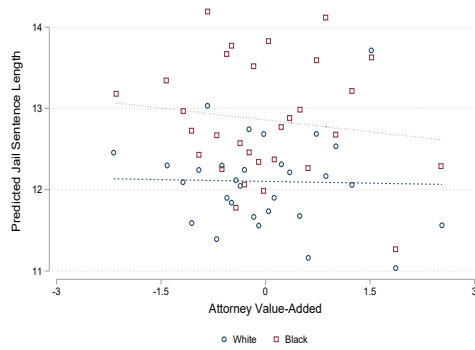
Figure 3: Correlation between Predicted Outcomes and Attorney Value-Added



(a) Predicted Dismissal



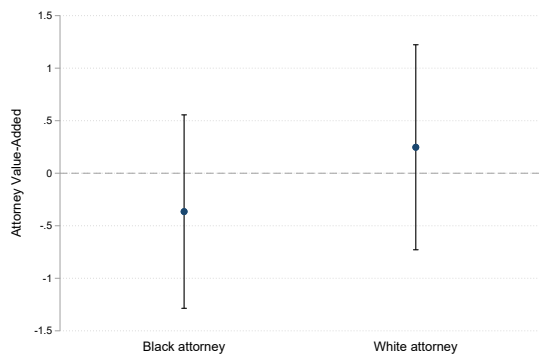
(b) Predicted Jail



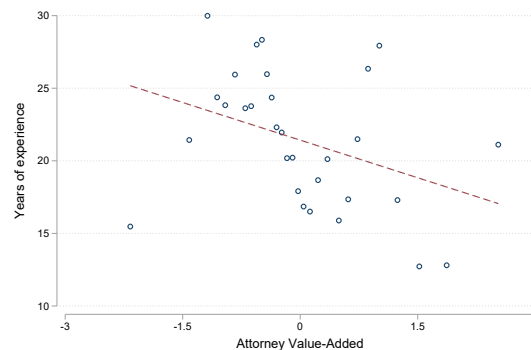
(c) Predicted Jail Sent. Length

Notes: These figures show the correlation between predicted outcomes and attorney value-added. Attorney value-added is based on case dismissals. Predicted outcomes are estimated by regressing each outcome of interest on case and defendant characteristics, including crime type, defendant sex, age, race, and previous arrests, and month-year-court fixed effects. We predict the outcomes of interests using the resulting coefficient estimates. In each figure, blue denotes White and red denotes Black.

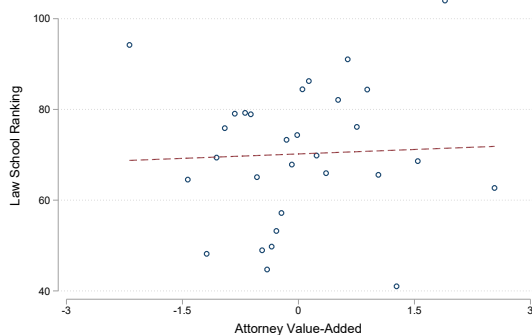
Figure 4: Correlation between Attorney Characteristics and Attorney Value-Added



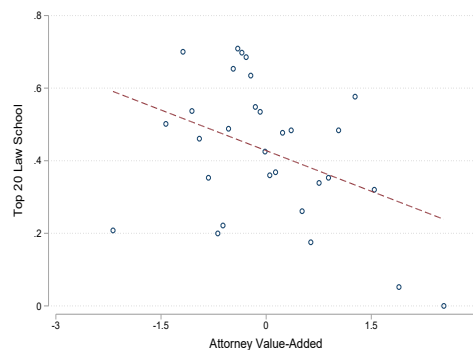
(a) Attorney Race



(b) Years of Experience



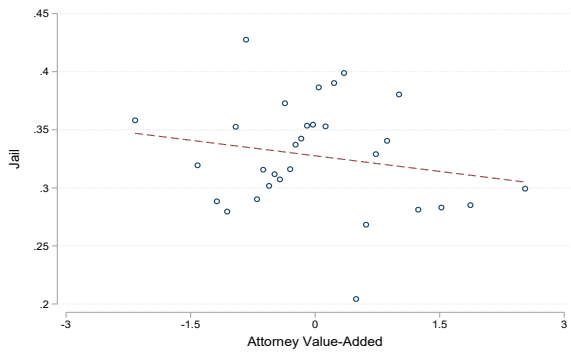
(c) Law School Ranking



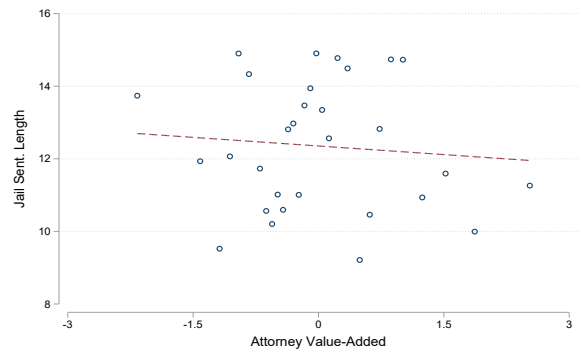
(d) Top 20 Law School

Notes: These figures show the correlation between attorney characteristics and attorney value-added, defined as the ability to achieve case dismissal. Panel (a) shows the mean attorney dismissal value-added by attorney race, with intervals indicating  $\pm 1$  standard deviation. Years of experience are defined as the difference between the filing date and an attorney's graduation date.

Figure 5: Effect of Attorney Value-Added on Case Outcomes



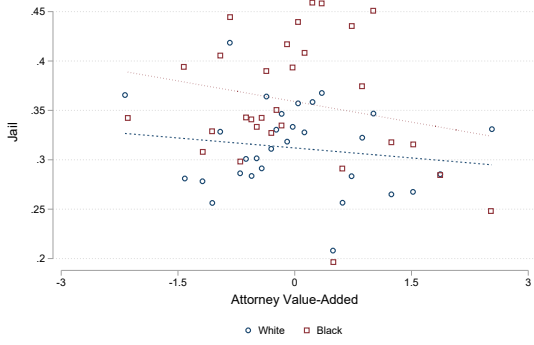
(a) Jail



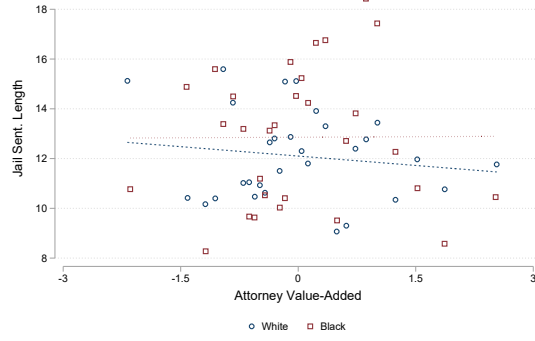
(b) Jail Sentence Length

Notes: Each subfigure is a binscatter plot of the outcome against attorney value-added. Jail sentence length is equal to zero if a defendant is not sentenced to jail.

Figure 6: Effect of Attorney Value-Added on Case Outcomes by Race



(a) Jail



(b) Jail Sentence Length

Notes: Each subfigure is a binscatter plot of the outcome against attorney value-added. Jail sentence length is equal to zero if a defendant is not sentenced to jail.

Table 1: Summary Statistics

	(1)	(2)	(3)
	<u>All defendants</u>	<u>Black defendants</u>	<u>White defendants</u>
<i>Outcomes</i>			
Dismissed	0.528	0.562	0.512
Jail	0.328	0.359	0.312
Sentence length (in days)	12.35	12.86	12.10
<i>Defendant characteristics</i>			
Black	0.333	1	0
Female	0.234	0.203	0.249
Age (in years)	34.5	34.5	34.4
No. previous charges	1.2	1.4	1.1
<i>Attorney Characteristics</i>			
White attorney	0.596	0.598	0.596
Black attorney	0.0268	0.0289	0.0257
Missing race	0.220	0.216	0.221
Other race	0.0257	0.0283	0.0243
Top 20 law school	0.427	0.423	0.429
Law school ranking	70.2	70.2	70.2
Experience (in years)	21.4	21.4	21.5
<i>Case characteristics</i>			
Drug	0.156	0.185	0.142
Property	0.0860	0.0855	0.0862
DWI	0.201	0.0878	0.258
Invalid license	0.104	0.123	0.0944
Weapon	0.0190	0.0216	0.0176
Other misd.	0.434	0.498	0.402
Number of charges	20895	6951	13944
Number of attorneys	180		

Notes: This table shows the means for outcome variables, defendant characteristics, attorney characteristics, and case characteristics. The data are at the charge level.

Table 2: Correlation between Attorney Value-Added and Case Characteristics

	(1)	(2)	(3)
	Attorney Value-Added	Attorney Value-Added	Attorney Value-Added
Drug	-0.0376 (0.0353)	-0.0306 (0.0276)	-0.0320 (0.0274)
Property	-0.0422 (0.0351)	-0.0368 (0.0284)	-0.0482 (0.0311)
DWI	-0.00366 (0.0262)	-0.00425 (0.0252)	-0.00687 (0.0249)
Invalid license	-0.0147 (0.0404)	-0.00539 (0.0283)	-0.0130 (0.0289)
Weapon	0.0303 (0.0488)	0.0168 (0.0466)	0.0181 (0.0498)
Female	0.00338 (0.0206)	0.00457 (0.0205)	0.00901 (0.0205)
Age (in years)	-0.000915 (0.00109)	-0.000987 (0.00113)	-0.00102 (0.00116)
Black	0.0166 (0.0193)	0.0133 (0.0184)	0.00958 (0.0177)
No. previous charges	0.0105 (0.0114)	0.00945 (0.0113)	0.00828 (0.0108)
N	20895	20895	20895
Outcome Mean	-0.00167	-0.00167	-0.00167
F-stat	0.669	0.744	0.812
P-value	0.736	0.668	0.605
Unconditional	Y	N	N
Month-year FE	N	Y	N
Month-year-court FE	N	N	Y

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table tests for any correlation between attorney value-added and case and defendant characteristics. Each column is a separate regression equation, where we regress attorney value-added on defendant characteristics to test whether these characteristics jointly predict attorney value-added. We report the joint F-statistic and its corresponding p-value. In the first column, we report the results without controlling for any fixed effects. In the second column, we control for month-year fixed effects, and in the third column we control for month-year-court fixed effects, which reflects our preferred specification. In all regressions, we cluster the standard errors at the attorney and the defendant level.

Table 3: Effect of Attorney Characteristics on Attorney Value-Added

	(1) Attorney Value-Added
White attorney	0.698*** (0.0195)
Black attorney	0.0623 (0.0451)
Experience (in years)	-0.00208*** (0.000762)
Top 20 law school	-0.0358** (0.0171)
Number of attorneys	146
R-squared	0.0840

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table shows the results from a regression of attorney value-added on attorney characteristics to test whether they are correlated, and to determine how well those characteristics jointly predict attorney value-added. The excluded race category is other race, including Asian, Arab, and Hispanic. The total number of attorneys in our sample is 180, but law school ranking information is missing for four attorneys, and race is missing for 30 others.

Table 4: Effect of Attorney Value-Added on Sentencing Outcomes

	<u>Jail</u>		<u>Jail Sentence Length</u>	
	(1)	(2)	(3)	(4)
Attorney Value-Added	-0.00668* (0.00403)	-0.00777** (0.00329)	-0.0500 (0.231)	-0.0686 (0.231)
Observations	20895	20895	20895	20895
Outcome Mean	0.329	0.329	12.31	12.31
Month-year-court FE	Y	Y	Y	Y
Case Characteristics	-	Y	-	Y

Standard errors in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Notes: This table shows the effect of attorney value-added on whether the case was dismissed, and whether the defendant was sentenced to jail. Odd columns represent the results using only month-year-court fixed effects, while Columns (2) and (4) show the results by controlling for case and defendant characteristics, including dummy variables for case type, defendant sex, age, and number of previous arrests. Standard errors are clustered at the defendant and attorney level.

Table 5: Effect of Attorney Value-Added on Sentencing Outcomes by Race

	<u>Jail</u>		<u>Jail Sentence Length</u>	
	(1)	(2)	(3)	(4)
<b>Panel A: Black Defendants</b>				
Attorney Value-Added	-0.0113 (0.00739)	-0.0134* (0.00799)	0.168 (0.384)	0.223 (0.396)
Observations	6951	6951	6951	6951
Outcome Mean	0.360	0.360	12.80	12.80
<b>Panel B: White Defendants</b>				
Attorney Value-Added	-0.00449 (0.00539)	-0.00437 (0.00451)	-0.142 (0.245)	-0.144 (0.241)
Observations	13944	13944	13944	13944
Outcome Mean	0.314	0.314	12.06	12.06
P-value (Difference [Black-White] = 0)	0.459	0.290	0.481	0.406
Month-year-court FE	Y	Y	Y	Y
Case Characteristics	-	Y	-	Y

Standard errors in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Notes: This table shows the effect of attorney value-added on whether the case was dismissed, and whether the defendant was sentenced to jail. Odd columns represent the results using only month-year-court fixed effects, while Columns (2) and (4) show the results by controlling for case and defendant characteristics, including dummy variables for case type, defendant sex, age, and number of previous arrests. Panels A and B show the results for Black and White defendants, respectively. We report the p-values for the t-test, where  $H_0: \beta^{Black} - \beta^{White} = 0$ . Standard errors are clustered at the defendant and attorney level.

Table 6: Difference-in-Differences Estimates of Disparate Impact

	(1)	(2)	(3)	(4)
<b>Panel A: Dismissed</b>				
Top 10% attorney X Black def.	0.0793*** (0.0282)	0.0889*** (0.0310)	0.0799*** (0.0306)	0.0616* (0.0323)
Observations	20895	20895	20895	20277
Non-top 10% mean	0.528	0.528	0.528	0.529
<b>Panel B: Jail</b>				
Top 10% attorney X Black def.	-0.0622** (0.0292)	-0.0725** (0.0329)	-0.0551* (0.0303)	-0.0420 (0.0309)
Observations	20895	20895	20895	20277
Non-top 10% mean	0.329	0.329	0.329	0.328
<b>Panel C: Jail Sent. Length</b>				
Top 10% attorney X Black def.	-2.406* (1.345)	-2.236* (1.222)	-2.336* (1.293)	-2.515* (1.361)
Observations	20895	20895	20895	20277
Non-top 10% mean	12.31	12.31	12.31	12.22
Defendant race indicator	Y	Y	Y	Y
Attorney quality indicator	Y	Y	Y	Y
Month-year-court FE	Y	Y	Y	Y
Case Characteristics	-	Y	Y	Y
Interactions (Def)	-	-	Y	Y
Interactions (Attorney)	-	-	-	Y

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table reports the difference-in-differences estimates of disparate impact using Equation 7. In Column (1), we control for month-year-court fixed effects. In Column (2), we add case characteristics, including dummy variables for crime type, defendant sex, age, and number of previous arrests. In Column (3), we include interaction terms of defendant characteristics (sex, age, and number of previous arrests) with attorney VA. In Column (4), we include interaction terms of attorney characteristics, including attorney race, years of experience, and law school ranking, with defendant race. In all regressions, we include an indicator for defendant race and an indicator for attorney quality. All standard errors are clustered at the defendant and attorney level.

Table 7: Mechanisms

	(1)	(2)	(3)	(4)
<b>Panel A: Filed Motions</b>				
Top 10% attorney X Black def.	0.0233 (0.0178)	0.0283 (0.0187)	0.0309 (0.0194)	0.0333 (0.0204)
Observations	20895	20895	20895	20277
Non-top 10% mean	0.122	0.122	0.122	0.123
<b>Panel B: Trial</b>				
Top 10% attorney X Black def.	0.00649 (0.00879)	0.00927 (0.00872)	0.00383 (0.00837)	0.00634 (0.00878)
Observations	20895	20895	20895	20277
Non-top 10% mean	0.0694	0.0694	0.0694	0.0700
<b>Panel C: Pretrial Dismissal</b>				
Top 10% attorney X Black def.	0.0833*** (0.0297)	0.0905*** (0.0319)	0.0823** (0.0324)	0.0653* (0.0335)
Observations	20895	20895	20895	20277
Non-top 10% mean	0.490	0.490	0.490	0.491
<b>Panel D: Case Length</b>				
Top 10% attorney X Black def.	-33.49** (16.95)	-25.39 (16.14)	-28.75* (16.28)	-35.55** (17.23)
Observations	19763	19763	19763	19168
Non-top 10% mean	361.9	361.9	361.9	363.3
Defendant race indicator	Y	Y	Y	Y
Attorney quality indicator	Y	Y	Y	Y
Month-year-court FE	Y	Y	Y	Y
Case Characteristics	-	Y	Y	Y
Interactions (Def)	-	-	Y	Y
Interactions (Attorney)	-	-	-	Y

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table reports the difference-in-differences estimates of disparate impact using Equation 7. In Column (1), we control for month-year-court fixed effects. In Column (2), we add case characteristics, including dummy variables for crime type, defendant sex, age, and number of previous arrests. In Column (3), we include interaction terms of defendant characteristics (sex, age, and number of previous arrests) with attorney value-added. In Column (4), we include interaction terms of attorney characteristics, including attorney race, years of experience, and law school ranking, with defendant race. In all regressions, we include an indicator for defendant race and an indicator for attorney quality. All standard errors are clustered at the defendant and attorney level.

# Online Appendix: Attorney Value-Added and Racial Disparities in the Criminal Justice System

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# Appendix A Data

## Appendix A.1 Main sample

We use misdemeanor cases that were filed in Travis County, Texas between 2013-2022, a total of 131,166 charges (129,679 unique cases). Here, we show how the data restrictions that we perform as explained in Appendix 3 affect the sample size. Note that the numbers here reflect the number of individual charges rather than individual cases since the data are at the charge level, and the number in each item reflects the number of remaining charges after performing every restriction.

- To obtain charges that were represented by court-appointed attorneys, we match the misdemeanor records to the wheel data (that show the court-appointed attorney). Total number of indigent charges from 2013-2022: 52,685 charges (51,979 unique cases).
- Dropping cases where the attorney was non-randomly assigned by a judge (11%): 46,682 charges.
- Dropping Hispanic defendants, defendants of other races (Asian, Middle Eastern, etc. ...), and defendants with a missing race (40%) : 27,920 charges.
- Dropping assault charges (12%): 24,577 charges.
- Dropping cases that are “active” (no disposition yet) (7%): 22,740 charges.
- Dropping attorneys with less than 29 cases (8%): 20,895 charges.

## Appendix A.2 Classification of Offenses

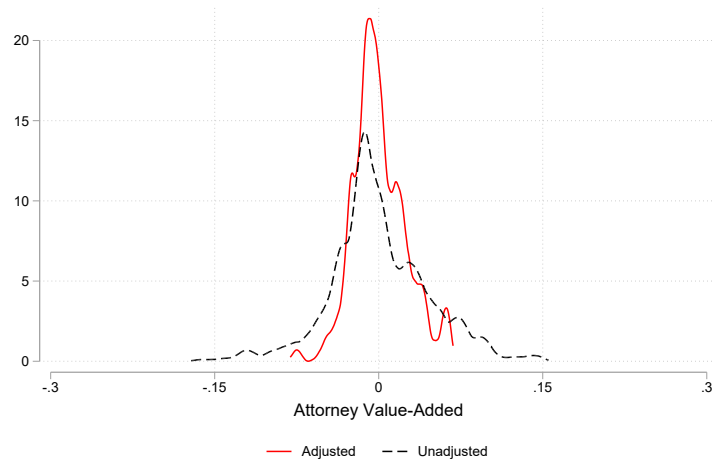
Table A1: Classification of Offenses

Harder to Prove	Easier to Prove
Criminal trespass	Bail jumping
Disorderly conduct	Accident involving damage to vehicle
Evade arrest	Boating while intoxicated
Fail to identify/Give false statement / passageway	Burglary
False alarm	Criminal mischief
False report	Discharge firearm
Fleeing police officer	Drug possession
Harassment	Marijuana possession
Indecent exposure	Driving while intoxicated
Interference w/ emergency call	Engage in organized criminal activity
Interference w/ public duties	Graffiti
Obstruct highway	Illegal dumping
Public intoxication	Theft (including organized retail theft, theft of service, theft of property, theft of mail...)
Riot participation	Invalid license
Prostitution	Reckless driving
Resist arrest/search	Alcohol sales to minors
Riot participation	Tamper with government record
	Terroristic threat
	Unlawful carrying of weapon
	Violation of protective order
	Violation of bond

Notes: Offenses are grouped based on the classification system proposed by Dube et al. (2025a). Harder-to-prove cases often require proof of intent, or rely on subjective judgment or witness credibility, while easier-to-prove cases are often less ambiguous and can be accompanied by objective evidence, such as video.

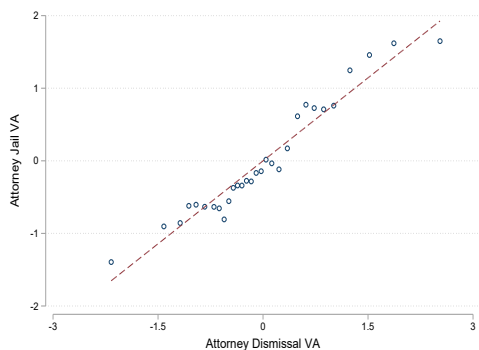
## Appendix B Additional Tables and Figures

Figure B1: Adjusted and Unadjusted Attorney Value-Added

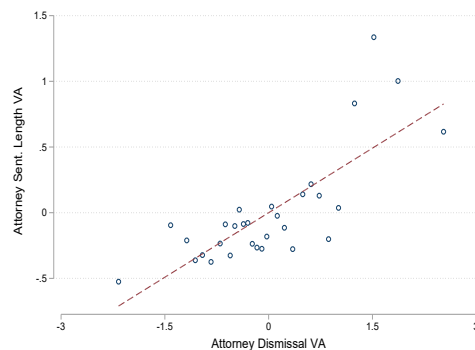


Notes: This figure shows the distribution of attorney value-added measures. The red solid line represents the adjusted (shrunk) value-added, and the black dashed line represents the unadjusted (un-shrunk) value-added.

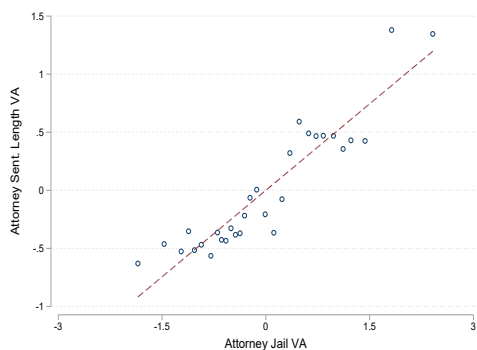
Figure B2: Correlations between Different Measures of Attorney Value-Added



(a) Probability of Jail Value-Added vs. Case Dismissal Value-Added



(b) Jail Sentence Length Value-Added vs. Case Dismissal Value-Added



(c) Jail Sentence Length Value-Added vs. Probability of Jail Value-Added

Notes: These figures show the correlation among different types of attorney value-added measures. We compute attorney quality with respect to three different outcomes: case dismissal, probability of jail sentence, and jail sentence length. Jail sentence length is defined as zero for those who were not sentenced to jail.

Table B1: Correlation between Attorney Value-added and Case Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Predicted Dismissal	Predicted Jail	Predicted Jail Duration	Drug	Property	DWI	Invalid license	Weapon	Other misd.	Black	White	Female	Age (in years)	No. previous charges
<b>Panel A: Unconditional</b>														
Attorney Value-Added	0.00219 (0.00417)	-0.00106 (0.00399)	-0.0463 (0.128)	-0.00427 (0.00341)	-0.00277 (0.00199)	-0.000175 (0.00437)	-0.000677 (0.00300)	0.000787 (0.000960)	0.00710 (0.00781)	0.00393 (0.00443)	-0.00393 (0.00443)	-0.000201 (0.00349)	-0.0805 (0.190)	0.0723 (0.0756)
Observations	20895	20895	20895	20895	20895	20895	20895	20895	20895	20895	20895	20895	20895	20895
Outcome Mean	0.528	0.328	12.33	0.155	0.0857	0.202	0.105	0.0188	0.433	0.331	0.669	0.234	34.48	1.196
<b>Panel B: Month-year FE</b>														
Attorney Value-Added	-0.000145 (0.00172)	0.000628 (0.00223)	0.0362 (0.0803)	-0.00322 (0.00261)	-0.00235 (0.00175)	-0.000359 (0.00412)	0.000418 (0.00197)	0.000449 (0.000843)	0.00506 (0.00590)	0.00316 (0.00417)	-0.00316 (0.00417)	0.000267 (0.00348)	-0.100 (0.194)	0.0604 (0.0713)
Observations	20894	20894	20894	20894	20894	20894	20894	20894	20894	20894	20894	20894	20894	20894
Outcome Mean	0.528	0.328	12.33	0.155	0.0857	0.202	0.105	0.0188	0.433	0.331	0.669	0.234	34.48	1.196
<b>Panel C: Month-year-court FE</b>														
Attorney Value-Added	-0.00154 (0.00174)	0.00116 (0.00221)	0.0214 (0.0690)	-0.00302 (0.00262)	-0.00280 (0.00188)	-0.000696 (0.00394)	0.000201 (0.00206)	0.000478 (0.000901)	0.00584 (0.00572)	0.00223 (0.00398)	-0.00223 (0.00398)	0.00114 (0.00356)	-0.111 (0.200)	0.0533 (0.0679)
Observations	20878	20878	20878	20878	20878	20878	20878	20878	20878	20878	20878	20878	20878	20878
Outcome Mean	0.528	0.328	12.34	0.155	0.0856	0.202	0.105	0.0189	0.433	0.331	0.669	0.234	34.48	1.196

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table shows the correlation between attorney value-added and case characteristics. Predicted outcomes in Columns 1 - 3 are estimated by regressing the outcome variable on all of the case characteristics reported in the table and predicting them based on the estimated coefficients. In all regressions, we control for month-year-court fixed effects, and we cluster the standard errors at the attorney level.

Table B2: The Effect of Attorney Characteristics on Case Dismissal

	(1)	(2)	(3)	(4)
	Dismissed	Dismissed	Dismissed	Dismissed
Experience (in years)	-0.000292 (0.000294)			-0.0000261 (0.000332)
Top 20 law school		-0.00998 (0.00770)		-0.00560 (0.00837)
White attorney			0.0202** (0.00789)	0.0185** (0.00864)
Black attorney			-0.00621 (0.0192)	-0.00630 (0.0187)
N	20895	20277	20895	20277
Outcome Mean	0.528	0.529	0.528	0.529
Month-year-court FE	Y	Y	Y	Y

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table shows the effect of attorney characteristics on case dismissal. Each column presents a separate regression, where we regress case dismissal on attorney characteristics, including years of experience, an indicator variable for graduating from a top 20 law school, and indicator variables for attorney race. The omitted race category includes Hispanic and other race. In all regressions, we control for month-year-court fixed effects and cluster the standard errors at the attorney and the defendant level.

Table B3: Alternative Measures of Attorney Value-Added

	Jail Value-Added	Jail Days Value-Added
<b>Panel A: Full Sample</b>		
Standard deviation	0.025	1.663
<b>Panel B: Black Defendants</b>		
Standard deviation	0.038	2.286
<b>Panel C: White Defendants</b>		
Standard deviation	0.028	1.937

Notes: This table shows the standard deviations of attorney value-added based on alternative outcomes, including the likelihood of jail incarceration and jail sentence length. Panel (A) shows value-added at the attorney level using the full sample, while Panels (B) and (C) show attorney value-added estimated separately for Black and White defendants' cases, respectively.

Table B4: Difference-in-Differences Estimates of Disparate Impact, by Prosecution Difficulty

	(1)	(2)
	Easier to Prove	Harder to Prove
<b>Panel A: Dismissed</b>		
Top 10% attorney X Black def.	0.0466 (0.0409)	0.152*** (0.0346)
Observations	14574	6321
Non-top 10% mean	0.550	0.470
<b>Panel B: Jail</b>		
Top 10% attorney X Black def.	-0.0487 (0.0395)	-0.125*** (0.0450)
Observations	14574	6321
Non-top 10% mean	0.310	0.380
Defendant race indicator	Y	Y
Attorney quality indicator	Y	Y
Month-year-court FE	Y	Y
Case Characteristics	Y	Y

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ 

Notes: This table reports the difference-in-differences results using Equation 7. Charges are classified as “Easier to Prove” or “Harder to Prove” based on Dube et al. (2025b). Column (1) shows results for charges that are easier to prove because the evidence is often reasonably objective and clear. Column (2) shows results for charges that are more difficult to prove, such as those that require proof of intent or the subjective judgment of the officer. For a full list of charges under each category, refer to subsection Appendix A.2. All regressions include month-year-court fixed effects and control for case characteristics, including dummy variables for crime type, defendant sex, age, and number of previous arrests. We also include an indicator for defendant race and an indicator for attorney quality. All standard errors are clustered at the defendant and attorney level.

Table B5: Robustness to Alternative Thresholds for Top-Quality Attorneys

	(1)	(2)	(3)	(4)	(5)
	Top 25%	Top 20%	Top 15%	Top 10%	Top 5%
<b>Panel A: Dismissed</b>					
Top Attorney X Black Def.	0.0334 (0.0207)	0.0526** (0.0218)	0.0618** (0.0258)	0.0887*** (0.0310)	0.163*** (0.0272)
Observations	20895	20895	20895	20895	20895
Non-top quality mean	0.530	0.520	0.520	0.520	0.530
<b>Panel B: Jail</b>					
Top Attorney X Black Def.	-0.00473 (0.0214)	-0.0259 (0.0227)	-0.0433 (0.0263)	-0.0720** (0.0329)	-0.115*** (0.0339)
Observations	20895	20895	20895	20895	20895
Non-top quality mean	0.330	0.330	0.330	0.330	0.330
Defendant race indicator	Y	Y	Y	Y	Y
Attorney quality indicator	Y	Y	Y	Y	Y
Month-year-court FE	Y	Y	Y	Y	Y
Case Characteristics	Y	Y	Y	Y	Y

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table reports the difference-in-differences estimates of disparate impact based on Equation 7. Each column shows results using a different threshold to define “top-quality” attorneys. For example, in Column (1), an attorney is considered to be a top-quality attorney if their attorney value-added is greater than or equal to the 75th percentile of the attorney value-added distribution. All regressions include month-year-court fixed effects and control for case characteristics, including dummy variables for crime type, defendant sex, age, and number of previous arrests. We also include an indicator for defendant race and an indicator for attorney quality. All standard errors are clustered at the defendant and attorney level.

Table B6: Standard Deviations of Attorney Value-Added, by Race

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Main results	Drop charges w/ multiple attorneys	Keep attorneys w/ above-mean caseloads	Leave-one-year-out Attorney VA	Keep assault charges	Drop mental-health court	Unshrunk
<b>Panel A: Full Sample</b>							
Attorney Value-Added (SD)	0.0242	0.0241	0.0221	0.0283	0.0233	0.0262	0.0452
<b>Panel B: Black Defendants</b>							
Attorney Value-Added (SD)	0.0418	0.0440	0.0380	0.0418	0.0386	0.0454	0.0914
<b>Panel C: White Defendants</b>							
Attorney Value-Added (SD)	0.0234	0.0226	0.0201	0.0234	0.0241	0.0260	0.0620
N (Attorneys)	180	180	121	180	182	178	180
N (Full Sample)	20895	19076	18277	20895	23629	18553	20895
N (Black Defendants)	6951	6343	6107	6951	7787	6182	6951
N (White Defendants)	13944	12733	12170	13944	15842	12371	13994

Notes: This table shows the standard deviations of attorney value-added, based on the ability to achieve case dismissals. Each column shows results for a different sample or method of estimating value-added. Column (1) shows standard deviations in the main specification. Column (2) excludes charges involving multiple attorneys from filing to case disposition, and Column (3) restricts the sample to attorneys who handle more than the mean number of charges per attorney. Column (4) calculates attorney VA using a leave-year-out method instead of the leave-month-out method, and Column (5) includes assault charges in the sample, which were excluded in the main analysis to avoid non-random attorney assignments. Column (6) excludes cases assigned to the mental health court. Panel A shows the results for the full sample, and Panels B and C show the results for Black and White defendants, respectively. Column (7) reports the unshrunk estimates of attorney value-added.

Table B7: Robustness of the Difference-in-Differences Disparate Impact Estimates

	(1)	(2)	(3)	(4)	(5)	(6)
	Main results	Drop charges w/ multiple attorneys	Keep attorneys w/ above-mean caseloads	Leave-one-year-out Attorney VA	Keep assault charges	Drop mental- health court
<b>Panel A: Dismissed</b>						
Top 10% attorney X Black def.	0.0889*** (0.0310)	0.0949*** (0.0293)	0.0946*** (0.0322)	0.0942*** (0.0256)	0.0580* (0.0350)	0.103*** (0.0345)
Observations	20895	19076	18277	20895	23629	18553
Non-top 10% mean	0.528	0.527	0.527	0.528	0.523	0.525
<b>Panel B: Jail</b>						
Top 10% attorney X Black def.	-0.0725** (0.0329)	-0.0808** (0.0327)	-0.0768** (0.0331)	-0.0745*** (0.0271)	-0.0324 (0.0350)	-0.0714** (0.0360)
Observations	20895	19076	18277	20895	23629	18553
Non-top 10% mean	0.329	0.334	0.330	0.329	0.322	0.334
<b>Panel C: Jail Sent. Length</b>						
Top 10% attorney X Black def.	-2.236* (1.222)	-2.728** (1.264)	-2.147* (1.154)	-1.402 (1.370)	-0.639 (1.270)	-1.305 (1.195)
Observations	20895	19076	18277	20895	23629	18553
Non-top 10% mean	12.31	12.07	12.18	12.31	13.56	12.47
Defendant race indicator	Y	Y	Y	Y	Y	Y
Attorney quality indicator	Y	Y	Y	Y	Y	Y
Month-year-court FE	Y	Y	Y	Y	Y	Y
Case Characteristics	Y	Y	Y	Y	Y	Y

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Notes: This table reports the difference-in-differences estimates of disparate impact using Equation 7. Each column shows results for a different sample or method of estimating value-added. Column (1) shows the results from the main specification. Column (2) excludes charges involving multiple attorneys from filing to case disposition, and Column (3) restricts the sample to attorneys who handle more than the mean number of charges per attorney. Column (4) calculates attorney VA using a leave-month-out method instead of the leave-year-out method, and Column (5) includes assault charges in the sample, which were excluded in the main analysis to avoid non-random attorney assignments. Column (6) excludes cases assigned to the mental health court. All regressions include month-year-court fixed effects and control for case characteristics, including dummy variables for crime type, defendant sex, age, and number of previous arrests. We also include an indicator for defendant race and an indicator for attorney quality. All standard errors are clustered at the defendant and attorney level.