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AN ANALYSIS OF THE PERFORMANCE OF FEDERAL INDIGENT DEFENSE
COUNSEL

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An Analysis of the Performance of Federal Indigent Defense Counsel
Radha Iyengar
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ABSTRACT

The right to an equal and fair trial regardless of wealth is a hallmark of American jurisprudence. To ensure this right, the government pays attorneys to represent financially needy clients. In the U.S. federal court system, indigent defendants are represented by either public defenders who are salaried employees of the court or private attorneys, known as Criminal Justice Act (CJA) attorneys, who are compensated on an hourly basis. This study measures differences in performance of these types of attorneys and explores some potential causes for these differences. Exploiting the use of random case assignment between the two types of attorneys, an analysis of federal criminal case level data from 1997-2001 from 51 districts indicates that public defenders perform significantly better than CJA panel attorneys in terms of lower conviction rates and sentence lengths. An analysis of data from three districts linking attorney experience, wages, law school quality and average caseload suggests that these variables account for over half of the overall difference in performance. These systematic differences in performance disproportionately affect minority and immigrant communities and as such may constitute a civil rights violation under Title VI of the Civil Rights Act.

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1. INTRODUCTION

The Sixth Amendment guarantees that “in all criminal prosecutions, the accused shall...have the assistance of counsel for his [sic] defense.” The Warren court, through *Gideon v. Wainwright*, implemented this right by requiring the state to provide lawyers to criminal defendants who face imprisonment. In 1964, the passage of the Criminal Justice Act (CJA) heralded the establishment of a federal indigent defense system intended to ensure that everyone, regardless of wealth, had representation to ensure a fair trial. The federal indigent defense system relies on both salaried government workers (public defenders) and hourly-wage earning court-appointed private attorneys (CJA panel attorneys). Over fifty years after the passage of the CJA, there is still a great deal of variation in the quality of services that is provided to the poor potentially related to this appointment of private attorneys.¹ Given that federal funds support both types of attorneys, the variation in performance raises questions of whether the current system meets its legal obligations of fairness as well as whether it is a cost efficient means of providing effective counsel.

This study analyzes the performance of attorneys in the federal indigent defense system using the fact that cases are randomly assigned between CJA attorneys and federal public defenders. In an effort to ensure *ex ante* fairness, each federal district assigns an annually determined fixed proportion of the cases to each group of attorneys. I attempt to verify if this occurred by testing how well a set of observable case and defendant characteristics predict what type of attorney assignment. I reject districts-years in which observables can significantly predict whether a defendant is assigned a CJA panel attorney. After identifying districts in which randomizations appears to be effective, I estimate the difference in probability of guilt and sentence length between CJA panel attorneys and Federal Public Defenders. Defendants with CJA panel attorneys are on average more likely to be found guilty and on average to receive longer sentences. Overall, the expected sentence for defendants with CJA panel attorneys is nearly 8 months longer. Decomposing these differences suggests they are largely due to differences in attorney performance when negotiating a guilty plea and the selection of which cases to plead rather than to take to trial.

¹ For detailed criticisms of the current system see American Bar Association (2004), Butcher and Moore (2000). For detailed analysis regarding the appointment of private counsel in different districts see Wool, Howell, Yedid (2003)

I next compare the characteristics of the two groups of attorneys in 3 federal districts to better understand the relationship between attorney characteristics, payment structure, and performance. CJA panel attorneys, on average, have less experience and attended lower “quality” law schools. This difference in experience and law school quality, combined with the effect of wages and caseload explain over half of the overall difference in expected sentence. Procedurally, the difference in outcomes appears to operate through plea bargaining as higher experience levels and wage rates encourage higher plea rates and lower negotiated sentences. These results appear consistent with the hourly wage structure of CJA contracts which provide incentives for CJA attorneys to take longer to resolve cases. The lower plea rates by CJA panel attorneys overwhelm any cost-saving generated by paying them lower wages. My estimates suggest that using CJA attorneys imposes a cost of approximately \$61 million per year due to higher court costs.

The analysis presented in this paper attempts to establish the nature of the relationship between wage structure, human capital, and specific capital on the selection into and performance of individuals engaged in a service-providing industry. The practice of criminal law by its nature offers clear metrics, such as win rate and sentence length, to measure worker performance and the indigent defense systems which relies on both salaried workers (public defenders) and hourly-wage earning court-appointed private attorneys, such as Criminal Justice Act (CJA) panel attorneys. Random case assignment results in lawyers of varying experience and quality trying similar cases. This provides a mechanism to evaluate how variation in market and lawyer characteristics affects their performance. Moreover, because the CJA panel is voluntary, involvement in it may provide non-pecuniary forms of compensation. The value of alternative forms of compensation, such as client recruitment or on-the-job training, is often difficult to identify or measure. Typically, variation in non-pecuniary compensation is linked to variation in monetary earnings as well as occupation and job type. It is therefore often difficult to isolate the impact of alternative types of compensation on job performance. The potential for on the job training that occurs in the indigent defense market comes at the cost of outside market wages. Thus, as the gap between the wage paid to indigent defense lawyers and the market wage shrinks, the relative value of non-wage compensation becomes more salient. Thus a comparison between these two types of attorneys provides some valuable insight into how workers respond

to opportunities to obtain on-the-job training, which in this situation is trial experience, and the consequences of these workers' decisions on their job performance.

Separate from the economic question of measuring performance, there is a policy concern regarding the fairness of the current court system. The two-tiered system of indigent defense, in which a substantial fraction of the cases are covered by contract workers, is also used in many state systems.² Because the federal system handles only about 5 percent of all criminal cases and is thought to attract substantially higher quality public defenders and contract workers, it is not directly comparable to many state criminal justice systems. To the extent that we believe the overall level of performance in the federal system is higher, we may be especially concerned about the quality of services provided to indigents in the state system. Indeed both anecdotal and empirical evidence suggests that there is considerable room for improvement in the provision of counsel to indigents.³ The quality of services received by indigent defendants varies widely and is associated with differences in the practices of federal panel attorneys.⁴ This variation raises the question of whether improvement needs to occur in both types of workers or if one type of worker is underperforming. The evidence presented in this study may be of some assistance in developing the set of reforms and improvements needed in state indigent defense systems which in many cases parallel the structure of the federal system.

Of especially great concern is that the difference in outcomes between CJA panel attorneys and public defenders presented in this paper are correlated with the race of the defendants. Specifically, districts with a higher fraction of caseload assigned to CJA panel attorneys are also districts with more minority defendants. Additionally, in non-randomizing districts, blacks are more likely to be assigned a CJA panel attorney than are whites. As a result, poor representation in the federal indigent defense system disproportionately impacts minorities. Because there does not appear to be an invidious purpose behind the creation of the current indigent defense system, the systematic provision of poor quality counsel likely does not violate any constitutional rights.⁵ However, under a disparate impact conception of discrimination, the

² Approximately one-third of prosecutors offices use a system of public defenders and contract workers akin to the federal system. However, more than half of all indigent defense systems use some combination of public defenders, contract attorneys and assigned counsel. (Harlow, 2000)

³ For detailed criticisms see American Bar Association (2004), Butcher and Moore (2000)

⁴ For an analysis of the practices of different districts see Wool, Howell, Yedid (2003)

⁵ This standard of discrimination is based on Personnel Administrator of Massachusetts v. Feeney 442 U.S. 256 (1979) and Washington v. Davis, 426 US 229 (1976).

ex-post differences in outcomes may violate the Civil Rights Act.⁶ Thus, the seemingly neutral system intended to provide counsel to financially needy defendants results in *de facto* discrimination against minority defendants.

2. BACKGROUND INFORMATION

2.1 THE FEDERAL INDIGENT DEFENSE SYSTEM

To qualify for representation in the federal indigent defense system, an individual must be charged with an imprisonable federal offense. In most cases these offenses are felonies or Class A misdemeanors. If an individual is arrested for a federal offense, that charge may be pursued through five stages:

1. Issuance of a charging document: Involves the formal filing of charges on which the defendant will be tried in a court of law. The defendant is not party to this proceeding. At least one of these offenses must be sufficiently serious to invoke an individual's right to federally funded counsel.
2. Arraignment: Formally informs the defendant of the charges upon which he or she will be tried and assigns counsel. If the defendant can establish that he or she is financially unable to provide counsel, one of the two types of indigent defense counsels will be appointed.
3. Detention Hearing: Determines bail and the nature of any pre-trial detention imposed on the defendant
4. Guilt determination: Establishes whether the defendant is guilty, beyond a reasonable doubt, of at least one of the charges for which he or she is charge. It either involves a negotiated agreement in which the defendant pleads guilty to a charge in exchanged for a sentence recommendation or a trial in which evidence is presented to a judge or jury, who then determine the defendant's guilt.
5. Sentencing Hearing: Only occurs if the defendant is convicted of a crime. In such a case, this hearing imposes a sentence on the defendant.

⁶ Title VI of the Civil Rights Act of 1964 42 U.S.C § 2000d expressly prohibits discrimination in any program which uses federal money.

If the defendant can establish that he or she cannot afford the necessities of life for him/herself and any dependents in addition to the cost of counsel, then the counsel is appointed. In the federal system, this results in one of two types of attorneys representing the defendant.

- Federal Public Defender: These are salaried federal workers who represent indigent defendants as their full-time job.
- Criminal Justice Act (CJA) Panel Attorney: These are private attorneys who are selected to be on a panel of qualified individuals and contacted by the federal government on a case-by-case basis.⁷ While the criteria required to apply to be considered vary by district they typically involve a minimum number of years of experience and good standing in the state bar association.

These two types of counsel split the indigent caseload for the district in a predetermined ratio. Appointment of cases to one of the two types of attorneys is done either through the court clerk's office or through the federal public defenders' office. In either system, cases are randomly assigned to either the panel or the public defender pool and then a specific attorney is also randomly assigned. Attorney assignment typically occurs in a rotational manner to ensure equitable distribution of cases. Except in very rare cases, it is not possible to request a specific attorney.⁸

2.2 ADMINISTRATIVE DATA

Using data from the Administrative Office of the U.S. Courts (AOUSC) Criminal Docket, I was able to observe the type of crime committed at the initial filing, the type of attorney assigned at the initial filing, as well as the disposition of the case for all criminal cases from 1997-2002. The AOUSC court data does not report defendant characteristics, such as age, race, marital status, or citizenship. To track defendant characteristics, the Bureau of Justice Statistics created a special linkage that set up a non-identifying case and defendant code which matched individuals from arrest records maintained by the Federal Bureau of Investigation

⁷ These individuals are typically judges and defense attorneys

⁸ For a more detailed description about criminal procedures, indigent defense eligibility, or attorney assignment see Appendix A.

(FBI), US Marshall's Service (USMS), and Drug Enforcement Agency (DEA).⁹ These data also track the defendant through the process, so it is possible to verify attorney assignment and charging offenses at different stages.

Table 1 shows the distribution of offenses and characteristics of defendants represented by different types of attorneys for all 96 federal districts from 1997-2001.¹⁰ This table includes two types of non-indigent counsel, privately retained attorneys and pro se counsel (where individuals defend themselves). It appears that indigent defense cases account for a majority of federal criminal cases. There also appear to be differences in the demographic characteristics of defendants by type of counsel.

[TABLE 1 ABOUT HERE]

Defendants who retain private attorneys are much less likely to be minorities, are more likely to be married and are slightly older. In general, these characteristics are also correlated with the distribution of types of crimes covered by private attorneys. Private attorneys tend to represent individuals charged with public order offenses, which are largely white collar and federal financial crimes. In contrast, individuals charged with drug crimes are much more likely to be represented by indigent defense counsel. In part these differences may be correlated to the differences in the distribution of race by attorney type.

2.3 VERIFICATION OF RANDOM ASSIGNMENT

Because I would like to attribute differences in outcomes to differences in performance I wish to restrict any analysis to districts that randomly assign cases. Although all districts with a substantial fraction of cases covered by CJA or public defenders should randomly assign cases, I attempt to statistically confirm that such assignment took place. This requires that I exclude districts-years in which 85 percent or more of cases are covered by CJA panel attorneys as these

⁹ The data used in this paper is a subset of the Cases Terminated files, maintained by the AOUSC. However, not all cases could be matched to defendant records. As such, for the time period, this data constitutes between 90-95 percent of the cases in any given year.

¹⁰ Crosswalk showing the classification of filing offenses into BJS classified subcategories and main categories available upon request. Tables 1 uses the main category classification. Later analysis is done using subcategories.

districts are not required to randomly assign (this excludes 18 districts and 8 percent of cases).¹¹ In addition, I restrict my analysis to district-years with a sufficiently large number of cases per year to allow analysis (identification requires that I set this at 30 cases in a district-year). This criterion does not reduce the dataset substantially. While 11 percent of the district-years have too few cases, when these district-years are excluded only about 3 percent of the sample of cases are excluded. This leaves 338 district-years for analysis.

Since the probability with which a defendant receives a type of counsel is dependent on his or her defendant number within the case, I limit my analysis to the “first” defendant.¹² If defendants are randomly assigned a number in their given case, as most courts claim they are, and then selecting the first defendant should not create a bias. However, if the process by which defendants are assigned a position within the case is non-random, this restriction may bias the sample in the direction of the failure of randomization. Approximately 11 percent of cases have 2 or more defendants.

To verify the randomization of case assignment, I tested how well a set of observable characteristics, such as the race, age, and sex of defendant as well as the specific offense with which the defendant was charged, predict the type of attorney assigned. If randomization of assignment was truly achieved, then defendant characteristics and crime type should not influence the type of attorney a defendant is assigned. To formally test this, I estimate a probit of the probability of being assigned a *CJA* panel attorney on defendant characteristics and type of crime for each district-year within the experience graded major crime groups.¹³ This procedure

¹¹ Districts with no cases covered by public defenders are: Eastern District of Wisconsin, Southern District of Georgia, Northern District of Alabama, Eastern District of Kentucky, Maine, Northern District of Mississippi, Southern District of Mississippi, Western District of North Carolina, North Dakota, Western District of Virginia, Northern District of West Virginia,. Districts with very few cases covered by public defenders are: Western District of Wisconsin (.92), Rhode Island (.99), Vermont (.88), Eastern District of Virginia (.97), Middle District of Georgia (.99), Northern District of Indiana (.94), Northern Marina Islands (.98), and South Dakota (.89).

¹² For cases with multiple defendants the process is more complicated. In a case with multiple defendants, the defendants are randomly assigned an order. Then defendant 1 is assigned either a public defender or a *CJA* panel attorney as described above. If defendant 1 is assigned a public defender, defendants 2 through *n* are assigned different *CJA* panel attorneys. If defendant 1 is assigned a *CJA* panel attorney, then defendant 2 is assigned either a public defender or a *CJA* panel attorney. If defendant 2 is assigned a public defender, defendants 3 through *n* are assigned *CJA* panel attorneys. If defendant 2 is assigned a *CJA* panel attorney, the process moves to defendant 3. In this case, although defendant 2 may be assigned either type of attorney, the probability that he or she would be assigned a *CJA* panel attorney is going to be higher than if he or she was the first defendant.

¹³ The major crime groups are typically separated into between 3 and 6 groups. Violent crimes require the most experienced attorneys. White collar offenses and RICO offenses also tend to require a higher level of experience. Theft and serious property offenses are considered mid-experience range cases. The groups of offenses with no experience restrictions are drugs weapons, and immigration offenses. All analysis presented in this paper controls for these 6 crime categories. For additional details on the assignment procedures see Appendix A.

is equivalent to fitting a discriminant function but instead of determining the best predictor I verify that the observable are poor predictors. Each of these categories of variables, race, sex, marital status, citizenship, offense category, and age are represented as a vector of indicator variables. Thus, the regression includes a full set of dummy variables for race (*black, Native American, Asian*), sex (*female*), marital status (*divorced, widowed, separated*), U.S. citizenship (*citizen*), offense category (51 BJS offense sub-categories), as well as a continuous variable for defendant age.¹⁴ Under the null hypothesis of randomization, I would expect that the vector of variables for defendant race, defendant sex, defendant marital status, age, defendant citizenship and offense category for the defendant's crime should be jointly insignificant. I therefore define the failure to randomly assign for a district-year as having joint significance of all variables in the regression is at or below the 0.05 level.¹⁵

Even under the null of random assignment, using a .05 level cutoff rule would result in 5 percent of the districts appearing not to randomly assign. I nevertheless remove these districts from the data because I cannot identify the districts that randomly assign but fall into this *p*-value range from districts that do not randomly assign. This process eliminates just over one-third of the remaining district-years leaving 51 districts, 225 district-years and about 50,000 cases for analysis.

While this analysis is conservative in the sense that it may exclude districts that do actually randomly assign, it may allow the inclusion of some districts which do not actually randomly assign but statistically appear to do so. To try to increase the power of this test, I also contact each district to verify what method the district uses for random assignment. Using this information, I exclude an additional 6 districts in 9 district-years. This leaves 45 districts, 216 district-years, and about 45,000 cases for analysis.

There were some regional patterns in rejection rates of districts. Districts in the south were more likely to fail randomization as were districts in the mid-west. Most districts failed in only one or two years however, some districts failed in all five years.¹⁶ Of the 15 largest

¹⁴ Note that while in theory there might be as many as 60 variables in any given regression, the maximum number of variables in any given district-year regression is 27 and as such districts were required to have 30 observations to be included in the regression. Analysis restricting to those district-years with more than 60 cases does not substantially change results.

¹⁵ Randomization in theory occurs at the same proportion over the course of the year. However, because of time trends in arrest patterns and crime commission, it is not possible to explicitly test for time-invariance of lawyer assignment within a year.

¹⁶ For a tables detailing districts failing randomization, see Appendix C.

districts, only the Texas Western District and the Georgia Northern district were excluded for at least 1 year. Among smaller districts, rejection was more common though rarely for all 5 years.¹⁷

3. RESULTS

3.1 DIFFERENCES IN PERFORMANCE

Restricting my attention to the set of districts that appear to randomly assign cases between two groups of lawyers, I next evaluate their relative effectiveness in representing indigent clients. I consider two outcomes:

- Fraction of cases resulting in a guilty verdict: This is the fraction of total cases in which the defendant either pleads guilty or is convicted at trial.
- Average sentence for all cases: This is defined as the average prison term for all cases regardless of outcome. Sentences for acquittals and dismissals are defined as zero.

These outcomes use the entire universe of cases that appear to randomly assign and as such I would expect there to be little difference in the outcome between types of attorneys. Moreover, differences in either outcome can be attributed to differences in the quality of representation provided and not to case quality. This is true because, on average, within a district year CJA panel attorneys and public defenders should have the same underlying distribution of guilt in the cases they represent and thus are equally likely to lose at trial.

I begin my analysis of case outcomes by estimating a simple probit regression of the probability of guilt on an indicator for the type of attorney. Table 2, Panel A, column 1 reports the marginal effects of this regression evaluated at the mean of each variable. It appears that defendants with CJA panel attorneys are more likely to be found guilty. Next controlling for district, year and crime effects, I estimated a parsimoniously specified probit:

$$\Pr(\textit{guilty} = 1) = \Phi[\beta_0 + \beta_1 \textit{CJA} + \textit{district FE} + \textit{year FE} + \textit{crime FE}] \quad (1)$$

In equation (1), *CJA* is an indicator variable for whether the case was handled by a CJA panel attorney or a Federal Public Defender. The variables *district FE*, *year FE*, and *crime FE* are the fixed effects for the district in which the case was filed, the year of initial case filing and the

¹⁷ According to discussions with clerks in several districts, the presence of “related cases” which are not observable in the dataset will result in a district being unable to randomly assign for those cases. In small districts, this may be a large fraction of cases in a given district year and thus appear as though the district does not randomly assign.

major crime category respectively. Table 2, Panel A, Column 2 reports the results of this model. Defendants assigned to CJA panel attorneys remain slightly more likely to be found guilty, with a difference of 2.8 tenths of a percentage point. While the magnitude of this effect is small, the overall probability of being found guilty is nearly 97 percent. As such, the increase in probability of guilt attributed to having a CJA attorney covers 10 percent of the remaining 3 percent probability of being found not guilty.

[TABLE 2 ABOUT HERE]

To further control for defendant characteristics, I estimate:

$$\Pr(\textit{guilty} = 1) = \Phi[\beta_0 + \beta_1\textit{CJA} + \beta_2\textit{black} + \beta_3\textit{NA} + \beta_4\textit{asian} + \beta_5\textit{female} + \beta_6\textit{age} + \textit{district FE} + \textit{year FE} + \textit{crime FE}] \quad (2)$$

In equation (2), *black*, *NA*, and *asian* are indicator variables for whether the defendant is black, Native American, or Asian, respectively. The variable *female* is an indicator for whether the defendant is female. The variable *age* is the age of the defendant at the time of initial case filing. Under random case assignment, the gap in attorney performance should be unaffected by defendant demographic controls. As reported in Table 2, Panel A, Column 3, the coefficient on the CJA indicators changes insignificantly after including demographic controls (which is also additional evidence supporting random assignment). Because the unit of randomization is a district in a given year, I next estimate a specification with district-year fixed effects. Specifically, I estimate:

$$\Pr(\textit{guilty} = 1) = \Phi[\beta_0 + \beta_1\textit{CJA} + \beta_2\textit{black} + \beta_3\textit{NA} + \beta_4\textit{asian} + \beta_5\textit{female} + \beta_6\textit{age} + \textit{district year FE} + \textit{crime FE}] \quad (3)$$

The results from equation 3 are reported in Table 2, Panel A, column 4. This analysis shows that there is little difference between using district-year fixed effects and using district and year fixed effects.¹⁸ The gap appears quite robust to specification. These estimates suggest that defendants assigned CJA panel attorneys are three-tenths of a percentage point more likely to be convicted.

For each type of attorney, I next tested whether the difference in case outcomes varies across the type of crime with which the defendant was charged. Given the way in which case

¹⁸ All subsequent analysis is repeated for rejected districts and presented in Appendix C. Analysis presented in this paper uses a rejection criterion of 0.05 level but analysis using rejection at the 0.10 level is available upon request.

assignment occurs, this analysis may provide insight into the role experience plays in affecting case outcomes. To do this, I estimated a probit with district and year fixed effects and included interaction terms between major crime categories and the CJA indicator variable. Specifically, I estimated:

$$\begin{aligned} \Pr(\text{guilty} = 1) = \Phi[\beta_0 + \beta_1 CJA * \text{violent} + \beta_2 CJA * \text{property} + \beta_3 CJA * \text{drugs} + \beta_4 CJA * \text{p.o.} \\ + \beta_5 CJA * \text{weapons} + \beta_6 CJA * \text{immigration} + \beta_7 \text{violent} + \beta_8 \text{property} + \beta_9 \text{drugs} \\ + \beta_{10} \text{p.o.} + \beta_{11} \text{weapons} + \beta_{12} \text{black} + \beta_{13} \text{NA} + \beta_{14} \text{asian} + \beta_{15} \text{female} + \beta_{16} \text{age} \\ + \text{district FE} + \text{year FE} + \text{crime FE}] \end{aligned} \quad (4)$$

In equation (4), I include interaction terms between the major crime categories and the *CJA* indicator variable. The major crime variables are *violent*, which includes all violent crimes, *property*, which includes property crimes such as thefts, *drugs*, which includes all drug offenses including possession, sales and trafficking, *p.o.*, which includes all public order offenses including most white-collar financial crimes, *weapons*, which include all weapons offenses including possession and sales, and *immigration*, which includes all immigration related offenses.¹⁹ I also include crime subcategory fixed effects to control for the specific type of crime committed within these broad categories. I repeat this analysis using district-year fixed effects. The results from both of these specifications are reported in Panel B of Table 2. It appears that much of the difference in performance before public defenders and CJA attorneys in cases involving weapons and drugs offenses. In part, this may be due to the high fraction of cases in these categories, allowing better identification of differences in these categories. This may also be due to the structure of randomization. In some districts, cases are placed into severity tiers (randomization occurs within these tiers), based largely on the major crime category. Most drugs and weapons offenses are considered less severe (typical charges are for low-level distribution or personal possession). Violent offenses are considered very severe. Public order and property offenses fall somewhere in between. Cases are randomly assigned to a type of attorney (e.g. CJA or public defender), but the specific attorney assigned will have the requisite experience deemed necessary to defend against the type of charge. In this situation, drugs and weapons charges will be handled by the least experienced attorneys, while violent offenses will be

¹⁹ The classification of offenses into these categories is based on the Bureau of Justice Statistics classification of primary offense categories. See Appendix E for categories

handled by the most experienced attorneys.²⁰ In this light, the results from Panel B of Table 2 suggest that highly experienced attorneys, regardless of type, perform similarly while the lesser experienced public defenders perform better than the lesser experienced CJA panel attorneys.

I conduct a parallel analysis of sentence length, which also suggests that public defenders may outperform CJA panel attorneys. I begin by estimating a simple difference in means using an unconditional linear regression. The results from this simple difference, reported in Table 2, When controlling for district, year, and offense type the difference in sentence length increases to about 5 months (Table 2, Panel A, Column 6). Table 2, Panel A, Column 7 reports results after including defendant characteristic controls. Again, this verifies random assignment as the inclusion of demographic controls does not affect the difference in sentence length between the two types of attorneys. The results from including district-year fixed effects are reported in Table 2, Panel A, Column 8. There is little change in the difference in sentence length with using district-year fixed effects, suggesting that the 5 month difference is relatively robust to specification. It is worth noting that conditional on district, year, and type of offense, black defendants receive substantially longer sentences than comparable white defendants.²¹

In the bottom panel of Table 2 (Panel B), I test whether the difference in sentence length varies across type of crime. I estimated a linear regression with district and year fixed effects and included interaction terms between major crime categories and the CJA indicator variable. I repeat the analysis using district-year fixed effects. The biggest differences are again concentrated in weapons and drugs offenses. In part, this may be due to mandatory sentencing for weapons and drugs offenses. In these categories, increased probability of conviction will have much larger impact on sentence length as judges have no discretion to adjust sentences based on case-specific characteristics.²² Moreover, while some convictions (for example for

²⁰ Evidence for the difference in experience level of attorneys handling various major offense categories comes from conversations with district clerks regarding the administration of the assignment of cases to indigent counsel as well as from the district specific CJA Plans guiding the implementation of an indigent defense system.

²¹ Of significant concern in this analysis is the fraction of the sample with zero sentence length. Appendix C presents some additional specifications and sensitivity checks addressing this issue.

²² According to Freed (1992, p. 1690), there are approximately 100 federal mandatory minimum penalties, contained in 60 different criminal statutes most of which involve drugs and/or the use of a gun. An analysis of sentence length conditional on conviction shows much lower variance in sentence length for offenders convicted of the same crime in drug and weapons cases relative to those convicted of other offenses. This supports the idea that the specific crime, not judicial discretion, generates differences in sentences in these cases.

property crimes) could result in only probation, mandatory sentencing requires prison time for most drugs and weapons offenses.

3.4 THE ROLE OF PLEA BARGAINING

Because most cases are disposed of using plea bargains, understanding performance differences requires an analysis of the relative plea rates of the two types of attorneys. This paper will use a notion of efficient plea bargains to measure attorney performance. Because trials are costly both in terms of time and monetary expenditures, from an efficiency standpoint, plea bargaining is a lower cost way to resolve criminal disputes. Plea bargains shorten the duration of a case and save the cost of a courtroom trial. Therefore if a higher fraction of cases which a final disposition of guilty are disposed of with a negotiated plea rather than an trial, this may be a form of efficient attorney performance.

Moreover, plea bargains have the potential to be a pareto improvement. If defendants are sufficiently risk averse then a negotiated shorter sentence is preferable to the risk of a higher sentence at trial.²³ Consider the extreme example of a guilty defendant who will be convicted at trial with probability one. In this case, the plea serves only to shorten the defendant's sentence and reduce the administrative costs of the case. The question of undue pressure for the innocent to plead guilty is moot as the injustice of the system (should any exist) is not generated by the decision to plead guilty.²⁴ Lastly, if prosecutors are averse to losses, then they will be willing to lessen the severity of charges in exchange for a guilty plea. Thus, all parties in this system may be made better off by plea bargaining.

To study plea rates, I first define plea cases as cases in which the defendant pleads guilty or *no lo contendre* to either the top charge or a lesser included charge and waives his or her right to a trial or future appeal. I estimate several specifications, reported in Table 3 Panel A. Regardless of specification, it appears that defendants with CJA panel attorneys are nearly 1 percentage points less likely to plead guilty. This corresponds to 20 percent of the remaining 5

²³ These situations, there are serious fairness concerns when risk-aversion (especially aversion that may be due to perceived racial or class-based biases in the system) rather than true guilt determines who is found guilty in court. For a discussion of the relationship between plea bargaining and the distribution of risk aversion, see Kobayashi and Lott (1996)

²⁴ The question of whether plea bargains generate excess pressure for innocent defendants to plead guilty is outside the scope of this paper. Chin and Holmes (2002) discuss the relationship between ineffective counsel and guilty pleas. However, several papers suggest that plea bargaining can be structured to ensure truthful revelation. See for example Grossman and Katz (1983).

percent of unplead cases. Repeating this analysis by type of crime, it appears that again, much of the effect is concentrated in weapons and drugs cases.

[TABLE 3 ABOUT HERE]

Pleading guilty in part works because defendants are able to plead guilty to less severe crimes (and therefore receive shorter sentences) in exchange for saving the government the cost of a trial.²⁵ The most effective form of plea bargaining then is pleading guilty to a lesser charge (typically included in the indictment). Therefore, I also estimate the relationship between attorney type and the probability of pleading guilty to a lesser included charge. It appears that CJA panel attorneys are over 8 percentage points less likely to negotiate pleas for lesser included charges. This difference again is especially pronounced in drugs and weapons offenses. This highlights the importance of plea bargaining in determining expected sentence length. Pleading to lesser included offenses allows defendants to either receive lower mandatory sentences or avail themselves of judicial discretion. In these cases, plea bargaining is the only way to negotiate lower sentences for defendants, as the sentences imposed at the sentencing hearing are highly constrained by federal guidelines.

The analysis of plea rates sheds some light on what is generating the overall difference in guilty rates and sentence length. The difference in the probability of being found guilty combined with the lower plea rates by CJA panel attorneys suggests that: 1) CJA attorneys are performing significantly worse at trial and/or 2) CJA panel attorneys are not taking the “right” cases to trial. I cannot determine whether CJA panel attorneys are only pleading only a proper subset of the cases that public defenders are pleading or if they are pleading an intersection set of cases. Given the high probability of plea bargaining among both groups of attorneys, it is likely that there is significant overlap in the cases which each type of attorney decides to plead guilty. Nevertheless, it appears that in some way, be it in the decision of what cases to plead or the quality of negotiations during the plea bargaining stage, the use of guilty pleas plays an important part in explaining the difference in attorney performance. Moreover, the difference in plea rates highlights an important reason why CJA attorneys may perform worse than public defenders. CJA attorneys receive an hourly wage which until recently was higher during in

²⁵ Evidence suggests that the sentencing guidelines shifted prosecutors from sentence bargaining to bargaining over the charges or guideline factors regarding mitigating or aggravating circumstances (Nagel and Schulhofer, 1997)

court-room appearances than during out-of-court work. Even when plea bargaining, CJA attorneys take significantly longer to dispose of cases (by about 20 days, corresponding to about 10 percent longer). Such payment structure may therefore encourage not only overuse of courtroom procedures but also significantly worse outcomes for defendants with CJA attorneys.

Analysis of case outcome and sentencing rates reveals differences but it is unclear if the overall difference between public defenders and CJA panel attorneys is due to performance at trial or incorrect decisions about which cases to take to trial in the first place. Moreover, because of the differing rates at which the lawyers plead as the differing sentence length, it is unclear how to attribute raw differences in outcomes to differences in performance at the various stages of criminal proceeding, and how much to attribute to the single decision of whether to plead guilty or not.

It is possible that understanding in which stage differences will help uncover the mechanism through which these differences arise. I therefore constructed a set of overall measures to be used in decomposition analysis. To estimate the overall difference in performance, I estimated the expected sentence for defendants with each type of lawyer. I defined the expected sentence as:

$$E(\textit{sentence}) = \Pr(\textit{plea} = 1) * (\textit{sentence} | \textit{plea} = 1) + \Pr(\textit{plea} = 0) * (\textit{sentence} | \textit{plea} = 0) \quad (5)$$

I then estimated these outcomes (the probability of plea bargaining and the sentence conditional on plea bargaining or not) by type of attorney. From these estimates, I constructed eight predicted values from which I then construct two measures of expected sentence length:

$$E(\textit{sentence} | CJA = 1) = J_{CJA} = \hat{P}_{CJA} * \hat{S}_{CJA}^P + (1 - \hat{P}_{CJA}) * \hat{S}_{CJA}^C \quad (6)$$

$$E(\textit{sentence} | CJA = 0) = J_{PD} = \hat{P}_{PD} * \hat{S}_{PD}^P + (1 - \hat{P}_{PD}) * \hat{S}_{PD}^C \quad (7)$$

To determine the proportional difference, the first column of Table 4 reports the difference in these two measures, i.e. $J_{CJA} - J_{PD}$. Overall, defendants with CJA attorneys have nearly eight months of additional jail time. Repeating the above analysis by primary offense type, it appears that the effect of having a CJA panel attorney ranges from a difference of about 5 months for violent offenses to a difference of nearly a year and a half for weapons offenses. Immigration offenses move in the opposite direction, so that defendants with CJA panel attorneys have about 2.5 month shorter sentences.

I next decompose the overall effect into six components, three of which are due to attorney performance holding the distribution of case characteristics fixed and three of which are due to selection of cases into the given stage, holding attorney performance fixed.²⁶ I define an estimate of expected sentence length with Public Defender case characteristics but CJA parameters. Define this predicted expected sentence length as:

$$\tilde{J} = \tilde{P} * \tilde{S}^P + (1 - \tilde{P}) * \tilde{S}^C \quad (8)$$

These variables in equation (8) \tilde{P} , \tilde{S}^P , and \tilde{S}^C correspond to the predicted expected probability of plea bargaining for CJA panel attorney cases at public defender parameter values, the predicted sentence length in pleaded cases for public defender cases at CJA panel attorney parameter values, and the predicted sentence in trial cases for public defender cases at CJA panel attorney parameter values, respectively. Taking the difference between equations (6) and (7), I add and subtract \tilde{J} . After some algebra, this yields:

$$\begin{aligned} J_{CJA} - J_{PD} = & (\hat{P}_{CJA} - \tilde{P})(\tilde{S}^P - \tilde{S}^C) + \hat{P}_{CJA}(\hat{S}_{CJA}^P - \tilde{S}^P) + (1 - \hat{P}_{CJA})(\hat{S}_{CJA}^C - \tilde{S}^C) \\ & + (\tilde{P} - \hat{P}_{PD})(\hat{S}_{PD}^P - \hat{S}_{PD}^C) + \tilde{P}(\tilde{S}^P - \hat{S}_{PD}^P) + (1 - \hat{P}_{PD})(\tilde{S}^C - \hat{S}_{PD}^C) \end{aligned} \quad (9)$$

In equation (9) the first line of the equation contains terms which measure attorney procedural performance holding case characteristics fixed. This measures how well the attorney advocates in a given procedure (e.g. trial or plea negotiations) holding fixed the offense type and defendant characteristics as well as district and year fixed effects. The second line contains terms which measure the effect of selecting certain cases to plead guilty, holding attorney procedural performance fixed. This measures the effect of the decision to plead guilty on outcomes, assuming that attorneys perform equally well once a given case is in a specific procedural stage. The stages are the decision-to-plea stage, the plea-sentencing stage and the trial-sentence stage. The decision to plea stage measures the effect of pleading guilty or not, regardless of the outcome of the plea. The plea sentencing stage measures the quality of plea, defining higher quality pleas as those with shorter sentences (conditional on type of crime). The trial-sentence

²⁶ Standard errors for these estimates are constructed by bootstrapping. The process involves drawing from the sample, with replacement, then constructing the estimates of J_{CJA} and J_{PD} , as well as a J_{CJA} and J_{PD} for each primary offense category. I repeated this process 1000 times and then constructed the standard error of the mean from these estimates.

stage includes acquittals and dismissals, treating these cases as being assigned no prison sentence.²⁷

Of the 7.76 months difference in sentence length, over half of the difference is due to attorney procedural performance related measures. It appears a little more than half of the difference in expected sentences is due to how well the attorney can plea bargain and negotiate sentences and a little less than half is due to how the attorney determines which cases should be plead versus those which go to trial. This decomposition also provides a check of random assignment. If cases are randomly assigned then term four should be zero since there should be no difference in case characteristics between the two types of attorney at the beginning of criminal proceedings. In all cases, there appears to be no significant difference in the case characteristics between CJA attorneys and public defenders at the plea stage.

[TABLE 4 ABOUT HERE]

Table 4 also reports the decomposition by major crime type. The relative importance of different measures of attorney performance is similar across major crime category. For violent, property, and public order offenses, nearly half of the expected sentence length is due to the difference in attorney performance during plea bargaining. Between a quarter and a third of the difference is explained by the difference in case characteristics for cases which are in the plea sentencing stage. For weapons offenses, nearly 85 percent of the 17 month difference in expected sentence length is due to difference in attorney performance when plea bargaining. For drug offenses, on the other hand, over half of the difference in expected sentence length is due to case characteristics. The last major crime category considered is immigration offenses, where defendants with CJA attorneys receive shorter sentences. Consistent with the other case categories, CJA attorneys perform worse during plea bargaining. In contrast with the other case categories, the case characteristics of trial cases explain the shorter sentences for CJA panel attorneys relative to the public defenders. Overall, it appears that attorney performance is responsible for a large fraction of the overall difference in expected sentence length. Although there is some variation across the type of crime committed, these results are robust across most

²⁷ The detailed algebraic derivation of this decomposition is presented in Appendix D.

crime types. These differences also do not appear due to case characteristics pre-case assignment, confirming random assignment.

3.5 THE IMPACT OF WAGES, EXPERIENCE, AND LAW SCHOOL QUALITY ON ATTORNEY PERFORMANCE

The previous analysis suggests that wage structure, experience and other labor market factors might explain the difference in attorney outcomes. I collect data on attorney characteristics from 3 districts to explore this hypothesis in greater detail. Taking the AOUSC Criminal Master File, I used the case docket numbers to identify the cases. Then using PACER, the Federal Court on-line case management system, it was possible to find the case records, which identify the lawyer. This collection was done for three districts (all of which passed the randomization tests): California Southern District, California Central District, and Arizona. These districts were chosen in part because their court records are currently on-line. The PACER system for District level dockets is not fully implemented and so not all districts have their court dockets available on line. In addition, these districts are in states that have on-line publicly accessible attorney information available through their State Bar Associations. Using this look-up service, I linked attorneys to the date they passed the bar as well as the law school they attended as a measure of their experience and ability respectively.

These districts were not chosen randomly and are not representative of the nation. In particular, all 3 districts are relatively large and include major metropolitan areas. Some summary statistics for these districts are presented in Panel A of Table 5. The districts have a higher fraction of white defendants (which includes Hispanics) and a lower fraction of black defendants than is true on average nationwide. The districts also have a significantly higher fraction of non-US citizens (nearly 75 percent of the sample is non-citizens in the 3 districts, compared to 47 percent nationwide). Naturally, this results in a higher fraction of immigration cases in these districts as well (46 percent in the 3-districts compared to 20 percent nationwide). Excluding immigration cases, there is a higher fraction of drug cases and a lower fraction of public order cases and weapons cases. There is approximately the same fraction of violent and serious property crime cases.

[TABLE 5 ABOUT HERE]

To examine whether there are differences in the attorneys in the two tiers of the indigent defense system, I define several variables to measure differences in outside opportunities and attorney characteristics. One characteristic which might be important for performance is the legal experience of the attorney. I defined experience as number of years the attorney has practiced law in the district where he or she was assigned a case, and therefore construct it as year the case was filed minus year the attorney passed the bar in that state. While in most cases this measure will accurately represent years of practice, some attorneys may have practiced for many years in other states and only passed the bar after moving to their current state. For these attorneys this experience measure will understate their experience. Similarly, for attorneys who passed the bar and then took time off from practice to engage in other activities, this measure will overstate their experience.

I also use the law school each lawyer attended as some measure of ability (either innate or acquired through human capital from their law school). I rank the law schools using the *U.S. News and World Reports* ranking from 2005. I break the differences down by tiers. Tier 1 includes law schools ranked 1 through 10. Tier 2 includes law schools ranked 11 through 25. Tier 3 includes law schools ranked 26 through 50. Tier 4 includes law schools ranked 51-100. Tier 5 includes law schools ranked 101 through 134 (this is the *U.S. News and World Reports* “tier 2” schools). Tier 6 includes law schools ranked 135 through 177 (this is *U.S. News and World Reports* “tier 3” schools).²⁸

In addition to lawyer-specific characteristics, I also look at some market variables. The variation in outside opportunity wages is likely to result in different types of attorneys selecting to be CJA panel attorneys and public defenders and as such could influence the performance of the attorneys in criminal proceedings. I develop a variable called the attorney wage gap, which is defined as the wage the federal government pays minus the outside opportunity wage. For CJA panel attorneys, the wage gap is defined as the wage the attorney receives for courtroom work minus the average wage for an attorney in that area. Similarly, for public defenders the wage gap is defined as the difference between the wage for public defenders in that district-year and the average wage for attorneys in that area.²⁹ As a measure market wages, I used the

²⁸ These law school rankings likely only roughly approximate the “quality” of education these schools provide and may not be an entirely accurate predictor of the quality of the schools or of the lawyers who graduate from them.

²⁹ The use of this data requires an assumption on average weekly hours. I use 40 hours but results using 38 hours, 50 hours and 60 hours show no significant differences and are available upon request.

Occupation Employment Statistics from the Bureau of Labor Statistics data, which lists wages by industry.³⁰ As a measure of federal government wages I use the Criminal Justice Expenditure report, which includes wages for federal government legal establishments. These estimates include U.S. Attorney's Offices (the prosecuting attorneys in federal cases) and Federal Public Defender Offices. Since Federal Public Defenders and U.S. Attorney's Offices have the same pay scale, I assumed that the average wage per employee is the same. For CJA panel attorneys, I use the established federal wage rate for CJA panel attorneys as set by Congressional Approval and appropriated through the Administrative Office of the US Courts.

Other factors affecting attorney performance may be their caseload or the frequency with which attorneys interact with prosecutors and judges in the criminal system and the number of cases an attorney handles in the federal criminal system. I calculate the average indigent caseload for an attorney in a district in a year. To do this I use the number of public defenders (L_{PD}), the number of CJA panel attorneys (L_{CJA}) and the number of cases handled by each (N_{CJA}, N_{PD}). I estimate L_{PD} and L_{CJA} , by contacting the districts and asking them the number of people on the panel and in the public defender's office in each year from 1997-2001. I can observe N_{CJA} and N_{PD} from the AOUSC data. I then define average indigent caseload as: N_i / L_i for $i=CJA, PD$. This then represents the expected number of cases on indigent defense lawyer will handle.

Some summary statistics on these lawyers are shown in Panel B of Table 5. The CJA panel attorney wage is on average lower than the average wage in the county in which the attorney resides. However, this varies a great deal depending on the county location. In some counties in Arizona, for example, the CJA wage is greater than the market wage. The experience level varies greatly between attorney types. CJA panel attorneys, on average, have very low experience. Figure 1 shows the distribution of experience. It appears that public defenders on average have higher experience and a wider distribution. Many panel attorneys have less than 10 years experience, but there is a cluster of attorneys with about 15 years experience and another cluster with about 25 years of experience. These are the attorneys that frequently handle the more difficult or highly technical cases and are, in some cases, former

³⁰ I use wages for lawyers from 1997-2001 from the following Metropolitan Statistical Areas (MSA): Flagstaff, Phoenix-Mesa, Tucson, Yuma, Los-Angeles-Long Beach, Orange County, Riverside-San Bernardino, San Louis Obispo-Atascadero-Paso-Robles, Santa Barbara-Santa Konica-Lompoc, Ventura, and San Diego.

public defenders or well established criminal defense attorneys.³¹ In addition, public defenders appear to be from higher ranked law schools. Relative to the overall population of lawyers, CJA attorneys are less experienced and attended lower quality law schools while Federal Public Defenders are more experienced and attended higher quality law schools.

While it appears that the attorneys in the two groups are observably different and there appears to be significant difference in their outcomes due to attorney performance, the analysis thus far has not explored the relationship between these two facts. I next consider the importance of differences in wages, experience, and education quality on generating the observed difference in attorney performance. Because this analysis is restricted to the three districts for which I have attorney level data, I first estimate a parsimonious specification with district, year, and crime fixed effects) restricting my analysis to these districts as a baseline to which to compare subsequent analysis.

I conduct this analysis for the outcome $\Pr(\textit{Guilty} = 1)$, the results of which are presented in column 1 of Table 6. The difference in probability of being found guilty is about 2.6 percentage points greater for CJA panel attorneys. This is much larger than the overall difference across all districts. I next estimated a probit of the probability of being found guilty on attorney type, experience, education quality, expected repeat interaction frequency and two wage gap variables. These regressions are of the following specification:

$$\Pr(\textit{guilty} = 1) = \Phi[\beta_0 + \beta_1\textit{CJA} + \beta_2(w_i - \bar{w}) + \beta_3\textit{caseload} + \beta_4 \exp + \beta_5\textit{LS} + \textit{district FE} + \textit{year FE} + \textit{crime FE}] \quad (10)$$

The results from equation (10) are reported in column (2) Table 6. Comparing the CJA-public defender performance gap using this new specification, it appears that the wage gap, experience, caseload, and law school quality variables explain the entire difference in guilty rates. Experience appears to be very important, reducing the probability of being found guilty by about 1.2 percentage points.³² Higher quality law schools also appear quite important. A 1 percentage point change in the wage gap reduces the probability of being found guilty by about 4 percentage points. Put another way, districts in which indigent defense counsel wages are closer to the market wage are associated with better performing attorney.

³¹ The recruitment and appointment of these highly experienced lawyers was described in detail to me by several public defenders offices including the Federal Defenders of San Diego, Inc.

³² Specifications with a quadratic experience term found this term insignificant.

A potential criticism of the specification in equation 10 is that both the wage gap and the caseload measures have systematic measurement error. The wage gap for CJA attorneys compares their courtroom wage to the average market wage. If wages are positively correlated with experience, and then the wage gap measure will overstate the size of the true wage gap for CJA panel attorneys. This is because CJA attorneys are less experienced and thus command a lower market wage. The caseload measure cannot account for the non-indigent work of CJA panel attorneys and as such may not accurately estimate the relationship between either workload or system interaction and attorney performance. Because these variables are market variables and not at the individual case level I cannot include them in a specification with district-year fixed effects. However, these fixed effects may allow me to isolate the impact of experience and law school quality without the potential contamination of these arguably mis-measured variables. As such, I estimate a specification

$$\Pr(\textit{guilty} = 1) = \Phi[\beta_0 + \beta_1\textit{CJA} + \beta_3 \textit{exp} + \beta_4\textit{LS} + \textit{district} - \textit{year FE} + \textit{crime FE}] \quad (11)$$

The results from equation (11) are reported in Table 6. Including district-year fixed effects along with experience and law school quality yields qualitatively similar results to the specification that included wages and caseload. The performance gap between attorneys remains insignificant and is not significantly different than the coefficient in the previous specification. The importance of law school appears to be virtually identical across specification. Overall, it appears that these variables can explain all of the difference in probability of guilt between the two types of indigent defense counsel.

Repeating this analysis for sentence length, I estimate the difference in expected sentence length between the two groups. On average, defendants with CJA panel attorneys will receive an additional sentence of nearly 7 months. This difference shrinks to about 2.6 months when including the wage gap, caseload, experience, and law school measures (as well as district and year fixed effects). Wages are only marginally significant but a 1 percentage point increase in the wage gap (higher indigent defense wage relative to the market wage) reduces sentence length by over 5 months. An additional year of experience also reduces sentence length, by about 5 months. Attorneys who attended higher-tier law schools (Tiers 1 and 2) secure 8 month shorter sentences for their clients. Again because of concerns about the mis-measurement of wages and caseload, I estimate a specification with district-year fixed effects. The difference between attorneys in this specification is about 3.3 months, slightly larger than the difference in the

previous specification. The effects of experience and law school quality are almost identical across specifications. Thus it appears that attorney characteristics (along with wages and caseload) explain over half of the difference in sentence length between attorneys.

Finally, I estimate the effect of these variables on the propensity of these attorneys to engage in plea bargains. There is a marginally significant difference in the probability of plea bargaining between the types of attorneys in these three districts. These results are reported in column (7) of Table 6. It appears that CJA panel attorneys plead less often than public defenders (consistent with the analysis across all districts). The difference between plea rates is insignificant after including wages, experience, caseload, and law school quality measures, as reported in Table 6 column (8). Moreover, it appears that higher levels of experience increase the probability of plea bargaining by about 2 percentage points, as do higher wages. Attending higher “quality” law schools increase the probability of plea bargaining by about 5 percentage points. The specification that includes district-year fixed effects is reported in column (9) of Table 6. The difference between types of attorneys shrinks even further and the effect of experience increases to 3 percentage points. Overall it appears that experience and law school quality (along with caseload and wages) fully explain any differences in plea rates.

I next estimate whether the effects of wages, experience, law school quality, and caseload have different effects for the two types of lawyers. I constructed a separate set of interaction terms between lawyer characteristics and attorney type.

The results using the dependent variable $\Pr(\textit{Guilty} = 1)$ are reported in columns (1) and (2) of Table 7. It appears that wages explain more of the performance of CJA panel attorneys than public defenders. As indigent defense lawyers wages move 1 percentage point closer to the market wage, the probability that a defendant will be found guilty decreases by 3.7 percentage points if they have a public defender and 5.5 percentage points if they have a CJA panel attorney. The effect of experience and law school quality is virtually identical across the two types of attorneys. A higher expected caseload increases the probability a defendant will be found guilty by about 6 percentage points for defendants with public defenders and has no significant effect on the probability of being found guilty for CJA panel attorneys.

I similarly estimated a regression of sentence length on the full set of interaction terms. These results are reported in columns (3) and (4) of Table 7. Again wages impact the performance of CJA panel attorneys more than that of public defenders. A 1 percentage point change in the

wage gap reduces the sentence received by 4 months for defendants with public defenders and nearly 6 months for defendants with CJA panel attorneys. An additional year of experience reduces sentence length by about 5 months both for defendants with public defenders and defendants with CJA panel attorneys. A higher expected caseload increases sentence length by 3 months for defendants with public defenders and reduces sentence length by 6.75 months for defendants with CJA panel attorneys.

In terms of plea rates (reported in columns (5) and (6) of Table 7), a change in the wage gap increases the probability that a defendant will plead guilty by nearly 3 percentage points if they have a public defender and nearly 5 percentage points if they have a CJA panel attorney. Again, the effect of experience is around 2 percentage points and is almost identical between the two types of attorneys. A higher expected caseload increases the probability that a defendant will plead guilty by about 6 percentage points if they are represented by a public defender and about 2.6 percentage points if they are represented by a CJA panel attorney.

The differential effects of caseload may be due to the positive effect of repeat interactions with prosecuting attorneys (U.S. Attorneys). Assuming there are diminishing returns to the positive effect of repeat interactions, the marginal effect of increasing the likelihood of repeat interactions for public defenders with prosecuting attorneys may be very small. If plea bargains allow public defenders to reduce the marginal cost of additional work from a higher caseload then it is reasonable to observe little significant effect on the negotiated sentence length. On the other hand, CJA panel attorneys may have little or no interaction with prosecutors outside of their assigned indigent defense caseload. Given the low experience level of many of these attorneys, it is possible that CJA panel attorneys are attorneys beginning their career and may have a high marginal benefit from improved relationships with US attorneys. However, because this caseload measure is likely to have error, it is difficult to develop a full explanation of these effects.

3.6 ESTIMATING THE COST OF A TWO-TIERED INDIGENT DEFENSE SYSTEM

Given the potential discriminatory impact of this institutional structure, it is unclear why the federal government does not simply hire more public defenders. One reason might be because it would be too costly. As shown in Table 5, wages paid to public defenders are on average higher than wages paid to CJA panel attorneys. To quantify the cost effectiveness of using CJA panel attorneys, I consider the potential costs and savings to using panel attorneys. In

terms of benefits, CJA panel attorneys earn a lower hourly wage than public defenders. Thus for the same hours worked, CJA panel attorneys will provide cheaper services. However, CJA panel attorneys take longer than public defenders for observably similar cases. This will impose costs in the form of additional hourly wages. Because CJA panel attorneys' plea-bargain less frequently, they impose additional costs through the administrative and personnel court costs.³³

$$\text{Cost of Public Defenders} = C_{PD} = w_{PD}h_{PD} + (1 - \Pr(\text{Plea} = 1)_{PD}) * \text{trial cost} \quad (12)$$

$$\text{Cost of CJA panel attorney} = C_{CJA} = w_{CJA}h_{CJA} + (1 - \Pr(\text{Plea} = 1)_{CJA}) * \text{trial cost} \quad (13)$$

Assuming that $h_{CJA} = h_{PD} + \delta$, then after some algebra, the difference in cost between the two types of attorneys is:

$$C_{PD} - C_{CJA} = (w_{PD} - w_{CJA})h_{PD} + w_{CJA}\delta + [\Pr(\text{Plea} = 1)_{CJA} - \Pr(\text{Plea} = 1)_{PD}] * \text{trial cost} \quad (14)$$

Calculating these components it appears that using CJA panel attorneys imposes a \$5800 per case cost on the federal system or a cost of \$61.1 million per year.³⁴

Several important caveats apply to this analysis. First, because public defenders are salaried while CJA attorneys can be hired more flexibly, there may be additional non-wage costs to increasing the number of public defenders. Because I do not observe the cost of search and hiring, benefits, and downtime, it is possible that these costs more than make up for the cost imposed by CJA attorneys. Second, the magnitude of the performance difference estimated in the previous section conflates both the incentive effects from wages and the selection effect of participation in the CJA panel. Thus, the effect of a change in wage structure for panel attorneys as opposed to simple replacement with public defenders might be an equally cost-effective solution. Third, because the public defenders office is a selective occupation the attorneys opting into public service in that field appear to be more experienced and have attend higher ranked law schools. If the expansion of public defenders required to cover the caseload of CJA panel attorneys is sufficiently large it may nullify the benefits which attract highly qualified attorneys which makes the effect of expanding public defenders offices somewhat ambiguous.

³³ Administrative and personnel costs per case include judge, court monitor, deputy clerk, bailiff as well as charge to the jury and time for clerical processing. Estimates of these costs are based on the Ostrom and Hall (2005).

³⁴ These estimates compare average hours per case * (wage_{PD} - wage_{CJA}) to the difference in hours per case * wage_{CJA} + (difference in Pr(plea))*cost of trial. Average values based on AOUSC data, BJS wage and hours data, and estimates for the National Center for States Courts on trial costs.

4 CONCLUSION

This study has analyzed the differences in performance between CJA panel attorneys and public defenders. It appears that public defenders outperform CJA panel attorneys in all outcomes that were considered. Defendants represented by CJA panel attorneys are more likely to be found guilty and receive longer sentences. These differences appear to be related to the ability of attorneys to determine which cases to plead guilty as well as their ability to negotiating plea bargains. While wage structure provides some disincentives for cja attorneys to plea bargain, these differences appear to also be due to differences in the training and experience levels between the attorneys in the CJA attorney panel and attorneys in the public defenders offices.

Analyzing the attorneys in the two groups reveals that public defenders on average have more experience and are more likely to have attended a top tier law school as defined by the *U.S. News and World Reports* ranking. Given the significant effect of experience on outcomes, this difference in attorney characteristic explains some of the differences in the performance gap. Wages too have an effect: attorneys in geographical areas where the wage paid to CJA panel attorneys is close to the average market wage in that area perform better. The expected caseload of an attorney appears to have different effects for the two types of attorneys. Public defenders perform worse when the number of cases they handle increases while CJA panel attorneys perform better. While this observation may seem contradictory to the overall findings in this study in reality it may not be so. This effect may be due to competing effects of increased caseload, which not only increases the workload/effort required by an attorney but also increases an attorney's exposure to the system through repeat interactions, trial experience and the development of general institutional knowledge. The results in this study suggest that this type of experience would preferentially benefit the CJA attorneys since as a group they are less experienced in the court system than public defenders. Taken together these observations suggest that the lower level of experience of the CJA attorneys and the ability of CJA attorneys to decide which cases to take to trial may combine to produce a situation where the decision to take a case to trial may be based not only on the facts related to the case but also on the desire of the CJA attorney to obtain trial experience. This difference in the underlying reasons that motivate workers to enter indigent defense service is not fully explored in this paper and is left as an area of future research.

The most striking result of this paper is the unintended consequence attorney assignment has on perpetuating discriminatory case outcomes on the basis of race. The use of lower-performing CJA panel attorneys impacts minority communities in several ways. First, as Table 1 illustrates, over 30 percent of indigent defendants are of African-American descent while they constitute only 13 percent of the U.S. population. Furthermore, only 19 percent of defendants who can afford to retain their own counsel are African-Americans. About 4000 cases per year involve minority defendants who are randomly assigned CJA panel attorney. Given the large fraction of defendants of African-American descent, it becomes obvious that poor quality representation may disproportionately affect them. Second, districts with high minority and immigrant populations have a higher fraction of their cases covered by CJA panel attorneys. A simple correlation between the fraction of cases covered by CJA panel attorneys and the fraction black defendants yields a correlation factor of 0.77. This correlation may be due to district specific factors such as cases per year, prevalence of urban centers, and other factors related to local geography and culture. Third, in districts that do not randomly assign, blacks are significantly more likely to be assigned a CJA panel attorney than whites. In part this difference is due to selection of cases based on crime type (the inclusion of crime fixed effects explains about 1/3 of the difference in the probability of assignment to a CJA panel attorney between blacks and whites). The performance gap between CJA panel attorneys and public defenders is larger among non-randomly assigning districts than among randomly assigning districts. This could be due to case selection decisions on the part of the attorneys (i.e. CJA panel attorneys are assigned cases which are more likely to end in conviction). However, because it is unclear how much of the gap is due to performance, the higher fraction of blacks assigned to CJA panel attorneys raises questions about whether race affects the quality of the representation indigent defendants are assigned.

Thus, though the procedures implemented to assign counsel are facially neutral, the difference in performance and the disproportionate impact this difference has on minorities may support a case for discrimination based on disparate impact.³⁵ Indeed the differences isolated in this study may legally constitute a case of discrimination under Title VI of the Civil Rights Act

³⁵ There is some evidence that the mere provision of inferior services or benefits to a protected group is sufficient cause to establish discrimination, regardless of the cost of the impact. (*Larry P. v. Riles*, 793 F. 2d 969 (9th Cir. 1984))The elements of a Title VI disparate impact claim derive from cases decided under Title VII disparate impact law. See for example *New York Urban League v. New York*, 71 F.3d 1031, 1036 (2nd Cir. 1995).

(1964).³⁶ Put another way, the initial decision to create a two-tiered system though formed without racial considerations appears to serious and substantial racially-linked negative consequences and may be an important mechanism through which minorities are disadvantaged in the criminal justice system.

³⁶Under disparate impact theory, if an organization which uses federal funds uses a “neutral procedure or practice that has disparate impact on protected individuals, and such practice lacks a substantial legitimate justification,” then this constitutes a violation of civil and perhaps due process rights. This definition of disparate impact is based on the US Department of Justice usage in its Legal Manual (1998)

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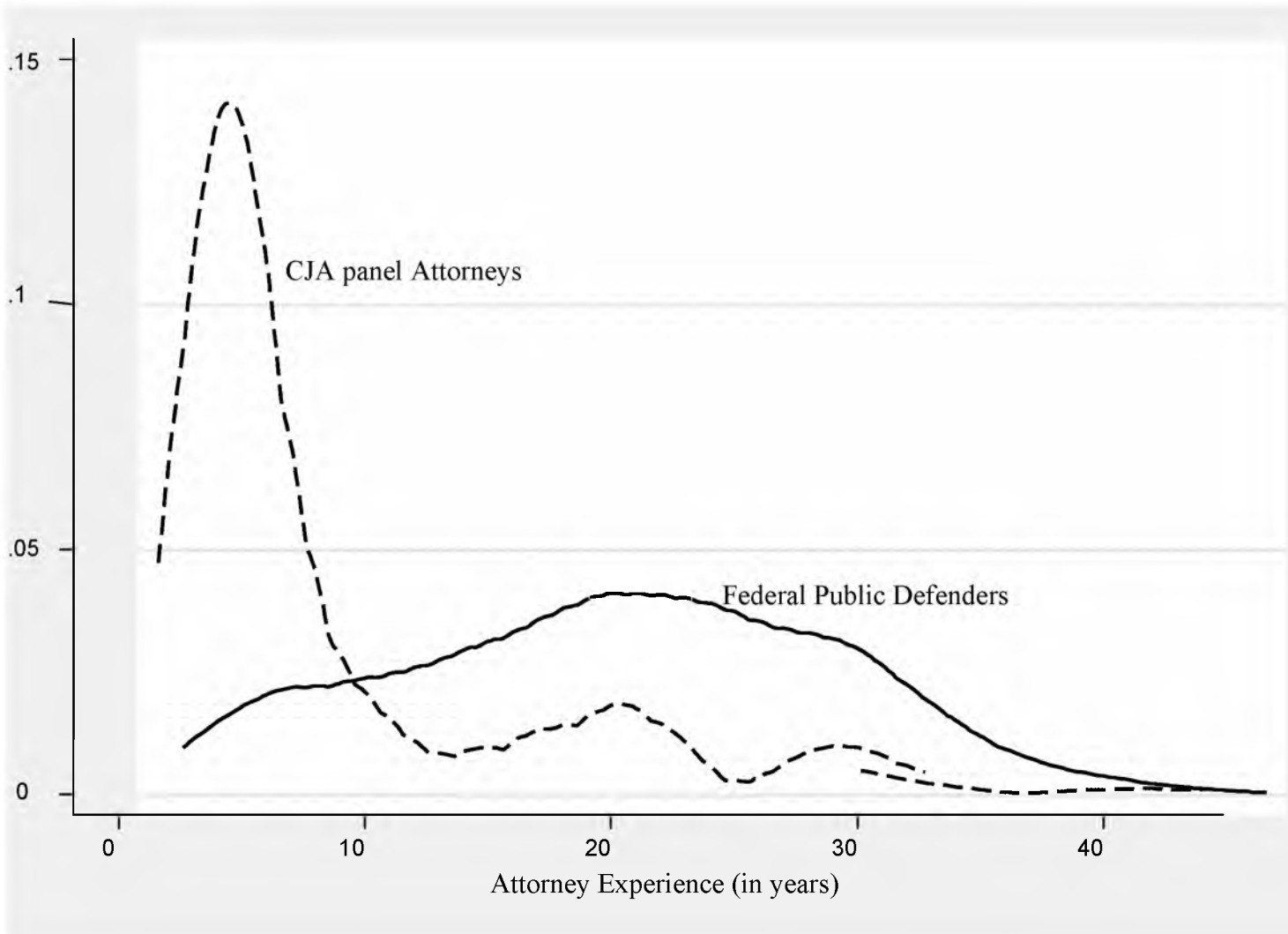
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Figure 1. Kernel Density Estimates of Indigent Attorney Experience for Lawyers Assigned to Cases 1997-2001



Notes: Districts included are the Southern District of California, the Central District of California, and the Federal District of Arizona. Experience is defined as years between case filing and bar admission. Estimates use optimal bandwidth and Epanechnikov kernel

Table 1. Characteristics of Cases Assigned to Different Types Attorneys

| | Privately Retained Attorney | Pro Se | Indigent Defense Counsel | Percent of Indigent Defense Cases covered by: | |
|---------------------------------|-----------------------------|----------------|--------------------------|---|---------------------|
| | | | | Public Defenders | CJA Panel Attorneys |
| Fraction of Sample (N =115,415) | 25.3 | 1.81 | 72.9 | 54.3 | 45.6 |
| Defendant Race | | | | | |
| African-American | 25.0 | 3.0 | 72.0 | 48.9 | 51.1 |
| Native American | 10.6 | 0.9 | 88.5 | 48.6 | 51.4 |
| Asian | 29.4 | 1.8 | 68.8 | 49.2 | 50.1 |
| White | 25.5 | 1.4 | 73.2 | 56.1 | 43.9 |
| Female | 24.7 | 1.7 | 73.6 | 55.2 | 44.8 |
| Male | 28.5 | 2.3 | 69.2 | 49.0 | 51.0 |
| US Citizens | 33.4 | 2.6 | 63.9 | 48.8 | 51.2 |
| Age of Defendant | 36.2 (11.6) | 32.3 (11.0) | 31.7 (9.7) | -- -- | -- -- |
| Primary Filing Offense Type | | | | | |
| Violent | 13.6 | 0.7 | 85.7 | 61.2 | 38.8 |
| Property | 35.4 | 2.3 | 62.4 | 54.6 | 45.4 |
| Drug | 27.5 | 1.0 | 71.5 | 46.2 | 53.8 |
| Public Order | 43.7 | 10.5 | 45.8 | 58.3 | 41.7 |
| Weapon | 24.7 | 0.6 | 74.7 | 56.7 | 43.3 |
| Immigration | 6.9 | 0.4 | 92.7 | 64.3 | 35.6 |

Notes: Estimates based on author's own calculations using Administrative Office of the US Courts (AOUSC) Criminal Master File. Federal Public Defender category includes Community Defender Organizations recognized by the AOUSC as the indigent defense provider in that federal district. Pro se refers to cases in which the defendant represents him or herself.

Table 2. Estimates of Differences in Guilty Rate and Sentence Length between Indigent Defense Counsel

| Dependent Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|--|----------------------------|---------------------|------------------------|------------------------|----------------------------|-------------------|--------------------|---------------------|
| N = 46,167 | E[Pr(Guilty = 1)] = 0.9676 | | | | E[Sentence Length] = 30.26 | | | |
| <i>Panel A: Estimates over all Offense Types</i> | | | | | | | | |
| <i>CJA</i> (=1 if CJA attorney) | 0.0041** (0.0020) | 0.0028* (0.0016) | 0.0031* (0.0017) | 0.0029* (0.0016) | 0.62 (0.62) | 4.75*** (0.74) | 4.69*** (0.72) | 4.89*** (0.68) |
| <i>Black</i> (=1 if client is black) | | | -0.0072*** (0.0027) | -0.0135*** (0.0027) | | | 18.15*** (1.56) | 21.33*** (1.73) |
| <i>US Citizen</i> (=1 if client is a Citizen) | | | -0.0072 (0.0050) | -0.0032** (0.0016) | | | 5.57*** (0.52) | 5.42*** (0.52) |
| R-squared/ Psuedo-R-squared | 0.0004 | 0.0774 | 0.0836 | 0.0684 | 0.000 | 0.1712 | 0.1909 | 0.0947 |
| District FE | N | Y | Y | N | N | Y | Y | N |
| Year FE | N | Y | Y | N | N | Y | Y | N |
| District-Year FE | N | N | N | Y | N | N | N | Y |
| Crime Category FE | N | Y | Y | Y | N | Y | Y | Y |
| <i>Panel B: Estimates by Offense Type</i> | | | | | | | | |
| <i>Violent Offenses</i> | | | -0.0036 (0.0029) | -0.0030 (0.0028) | | | 14.67** (5.98) | 31.46*** (5.96) |
| <i>Property Offense</i> | | | 0.0062 (0.0047) | 0.0129*** (0.0040) | | | 1.33** (0.61) | -22.00*** (0.54) |
| <i>Drug Offense</i> | | | 0.0119 (0.0084) | 0.0008 (0.0079) | | | 9.27*** (1.11) | 16.16*** (1.06) |
| <i>Public Order Offense</i> | | | 0.0071 (0.0082) | -0.0109 (0.0070) | | | 4.64** (2.21) | -17.09*** (1.97) |
| <i>Weapons Offense</i> | | | 0.0131 (0.0080) | -0.0035 (0.0075) | | | 16.37 (10.42) | 47.52*** (9.81) |
| <i>Immigration Offense</i> | | | -0.0003 (0.0033) | 0.0039 (0.0032) | | | 0.07 (0.58) | 1.08* (0.58) |
| R-squared/ Psuedo R-Squared | | | 0.0844 | 0.0699 | | | 0.1931 | 0.1296 |
| District FE | N | Y | Y | N | N | Y | Y | N |
| Year FE | N | Y | Y | N | N | Y | Y | N |
| District-Year FE | N | N | N | Y | N | N | N | Y |
| Crime Category FE | N | Y | Y | Y | N | Y | Y | Y |

Note: Columns (1) through (4) report marginal effects evaluated at the mean $[\beta_j * \phi(X'\beta)]$ with standard errors reported in parentheses. Columns (5) through (8) have robust standard errors reported in parentheses. Coefficients that are significant at the .05 (.1, .01) level are marked with ** (*, ***). Offender characteristics included but not reported are variables for Native American descent, Asian descent, female, marital status, age and country of origin. Crime categories are 60 detailed BJS detailed crime subcategories. Year fixed effects are year of initial offense filing.

Table 3. Probit Estimates of Plea Rate for different types of attorneys representing defendants

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|--|--------------------------|------------------------|------------------------|------------------------|--|-----------------------|------------------------|------------------------|
| Dependent Variable | E[Pr(Plea = 1)] = 0.9489 | | | | E[Pr(Plea to Lesser Included Charge = 1)] = 0.8032 | | | |
| N = 46,167 | | | | | | | | |
| <i>Panel A: Estimates over all Offense Types</i> | | | | | | | | |
| <i>CJA</i> (=1 if CJA attorney) | -0.0028 (0.0025) | -0.0096*** (0.0023) | -0.0091*** (0.0023) | -0.0082*** (0.0024) | -0.0325*** (0.0037) | -0.0064** (0.0031) | -0.0058* (0.0031) | -0.0149*** (0.0039) |
| <i>Black</i> (=1 if client is black) | | | -0.0179*** (0.0031) | -0.0302*** (0.0032) | | | -0.0208*** (0.0044) | 0.0052 (0.0057) |
| <i>US Citizen</i> (=1 if client is a Citizen) | | | -0.0052 (0.0075) | -0.0066*** (0.0020) | | | -0.0046** (0.0021) | -0.0055*** (0.0020) |
| Pseudo R-Squared | 0.0001 | 0.0878 | 0.0970 | 0.0760 | 0.0028 | 0.1812 | 0.1826 | 0.0515 |
| District FE | N | Y | Y | N | N | Y | Y | N |
| Year FE | N | Y | Y | N | N | Y | Y | N |
| District-Year FE | N | N | N | Y | N | N | N | Y |
| Crime Category FE | N | Y | Y | Y | N | Y | Y | Y |
| <i>Panel B: Estimates by Offense Type</i> | | | | | | | | |
| <i>Violent Offenses</i> | | | -0.0064 (0.0092) | -0.0250*** (0.0086) | | | 0.0568*** (0.0144) | 0.0407*** (0.0151) |
| <i>Property Offense</i> | | | -0.0024 (0.0057) | 0.0127*** (0.0048) | | | 0.0080 (0.0071) | -0.0416*** (0.0068) |
| <i>Drug Offense</i> | | | -0.0171*** (0.0035) | -0.0199*** (0.0032) | | | -0.0156*** (0.0041) | 0.0446*** (0.0049) |
| <i>Public Order Offense</i> | | | 0.0020 (0.0104) | -0.0150* (0.0090) | | | 0.0102 (0.0156) | -0.0175 (0.0159) |
| <i>Weapons Offense</i> | | | -0.0021 (0.0083) | -0.0430*** (0.0076) | | | -0.0229* (0.0120) | -0.0870*** (0.0133) |
| <i>Immigration Offense</i> | | | -0.0048 (0.0043) | 0.0057 (0.0042) | | | -0.0171** (0.0073) | -0.1414*** (0.0083) |
| Pseudo R-Squared | | | 0.0976 | 0.0810 | | | 0.1839 | 0.0726 |
| District FE | N | Y | Y | N | N | Y | Y | N |
| Year FE | N | Y | Y | N | N | Y | Y | N |
| District-Year FE | N | N | N | Y | N | N | N | Y |
| Crime Category FE | N | Y | Y | Y | N | Y | Y | Y |

Note: All columns report marginal effects evaluated at the mean. $[\beta_j * \phi(X'\beta)]$ with standard errors reported in parentheses. Coefficients that are significant at the .05 (.1, .01) level are marked with ** (*, ***). Offender characteristics included but not reported are variables for Native American descent, Asian descent, female, marital status, age and country of origin. Crime categories are 60 detailed BJS detailed crime subcategories. Year fixed effects are year of initial offense filing.

Table 4. Decomposition of Difference in Expected Sentence into Performance and Selection Effects by Type of Crime

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|-----------------------|---|---|--|---|--|---|---|--|
| | <i>Difference in Expected Sentence Decomposition Categories</i> | | | | | | | |
| | | | <i>Attorney performance (holding case characteristics fixed)</i> | | | <i>Case characteristic (holding attorney performance fixed)</i> | | |
| | <i>Sample Size</i> | <i>Difference in Expected Sentence Length</i> | <i>Difference in Probability of Plea Bargaining</i> | <i>Difference in Plea Bargained Sentences</i> | <i>Difference in Sentences after Trial</i> | <i>Difference in Probability of Plea Bargaining</i> | <i>Difference in Plea Bargained Sentences</i> | <i>Difference in Sentences after Trial</i> |
| For all Offense Types | 46,167 | 7.76*** (1.29) | 2.48** (1.10) | 0.42*** (0.18) | 1.79** (0.70) | -0.14 (0.23) | 3.63*** (0.06) | -0.42*** (0.03) |
| Violent Offenses | 3,198 | 5.52** (1.26) | 2.45** (1.16) | 0.07*** (0.03) | 0.70* (0.42) | 0.76 (0.71) | 1.30*** (0.23) | 0.24 (0.16) |
| Property Offenses | 2,340 | 3.71** (1.44) | 1.92** (0.81) | -0.01 (0.01) | 0.53*** (0.13) | -0.06 (0.33) | 1.25*** (0.19) | 0.08*** (0.06) |
| Drug Offenses | 16,880 | 12.03** (1.38) | 1.04*** (0.32) | 0.11*** (0.01) | 2.14*** (0.09) | 0.70 (0.45) | 3.35*** (0.28) | 4.69*** (0.11) |
| Public-order Offenses | 2,746 | 6.18** (2.96) | 3.52*** (1.42) | 0.11 (0.13) | 0.68 (0.50) | -0.22* (0.13) | 3.28*** (1.34) | -1.19* (0.67) |
| Weapon Offenses | 7,612 | 16.97*** (1.78) | 14.29*** (1.35) | -0.10 (0.12) | 5.98** (2.54) | -0.72 (0.53) | -2.56* (1.31) | 0.08 (0.10) |
| Immigration Offenses | 13,391 | -2.52 (1.20) | 2.16 (1.06) | -0.03 (0.00) | 0.26 (0.03) | -0.35 (0.28) | -0.71 (0.76) | -3.85 (1.18) |

Notes: Bootstrapped standard errors are reported in parentheses. Estimates in columns (3) – (8) do not add up to column (2) due to rounding errors. Coefficients that are significant at the .05 (.1, .01) level are marked with ** (*, ***). All estimates control for state, year, and crime subcategory as well as for offender characteristics.

Table 5. Statistics and Estimates of the Relationship between Lawyer Characteristics and Lawyer Type

| | (1) | (2) | (3) |
|---|-------------------|--------------------------|--------------------|
| <i>Panel A: Summary Statistics for 3-District Sample</i> | | | |
| | <i>Nationwide</i> | <i>3-District Sample</i> | |
| Defendant Race | | | |
| African-American | 21.68 | 3.47 | |
| Native American | 1.75 | 0.95 | |
| Asian | 1.29 | 0.89 | |
| White | 74.68 | 94.28 | |
| Non-citizen | 55.94 | 76.69 | |
| US Citizen | 44.06 | 23.31 | |
| Primary Filing Offense Type | | | |
| Violent | 6.07 | 3.66 | |
| Property | 18.64 | 9.18 | |
| Drug | 37.03 | 30.98 | |
| Public Order | 5.25 | 1.94 | |
| Weapon | 5.94 | 1.42 | |
| Immigration | 27.08 | 52.82 | |
| <i>Panel B: Summary Statistics for Attorney Characteristics, by Attorney Type</i> | | | |
| | <i>CJA Panel</i> | <i>Public Defender</i> | <i>All Lawyers</i> |
| Avg. Wage (1997-2001) | 71.54 (2.31) | 76.63 (16.11) | 77.93 (17.54) |
| Experience for Lawyers (Case Filing year – Year passed State Bar) | 9.29 (6.59) | 20.79 (9.71) | -- -- |
| Law School “Quality” | | | |
| % in Tier 1 (ranked 1-10 in <i>US News & World Reports</i>) | 4.22 | 9.63 | -- |
| % in Tier 2 (ranked 11-25 in <i>US News & World Reports</i>) | 13.97 | 22.1 | -- |
| % in Tier 3 (ranked 26-50 in <i>US News & World Reports</i>) | 18.34 | 16.99 | -- |
| % in Tier 4 (ranked 51-100 in <i>US News & World Reports</i>) | 30.54 | 27.33 | -- |
| % in Tier 5 (ranked 101 – 134 in <i>US News & World Reports</i>) | 7.60 | 9.85 | -- |
| % in Tier 6 (ranked 135 – 177 in <i>US News & World Reports</i>) | 25.33 | 14.09 | -- |
| Attorneys in Sample | 103 | 613 | |

Notes: Panel A reports standard deviations are reported in parentheses. Panel B reports marginal effects evaluated at the mean and standard errors in parentheses. Coefficients marked with ** (*, ***) are significant at the .05 (.1, .01) level. Districts included are the Southern District of California, Central District of California, and Arizona.

Table 6. Regression Estimates of the Effect of Attorney Characteristics on Case

| Dependent Variable (N=2907) | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|------------------------------------|------------------------|------------------------|-------------------------------------|--------------------|--------------------|---------------------------------|-----------------------|-----------------------|
| | E[Pr(<i>Guilty</i> = 1)] = 0.9812 | | | E[<i>Sentence Length</i>] = 20.99 | | | E[Pr(<i>Plea</i> =1)] = 0.9744 | | |
| <i>CJA</i> (=1 if CJA attorney) | 0.0265* (0.0137) | 0.0064 (0.0148) | 0.0085 (0.0157) | 6.77*** (1.22) | 2.61** (0.88) | 3.34*** (1.06) | - 0.0248* (0.0148) | -0.0114 (0.0180) | -0.0034 (0.0199) |
| <i>Log Wage Gap</i> $\log(wage_i) - \log(wage_{market})$ | | -0.0383** (0.0152) | -- | | -5.66* (2.96) | -- | | 0.0225* (0.0113) | -- |
| <i>Experience</i> (Year of case filing – Year attorney passed the bar) | | -0.0115*** (0.0034) | -0.0208*** (0.0074) | | -4.82*** (0.87) | -5.02*** (0.82) | | 0.0216** (0.0086) | 0.0312*** (0.0093) |
| <i>Avg. indigent caseload</i> (Average # cases assigned to attorney type in a district-year) | | 0.0131 (0.0146) | -- | | 0.06** (0.02) | -- | | 0.0085 (0.0138) | -- |
| <i>Attended Tier 1 Law School</i> (=1 if attorney attended Tier 1 LS) | | -0.0443*** (0.0148) | -0.0448*** (0.0148) | | -8.37** (3.86) | -8.93** (3.87) | | 0.0598*** (0.0188) | 0.0605*** (0.0188) |
| <i>Attended Tier 2 Law School</i> (=1 if attorney attended Tier 2 LS) | | -0.0534*** (0.0170) | -0.0540*** (0.0169) | | -7.54*** (2.89) | -7.67*** (2.88) | | 0.0594*** (0.0215) | 0.0598*** (0.0215) |
| <i>Attended Tier 3 Law School</i> (=1 if attorney attended Tier 3 LS) | | -0.0194 (0.0198) | -0.0233 (0.0198) | | -1.64 (3.30) | -1.75 (3.30) | | 0.0350 (0.0251) | 0.0396 (0.0252) |
| <i>Attended Tier 4 Law School</i> (=1 if attorney attended Tier 4 LS) | | 0.0221 (0.0151) | 0.0244 (0.0151) | | 0.37 (2.94) | 0.79 (2.94) | | 0.0240 (0.0192) | 0.0271 (0.0192) |
| <i>Attended Tier 5 Law School</i> (=1 if attorney attended Tier 5 LS) | | 0.0046 (0.0180) | 0.0065 (0.0180) | | 1.28 (3.51) | 1.56 (3.51) | | 0.0018 (0.0229) | 0.0040 (0.0228) |
| District FE | Y | Y | N | Y | Y | N | Y | Y | N |
| Year FE | Y | Y | N | Y | Y | N | Y | Y | N |
| District-Year FE | N | N | Y | N | N | Y | N | N | Y |

Notes: Marginal effects evaluated at the mean reported in Columns (1) through (6). Standard errors are reported in parentheses. Coefficients marked with ** (*,***), are significant at the .05 (.1, .01) level. . All columns include crime category fixed effects. Sample uses 2908 observations from the Southern District of California, Central District of California, and the Arizona District. Law School Tiers are based on the *U.S. News and World Reports* 2001 Law School Ranking. Average wage is based on the average lawyer wage from the Occupation Employment Survey from the Bureau of Labor Statistics.

Table 7. Estimates of the Effect of Attorney Characteristics on Case Outcome and Sentence Length by Attorney Type

| Dependent Variable Mean (N=2907) | (1) | (2) | (3) | (4) | (5) | (6) |
|---|-------------------------------------|------------------------|-------------------------------------|--------------------|-----------------------------------|-----------------------|
| | $E[Pr(\text{guilty} = 1)] = 0.9812$ | | $E[\text{Sentence Length}] = 20.99$ | | $E[Pr(\text{plea} = 1)] = 0.9744$ | |
| | <i>PD</i> | <i>CJA</i> | <i>PD</i> | <i>CJA</i> | <i>PD</i> | <i>CJA</i> |
| <i>Log Wage Gap</i> $\log(\text{wage}_i) - \log(\text{wage}_{\text{market}})$ | -0.0367** (0.0175) | -0.0560*** (0.0187) | -4.22** (1.64) | -5.86** (1.42) | 0.0291** (0.0122) | 0.0512** (0.0236) |
| <i>Experience</i> (Year of case filing – Year attorney passed the bar) | -0.0115*** (0.0015) | -0.0117*** (0.0052) | -5.04*** (1.38) | -4.77*** (1.05) | 0.0218** (0.0111) | 0.0213* (0.0109) |
| <i>Avg. indigent caseload</i> (Average # cases assigned to attorney type in a district-year) | 0.0611** (0.0298) | 0.0085 (0.0138) | -9.72** (2.65) | -6.84** (2.31) | 0.0586** (0.0292) | 0.0264** (0.0103) |
| <i>Attended Tier 1 Law School</i> (=1 if attorney attended Tier 1 LS) | -0.0512*** (0.0173) | -0.0421 (0.0291) | -7.90*** (2.53) | -7.10** (1.38) | 0.0484** (0.0219) | 0.703** (0.0395) |
| <i>Attended Tier 2 Law School</i> (=1 if attorney attended Tier 2 LS) | -0.0215 (0.0221) | -0.0545* (0.0232) | -2.65 (4.52) | -1.17 (1.21) | 0.0482 (0.0279) | 0.0531 (0.0293) |
| <i>Attended Tier 3 Law School</i> (=1 if attorney attended Tier 3 LS) | -0.0186 (0.0216) | -0.0111 (0.0232) | -1.82 (1.64) | -1.12 (1.50) | 0.0343 (0.0273) | 0.0801*** (0.0293) |
| <i>Attended Tier 4 Law School</i> (=1 if attorney attended Tier 4 LS) | 0.0211 (0.0180) | 0.0272 (0.0238) | 0.73 (0.87) | 0.18 (2.17) | 0.0315 (0.0227) | 0.0207 (0.0300) |
| <i>Attended Tier 5 Law School</i> (=1 if attorney attended Tier 1 LS) | 0.0040 (0.0213) | 0.0084 (0.0301) | 1.80 (1.36) | 1.15 (1.43) | 0.0059 (0.0270) | 0.0016 (0.0380) |
| <i>District Fixed Effects</i> | Y | Y | Y | Y | Y | Y |
| <i>Year Fixed Effects</i> | Y | Y | Y | Y | Y | Y |
| <i>Crime Category Fixed Effects</i> | Y | Y | Y | Y | Y | Y |

Notes: Parameters reported are marginal effects evaluated at the mean. Standard errors are reported in parentheses. Coefficients marked with ** (*, ***) are significant at the .05 (.1, .01) level. All regressions include district, year and crime category fixed effects. Districts included are the Southern District of California, Central District of California, and Arizona. Law School Quality is the average rank of law schools, based on the *U.S. News and World Reports* 2001 Law School Ranking. Average wage is based on the average lawyer wage from the Occupation Employment Survey from the Bureau of Labor Statistics