

Crime and (Monetary) Punishment

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Abstract

This paper examines the effects of monetary sanctions (fines and court fees) on criminal defendants. There is limited causal evidence on the direct effects of monetary sanctions due to them both not being levied randomly, as well as typically being bundled with other penalties. I identify the causal effect of monetary sanctions by leveraging the quasi-random assignment of judges and isolate their effect by studying low level misdemeanors in North Carolina, where penalties are limited to fines and fees only. I find no impact of fines and fees on the likelihood of defendants engaging in subsequent criminal activity (-0.058, SE=0.054). There are strong negative effects (-0.069, SE=0.030) for financially motivated offenses. Defendants living in wealthier areas are the most strongly deterred (-0.087, SE=0.029), I cannot rule out some criminogenic effects for defendants living in poorer areas. Policies that aim to recognize defendants' ability-to-pay are recommended.

Keywords: Monetary sanctions, Legal financial obligations, LFO, Specific deterrence.

JEL Codes: J64, K14, K42.

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1 Introduction

Every year over 16 million people go to court in the United States,¹ and even though relatively few end up doing any prison time, the vast majority of them end up owing money—oftentimes considerable amounts—in criminal debt because of fines and court.² Total debt owed to the criminal justice system exceeds 50 billion dollars (Beckett and Harris, 2011).

Despite monetary sanctions having always been part of the U.S. criminal justice system (Ruback and Bergstrom, 2006), the system has expanded considerably³ these past few decades and rising expenditures⁴ have prompted state and local governments, who pay many of the operational costs of the criminal justice system, to turn increasingly towards monetary sanctions—fines and fees—as a source of additional revenue.^{5,6}

This revenue-generating motive has prompted increased attention these past few years, especially following the police killing of Michael Brown Jr. in Ferguson, Missouri, as the U.S. Department of Justice’s investigation that followed highlighted the focus of Ferguson law enforcement on revenue generation. Attention has been mainly on the extent to which the use of monetary penalties disproportionately impacts the poor, because of their general inability to pay, and, in turn, because of the higher percentage of African Americans, Hispanics and other minorities in this group, on how most of the burden of monetary sanctions fall on these groups.

However, despite this high—and growing—incidence of monetary sanctions, there is little evidence of their consequences for defendants. Claims have been made in recent years of a “path to crime” for poorer defendants as monetary sanctions trap them in poverty (Bannon et al., 2010 and Harris, 2016), but with no causal backing.

What are the effects of monetary sanctions on defendants? In this paper I investigate the effects of monetary sanctions on future reoffending using administrative data from North

¹Between 3 and 4 million felony cases are filed annually in state and federal courts, and over 13 million misdemeanor cases (Natapoff, 2018; Stevenson and Mayson, 2018).

²All fifteen states in Bannon et al. (2010) imposed fees upon conviction, for example.

³Between 1990 and 2014, incarceration rates increased by 61 percent, and in 2014, over 2.2 million people were incarcerated in local jails or in State and Federal prisons (Cohen, 1991 and Carson and Anderson, 2015)

⁴Between 1993 and 2012, total real annual criminal justice expenditures grew by 74 percent from \$157 to \$273 billion, with local spending comprising approximately half of total expenditures. State corrections expenditures represent 7 percent of the total State general funds on average, and 11 States spent more on corrections than higher education in 2013 (Council of Economic Advisers, 2015).

⁵Monetary sanctions, usually referred to as legal financial obligations (LFOs) as well, also consider restitution and forfeitures (See Appendix C for a full taxonomy). In my data I only see fines and court fees, so I will refer to monetary sanctions either as such or as fines and fees throughout.

⁶In 1986, 12 percent of those incarcerated were also fined, while in 2004 this number had increased to 37 percent. When including fees as well, the total rises to 66 percent of all prison inmates. In 2014, 44 States charged offenders for probation and parole supervision, up from 26 in 1990 (Council of Economic Advisers, 2015).

Carolina, from 2014 until 2021. I also assess the differential effects of monetary sanctions on poorer defendants and evaluate the mechanisms that can explain this heterogeneity.

Teasing out the effects of monetary sanctions is complicated by the fact that in current practice monetary sanctions are usually levied in addition to other common penalties such as community service, probation, parole, or incarceration (Harris et al., 2011)⁷. I address this challenge by focusing on defendants targeted by North Carolina’s 2013 Appropriations Act, which limits the scope of sanctions for these defendants, effectively making them susceptible only to monetary sanctions. This subsample is relevant in and of itself, as these are mostly first-time offenders, encountering the criminal justice system for the first time and, **studying ways to avoid reentry is of major policy relevance (CITATION)**.⁸ I leverage the fact that in North Carolina defendants are randomly assigned to judges that differ in their propensity to levy monetary sanctions in order to recover a local average treatment effect (LATE) for individuals at the margin of being levied higher monetary sanctions, i.e., what’s commonly referred to now as the “judge fixed effects design” (EXPLAIN).⁹

I measure judges’ “fining” propensity using a leave-one-out–residualized measure, as in Dahl et al., 2014, Dobbie et al., 2018, Bhuller et al., 2020, Agan et al., 2021— mean of judges’ choices regarding fines, fees, and restitution. This measure is highly predictive of the amount of monetary sanctions defendants endure, but uncorrelated with case and defendant characteristics. Going from the most lenient to the least lenient judge increases a defendant’s expected monetary sanction by XX percentage points.

I first estimate the effects of monetary sanctions on reoffending. I find that defendants receiving monetary sanctions are XX percentage points less likely to recidivate within two years after their trial, XX percentage points less likely to recidivate committing a misdemeanor, and XX percentage points less likely to commit a felony. I also see reductions in property (XX% pp) and XX crimes (XX% pp). The results are not so clear for violent and drug offenses, where I cannot rule out increases in reoffending rates of XX and XX percentage points, respectively. I do not find criminogenic evidence stemming from monetary sanctions though, only deterrence.

When thinking of offenses that would be affected the most following the experience of monetary sanctions, I characterize offenses as either being or not financially motivated

⁷One approach to address multiple treatments such as these is Mueller-Smith (2015)....

⁸Furthermore, while the use of fines and fees has grown for all sentencing groups, they remain more common in cases of misdemeanors, infractions, and other relatively less serious crimes. **Therefore, an individual’s first encounter with the criminal justice system will probably involve monetary sanctions.**

⁹Examples of papers exploiting this research design include Kling, 2006, Aizer and Doyle Jr, 2015, Mueller-Smith, 2015, and Bhuller et al., 2020, studying the effects of incarceration; Dobbie et al., 2018 assessing the consequences of pretrial detention; Norris et al., 2021 estimating the impact of parental incarceration; and Agan et al., 2021 looking at the effects of misdemeanor prosecution.

(Tuttle, 2019). I find strong negative effects, XX pp, of monetary sanctions on reoffending for these kind of offenses. One would expect that the impact of monetary sanctions on these type of offenses to be a direct function of defendants' wealth. In order to study this possible heterogeneity I split the sample in income quartiles (proxying wealth with the median household income in the census tract where the defendant lives) and estimate the effects of monetary sanctions separately in each subsample. I can see a clear pattern, where financially motivated offenses are deterred only for those wealthier defendants.

Even though it is a widely accepted conclusion of the economic literature on optimal law enforcement that nonmonetary sanctions carry no social costs and, implicitly, that agents do not react to their experience, (Becker, 1968; Polinsky and Shavell, 1984, 2000; Garoupa, 1997), there is considerable evidence that the experience of monetary punishment can have substantial effects on behavior in the space of regulatory violations (Gray and Jones, 1991; Weil, 1996; Ko et al., 2010; Stafford, 2003; Eckert, 2004; Stafford, 2014; Gray and Deily, 1996; Nadeau, 1997; Gray and Shadbegian, 2005; Keohane et al., 2009; Magat and Viscusi, 1990; Laplante and Rilstone, 1996; Earnhart, 2004b; Earnhart, 2004a; Shimshack and Ward, 2005; Glicksman and Earnhart, 2007; Shimshack and Ward, 2008; Earnhart and Segerson, 2012; Makofske, 2020).^{10,11,12} Furthermore, in a result similar to what I find in this paper, Earnhart and Segerson, 2012 find the effectiveness of increased enforcement—regarding firms' environmental performance—depends on firms' financial status.

Additionally, the wealth of evidence regarding the disincentives imprisonment has on criminal offending (Helland and Tabarrok, 2007; Drago et al., 2009; Bell et al., 2014; among others), as well as the effects of experiencing prison terms, both on criminals themselves as well as their families (Kling, 2006; Mueller-Smith, 2015; Bhuller et al., 2020; Bayer et al., 2009; Stevenson, 2017; Norris et al., 2021) contrasts with the total lack of any for monetary sanctions, even though they are the most common form of punishment in the US.

This paper contributes broadly to the literature on both criminogenic factors stemming from punishment, as well as prisoner reentry, specifically that which explores the effects of financial support for released offenders. This literature has focused mostly on incarceration, finding effects that range from XX to XX (Kling, 2006; Bayer et al., 2009; Mueller-Smith,

¹⁰Gray and Jones, 1991, Weil, 1996, Ko et al., 2010 OSHA—Occupational Safety and Health Administration—inspections on future compliance of inspected facilities

¹¹Stafford, 2003; Eckert, 2004 Environmental Protection Agency in toxic, hazardous, and household waste contexts is mixed. Nevertheless, some significant specific deterrence is typically detected in most studies. Gray and Deily, 1996 Nadeau, 1997 Gray and Shadbegian, 2005 Keohane et al., 2009 air pollutants. Magat and Viscusi, 1990 Laplante and Rilstone, 1996 Earnhart, 2004b Earnhart, 2004a Shimshack and Ward, 2005 Glicksman and Earnhart, 2007 Shimshack and Ward, 2008 Earnhart and Segerson, 2012 CWA. See Alm and Shimshack, 2014 for an overview of the literature.

¹²Makofske, 2020 studies how food service establishments respond to one-letter downgrades in health inspections and finds that restaurants are assessed 17%–27% fewer demerits following a downgrade.

2015; Stevenson, 2018) for each additional year in their sentence. There has also been some observational research concerning monetary sanctions but not much regarding their consequences.^{13,14} Gordon and Glaser, 1991, in California’s lower courts, find that, relative to jail sentences, monetary sanctions were associated with lower incidence of reoffending. However, among those receiving only monetary penalties, the amount had no relationship with reoffending. Financial penalties seemed to neither encourage nor deter future criminality. Piquero and Jennings, 2017 find that assessing monetary sanctions on juvenile offenders and their families increases the likelihood of recidivism. Furthermore, Schneider (1986) and Butts and Snyder (1992) study randomized trials and find that restitution, compared to other non-monetary sanctions, is associated with higher recidivism rates. Finally, Raphael (2011) and Jacob and Ludwig (2012) study how greater financial assistance following release reduces recidivism rates.

Second, I also contribute new evidence highlighting the relationship between financial need and criminal behavior, which links to the the broader literature in specific deterrence, which focuses mainly on business regulation. The paper most closely related to mine in this area is Earnhart and Segerson, 2012’s study of how businesses’ financial status affects their behavior following punishment for violation of environmental standards.

Literature on accuracy of prediction of sanctions Pérez and Kiss (2012).

The remainder of the paper is structured as follows. Section 2 provides a brief overview of North Carolina and judge assignment in this context, as well as describe my data and provide some summary statistics. Section 3 develops a simple conceptual framework in order to focus the analysis. Section 4 describes my empirical strategy. Section 5 presents the results, and some interpretation, and Section 6 concludes. An Appendix provides additional results and detailed information on administrative information and alternative outcomes used in the analysis.

2 Conceptual framework

In this section I lay out a simple framework in order to understand the mechanisms through which monetary sanctions may operate on reoffending. To fix ideas consider that an individual

¹³(Albrecht & Johnson, 1980; Glaser & Gordon, 1988; MacDonald, Greene, & Worzella, 1992). Administrative or process based (cf. Hillsman,1990). Focused on the extent to which the use of monetary penalties disproportionately impacts poor defendants because of their general inability to pay (Beckett et al., 2008; Council of Economic Advisers, 2015).

¹⁴An exception to the observational literature is Lurigio and Davis, 1990, who randomly assigned adult probationers who were delinquent in paying restitution to receive reminder informing them the amount they owed and threatening with sanctions in the event of noncompliance. Defendants who received this notification were significantly more likely to pay restitution, with stronger effects for those with greater payment ability.

will commit a crime in the future if and only if

$$pU_c(Y - \mathbb{E}[F]) + (1 - p)U_c(Y) > U_{nc} \quad (1)$$

where p represents the probability of being caught, Y the income associated with getting away with the crime (monetary or otherwise), F the severity of the criminal sanction if captured (which individuals are uncertain about), and U_{nc} the utility associated with abstaining from crime.

Individuals that experience punishment know more about the severity of future punishment than those that get off scot-free. In my setting, if a defendant is levied a fine or fee, they know more about possible fines or fees they may receive in the future, if they were to reoffend. I refer to this as the “learning” channel through which fines and fees may influence reoffending.¹⁵ Defendants, upon receiving a fine or a fee, update their expectations regarding future possible fines and fees: if revised upwards this disincentivizes them from committing crimes, while the opposite holds true if they revise downwards.

Now, consider a situation where criminals have altruistic motives and are uncertain about the harmfulness of their actions, say if $Y = Y_{private} - \mathbb{E}[Y_{social}]$, and are uncertain as well of whether the criminal justice system is maximizing social welfare or revenue (D’Antoni and Galbiati, 2007). In this context the harshness of monetary sanctions, fines and fees, can affect the credibility of the criminal justice system, having criminals question that the enforcement policy is more about revenue maximization than aimed at deterring socially costly violations: “I understand you have to pay your way, and the court has to pay its way, and they got to collect off somebody. But it seems to me like the way our criminal justice system works, you know, there’s too many people making money out of corrections, and the corrections isn’t correcting anything” (Harris, 2016). In this situation, what I call the “signaling” channel, a harsh penalty is not necessarily signaling that a given offense is socially costly and, therefore, individuals may update $\mathbb{E}[Y_{social}]$ downwards, incentivizing reoffending.

Finally, it may be the case that these fines and fees drive poorer individuals to crime, as they resort to robbery, theft, or other financially motivated crimes, to generate income (Harris, 2016; Natapoff, 2018). This is what I refer to as the “income” channel.¹⁶ It is important to note that even fines and fees of low amounts may impact individuals through this income channel. Individuals sometimes forego payment of rent or utilities in order to pay

¹⁵In criminology this is what is usually referred to as *specific deterrence*, the way in which the “experience” of punishment affects reoffending (Chalfin and McCrary, 2017).

¹⁶This income channel does not correspond to the “parallel expansions” of budget sets that are commonly referred to as income effects.

their legal financial obligations¹⁷ which may start them down a debt spiral that eventually makes it that much more appealing to resort to crime,¹⁸ unpaid legal financial obligations can trigger additional sanctions, if unpaid these obligations also grow over time as interest and other payment penalties accrue, and they can also have non-justice related consequences, including the suspension of individuals’ driver’s licenses.

Deterrence in terms of updating should be somewhat invariant to income. This to the extent that priors do not differ within this margin. In terms of the negative signal steep monetary sanctions may convey, one would expect this to be stronger for lower income groups. Income effects, on the other hand, should operate only on poorer defendants. One would also expect this to kick in with a lag, as the mechanisms, missed rent payments, worsened credit score due to legal financial obligations accrual, loss of driver’s license, etc. take time to kick in. Additionally, this channel should be accompanied with failure to pay the financial obligations in the first place.

This framework suggests that one must (a) consider financially and non-financially motivated crimes separately, and (b) distinguish between defendants’ income level. Both the learning and income channels should affect exclusively financially motivated reoffending. The signaling channel, on the other hand, should affect non-financially motivated crime as well. Defendants’ income

3 Setting: North Carolina

There are three main challenges when investigating the effects of monetary sanctions. First, high-quality data on total fees and fines assessed are difficult to obtain. Second, the endogeneity of monetary sanctions and subsequent outcomes. And third, the fact that monetary sanctions are typically being bundled with other penalties.

I use data from North Carolina because it allows me to address each of these concerns. The data provided by North Carolina’s Administrative Office of the Courts (NCAOC) provides detailed information regarding fines, court costs, and restitution. Furthermore, the quasi-random assignment of district court judges allows me to identify causal effects by using a leniency design. Finally, because of reforms that went into effect in 2014, there is a subset of offenses that are only liable to monetary sanctions, allowing me to study their effect in isolation. In this section I address each of these in detail.

¹⁷“[To pay off my legal financial obligations] I rob Peter to pay Paul... [Not paying] rent, and car payments, insurance payments...” (Natapoff, 2018).

¹⁸“[O]ne defendant we interviewed, recalled that when he had to choose, he paid fines and fees over child support because he thought he was less likely to go to jail that way. He also sold narcotics to pay both debts. As he noted, ‘why not do more crimes if you’re already in trouble?’” (Nichol and Hunt, 2018).

Let me begin with an overview of the North Carolina criminal justice system and its monetary sanctions **policies**.

3.1 The North Carolina Criminal Justice System

I use data on criminal cases prosecuted in North Carolina’s District Courts. The court system in North Carolina consists of two trial court divisions: the Superior Court division and the District Court division.¹⁹ Superior Courts are the highest of the general trial courts and, broadly speaking, have jurisdiction over all felony cases, while District Courts have jurisdiction over misdemeanors and infractions.^{20,21}

North Carolina is divided into Superior Court divisions, which are then subdivided into districts (5 divisions and 48 districts as of 2019). In the same way the state is also subdivided into 41—as of 2019—District Court districts. These divisions serve both electoral and administrative purposes.²² See Figures C1 and C2 in the Appendix.

All Superior Court cases brought to trial are decided by a jury of 12, who determines whether the defendant is guilty. A criminal trial in District Court, on the other hand, is always a “bench trial”, a judge decides the verdict instead of a jury.²³

In addition to judges, prosecutors, and defense attorneys, the other District Court official that plays a role in the disposition of criminal cases is the magistrate.²⁴ Magistrates are

¹⁹There is also an appellate division, which comprises the Supreme Court and the Court of Appeals. More details are provided in Appendix D.

²⁰Technically, the Superior Courts have exclusive jurisdiction over all felony cases, as well as over civil cases involving large amounts of money and misdemeanor and infraction cases appealed from a decision in District Courts. District Courts, then, have exclusive “original” jurisdiction over all misdemeanors and infractions, as all misdemeanor crimes and infractions are tried initially in District Courts (unless the misdemeanor was committed as part of the same act as a felony, in which case both are tried together in Superior Court).

²¹An infraction is not a criminal offense and may be punished only by a fine.

²²All judges and district attorneys participate in partisan—as of 2018—elections in even-numbered years. Superior Court judges serve eight-year terms, while District Court judges and district attorneys serve for four years.

²³because the Sixth Amendment to the United States Constitution guarantees a person charged with a crime the right to be tried by a jury, a defendant convicted of a misdemeanor in district court has the right to appeal his conviction to the superior court for a new trial (also called a trial “de novo”), in which the trial must be before a jury. If a defendant pleads guilty to a low-level felony in district court and appeals the judgment, there is no new trial in superior court. Because the plea is treated as if it had been done in superior court, any appeal from the judgment goes to the appellate division. A person charged with an infraction initially appears before the district court, but if the person is found responsible for committing the infraction he may appeal to the superior court for a new hearing. Unlike felonies and misdemeanors, a person found responsible for an infraction cannot be sent to jail or prison for the infraction, so the state constitution’s requirement that a jury decide criminal cases does not apply. A person who appeals a district court finding of responsibility for an infraction, therefore, can have a bench trial in superior court.

²⁴Magistrates are not elected, but are nominated for office by the clerk of superior court, appointed by the senior resident superior court judge, and supervised by the chief district court judge. A magistrate serves an initial term of two years, with subsequent terms of four years.

generally the first judicial officials involved in criminal cases, because they usually issue the criminal process (e.g., a warrant for arrest) that begins most criminal cases. The magistrate also generally sets the initial conditions for pretrial release (bail) for persons who have been arrested. More importantly, and relevant for the present study, in disposing of criminal cases, magistrates have jurisdiction to accept waivers of trial and guilty pleas to certain minor misdemeanors and pleas of responsibility to infractions. The minor misdemeanors and infractions for which magistrates may accept waivers of trial and pleas of guilt or responsibility, as well as the fines associated with each of them, are listed in uniform statewide schedules (called “waiver lists”), which are developed by the chief district court judges at their annual conference. See Figure XX for an example of one such list.

It is important to note that the North Carolina court system uses a structured sentencing scheme since 1994,²⁵ that classifies felony charges into ten classes (A, B1, B2, C, D, E, F, G, H, and I, where A is the most severe one and I, the least), misdemeanor charges into three (A1, 1, 2, and 3, where A1 is the most severe and 3, the least), and defendants facing felony (misdemeanor) charges into six (three) different criminal history levels (I-VI or I-III, where higher levels indicate more severity). The law stipulates a sentence range²⁶ for each combination of offense class and prior record level, and the sentence may be active (i.e. the offender needs to be under custody) or suspended. For certain class-record combinations, the judge has to decide whether the sentence should be active or suspended. The current punishment charts for both misdemeanors and felonies committed are depicted in Figures C3 and C4.

3.1.1 Monetary sanctions in North Carolina

Within North Carolina’s structured sentencing scheme, both fines and fees are ubiquitous. Any person convicted of a crime may be ordered to pay a fine as part of the sentence.²⁷ And the same goes for court fees.²⁸ Restitution, on the other hand, is restricted to offenses that fall under the Crime Victims’ Rights Act (CRVA).²⁹ Judges have complete discretion regarding

²⁵N.C. GEN. STAT. §15A-81B, added by 1993 N.C. Sess. Laws 538.

²⁶If the judge determines the sentence should be active the defendant is required to serve the full minimum of the range, and may serve less than the maximum with good behavior.

²⁷N.C. GEN. STAT. §§15A-1361, -1340.17 (felonies), and -1340.23 (misdemeanors).

²⁸*Id.* §7A-304

²⁹*Id.* Art. 46

whether to impose, and the amount of, fines^{30,31} and court fees.^{32,33}, and restitution³⁴

The expenditures financed via monetary sanctions vary. In North Carolina, the proceedings of all fines go towards maintaining public schools.³⁵ Court fees, on the other hand, aim to finance the court system. The most relevant items, common to all dispositions, are the general court fee, which amounts to around \$150, facility fees of \$12 and \$30 for District and Superior Courts, respectively, and phones fees of \$4.^{36,37,38} Restitution payments always go to the victim.^{39,40}

An important consideration for any monetary obligation is the defendant's ability to pay. North Carolina law either requires or encourages the court to consider a defendant's ability to pay before imposing obligations^{41,42} Some courts compare the defendant's income to the Federal Poverty Guidelines (See Table XX) in order to determine a defendant's ability to pay. An inability to pay is presumed if the defendant's annual income is at or below a certain percentage of the guidelines. No threshold percentage is defined by law, but a judicial district may wish to establish one by local rule (Abrams et al., 2019). Many programs view the 100 percent guideline as outdated and use another multiplier though (Markham, 2018).⁴³

³⁰ *Id.* §§15A-1362 and 15A-1363

³¹ Exceptions are Class 2 and 3 misdemeanors, as well as local ordinance violations, whose maximum amount is capped. For Class 2 misdemeanors fines cannot exceed \$1,000; for Class 3 misdemeanors the maximum is \$200; and for local ordinance violations the maximum fine is \$50, unless the ordinance provides for a larger amount, up to \$500 (*Id.* §14-4).

³² Judicial discretion regards court fees waivers, as all court fees are capped at the amounts outlined in *Id.* §7A-304

³³ *Id.* §§7A-304(a) and 15A-1363—see also State v. Patterson, 223 N.C. App. 280, 2012.

³⁴ *Id.* §§15A-1340.34(a) and 15A-1340.38

³⁵ N.C. Const. Art. IX, §7

³⁶ There are also fees intended to fund law enforcement retirement/insurance and training of \$4 and \$7.50, respectively (common to both cases in District and Superior Courts). Finally, there are service fees of \$5 common also to both courts. For criminal cases, there is also a DNA fee of \$2, for the support and services of the State DNA Database and DNA Databank. And the conviction of any motor vehicle offense carries with it an additional fee of \$10.

³⁷ Defendants appearing in District Court can expect to pay a minimum fee amount of \$178 for an infraction and \$180 for a misdemeanor, while in Superior Court defendants face fees starting at \$205.

³⁸ There are also fees for the provision of indigent defense (at least \$60), house arrest monitoring (one-time \$90 and \$4.37 daily), etc. See Figures C5 and C6 for a more comprehensive list of cost items and amounts.

³⁹ N.C. GEN. STAT. §§15A-1340.34(a) and 15A-1340.37(b)

⁴⁰ Although, the court may order the defendant to make restitution to a person other than the victim, or to any organization, corporation, or association, including the Crime Victims Compensation Fund, that provided assistance to the victim. Restitution shall be made to the victim or the victim's estate before it is made to any other recipient (*Id.* §15A-1340.37(b))

⁴¹ N.C. GEN. STAT. §§15A-1340.36(a) and 15A-1362.

⁴² make Bearden meaningful, courts should also examine a defendant's ability to pay at sentencing, when contemplating the assessment of fees and fines, rather than waiting until failure to pay the imposed obligation. Fundamental notions of due process of law, at a minimum, demand notice to the defendant of the centrality of ability to pay to the punishment determination and an opportunity to explain financial exigency and hardship. Many courts in North Carolina fail to meet such a basic standard Nichol and Hunt, 2018.

⁴³ Additionally, in order to consider a defendant's ability to pay the court may consider his or her eligibility

Monetary obligations from criminal and infraction cases are due at the time of the conviction, but in some cases, payment might be delayed to a later date or paid over time. If the defendant’s conviction results in probation, payment usually can be made any time during the period of probation. For persons not placed on probation, the court might allow some additional time to pay. Note that if all monetary obligations are not paid in full at the time of conviction, the courts are required to assess a one-time fee of \$20 to cover the State’s costs of processing future payments.

If the total amount is not paid within 40 days of the conviction (or within 40 days of the date allowed by the court, if a later date) this triggers what’s referred to as a “failure to comply” (FTC). In this event an additional fee of \$50⁴⁴ will be levied and the court or prosecutor may require the defendant to appear and “show cause”, i.e., to explain why they should not be jailed or otherwise penalized for their failure to comply.⁴⁵

However, in order for the court to imprison a defendant, it needs to be established that the nonpayment was willful, as well as consider the defendant’s ability to pay.⁴⁶ The burden of proof regarding inability to pay lies in the defendant though.⁴⁷ If it were shown that the defendant had indeed the ability to pay, the court may order the suspended sentence activated or, if no suspended sentence was imposed, order imprisonment—not exceeding 30 days⁴⁸— and, because the defendant is at risk of being imprisoned as a result of these hearings, he or she must be afforded counsel.⁴⁹ If it’s the case that nonpayment was not willful, the court may grant additional time for payment, reduce the owed amount, or revoke the monetary obligation altogether.⁵⁰

Finally, if a defendant has defaulted in payment of fines, fees, or other monetary obligations, the court may order that unpaid fines or costs be docketed as a civil judgment, a lien on the

for appointed counsel, their resources, including all real and personal property and the income derived from that property, their ability to earn or work, including any limitations due to disability, health, lack of transportation, or driving privileges, obligations to support dependents (including children, the elderly, and the disabled), the receipt of any public assistance, whether monetary obligations already owed to the court, or to another court, etc.

⁴⁴N.C. GEN. STAT. §7A-304(a)(6)

⁴⁵*Id.* §§15A-1362(c) and 15A-1364.

⁴⁶*Bearden v. Georgia*, 461 U.S. 660 (1983).

⁴⁷*State v. Tate*, 187 N.C. App. 593 (2007).

⁴⁸N.C. GEN. STAT. §15A-1364

⁴⁹*Hammock v. Bencini*, 98 N.C. App. 510 (1990).

⁵⁰It’s important to note also that for motor vehicle–traffic–offenses in the event of an FTC the court must report the person to the DMV, which will issue an order revoking the person’s driver’s license, effective on the sixtieth day after the order is mailed or delivered (N.C. GEN. STAT. §§20-24.1(b) and 20-24.2). A license revoked in this way remains revoked until the person settles the financial obligations ordered by the court, demonstrates an inability, and good-faith efforts, to pay, or shows the penalty, fine, or costs should be remitted.

defendant’s real estate.⁵¹

3.2 Identifying the effect of fines alone

In current practice in the United States monetary sanctions are usually levied in addition to other penalties, e.g., community service, probation or parole, incarceration, etc.. This creates an identification challenge, in the sense that agents experience multiple treatments simultaneously. In order to address this I take advantage of North Carolina’s particular treatment of its lowest-level misdemeanors following December 2013, when reforms aimed at reducing costs in their provision of defense representation for poor defendants.

Counsel for criminal defendants may be provided either by privately retained attorneys or by what’s known as indigent defense representation. In the U.S., indigent people accused of crimes have a constitutional right to legal representation free of charge. In North Carolina, depending on the jurisdiction this can be provided either by public defenders—full-time state employees— or by private attorneys who choose to participate in an assigned counsel system. More specifically, for misdemeanors, a defendant has a Sixth Amendment right to counsel only if an active or suspended sentence of imprisonment is imposed.⁵² In contrast, the Sixth Amendment guarantees the right to counsel to any indigent person accused of a felony, regardless of the possible punishment.⁵³ North Carolina law provides indigent criminal defendants with a slightly broader right to counsel, providing for appointed counsel in “[a]ny case in which imprisonment, or a fine of five hundred dollars . . . or more, is likely to be adjudged.”⁵⁴

In 2013, North Carolina made major changes to its criminal justice system as part of the 2013 Appropriations Act. Seemingly attempting to save money on appointed counsel,⁵⁵ North Carolina’s General Assembly enacted a new punishment scheme for Class 3 misdemeanors,

⁵¹N.C. GEN. STAT. §§15A-1365, 7A-455, 7A-455.1, and 15A-1340.38.

⁵²The formulation of this right has developed over a series of U.S. Supreme Court decisions. See *Argersinger v. Hamlin*, 407 U.S. 25 (1972) (recognizing basic right to counsel in misdemeanor cases); *Scott v. Illinois*, 440 U.S. 367, 373–74 (1979) (in misdemeanor cases, “the Sixth and Fourteenth Amendments to the United States Constitution require only that no indigent criminal defendant be sentenced to a term of imprisonment unless the State has afforded him the right to assistance of appointed counsel”); *Alabama v. Shelton*, 535 U.S. 654 (2002) (indigent defendant has right to appointed counsel in misdemeanor case if court imposes suspended sentence of imprisonment).

⁵³*Gideon v. Wainwright*, 372 U.S. 335 (1963).

⁵⁴N.C. GEN. STAT. §7A-451(a)(1)

⁵⁵The report accompanying the bill⁵⁶ states that Indigent Defense Services’ budget would be reduced by \$2,000,000 annually because the budget “[r]eclassifies low-level misdemeanors that rarely result in incarceration as Class 3 misdemeanors or infractions and modifies the sentencing structure for Class 3 misdemeanors so that the first [four] charges are fineable offenses. With no possibility of incarceration, these offenses do not require legal counsel.”

limiting the punishment to a fine for many defendants.⁵⁷ The change applies to offenses committed on or after December 1, 2013 and, in addition to changing the punishment for Class 3 misdemeanors, the reform reclassifies some Class 1 and 2 misdemeanors as Class 3 misdemeanors, as well as some Class 3 misdemeanors as infractions.⁵⁸ The punishment for offenses reclassified as Class 3 misdemeanors is likewise limited to a fine for many defendants. Furthermore, because due to other structured sentencing rules, the maximum fine is usually limited to \$200 for Class 3 misdemeanors—which has always been the case for traffic violations—these defendants would not be entitled to indigent defense as per North Carolina provisions.

4 Data and sample

In this paper, I analyze case-level data provided by the North Carolina Administrative Office of the Courts (NCAOC), which comprise the universe of felony, misdemeanor, and infraction cases filed at District and Superior Courts from 2013 until 2019.

The data include detailed information on sentencing decisions, arrest charges, and characteristics of the defendants. For each case, the data also identify the judge, district attorney, and defense attorney, and whether the latter is privately retained or providing indigent counsel.

I merged these administrative court records with several other datasets. First, I obtained information from the North Carolina State Bar on the characteristics of all attorneys licensed to practice in North Carolina. Specifically, information on when the attorney was licensed in the state, their gender, and the location of their offices. I complement this data with the law school from which attorneys graduated as well as the institution from where they obtained their undergraduate degree, which I obtained from the website Avvo.com.⁵⁹

The case-level data includes defendants’ home addresses, which I use to include census block information from the 2014-2018 American Community Survey.

Finally, in order to study possible mechanisms, I also use case records for all summary ejectment (eviction) and lien cases led in North Carolina from 2013 to 2019, provided by the NCAOC as well.

For the purpose of the analysis, defendants charged with multiple offenses—or recharged

⁵⁷Current Operations and Capital Improvements Appropriations Act of 2013, §18B.13, 2013 N.C. Sess. Laws 995, 1303–04.

⁵⁸*Id.* §§18B.14 and §18B.15, 2013 N.C. Sess. Laws 995, 1304–09, amended by 2013 N.C. Sess. Laws 1594, §§4–6.

⁵⁹This is an online marketplace for legal services that provides lawyer referrals and access to a database of legal information consisting primarily of previously answered questions, but that also includes—in addition to the lawyers’ offices location and abridged resumes—client reviews, disciplinary actions, and peer endorsements.

for the same crime after a mistrial, in the case of misdemeanors—are collapsed to a single observation. In this scenario, I retain only the earliest filing date, charge characteristics and original sentencing outcomes. When a defendant faces multiple charges, I only consider the most severe one, where the most severe charge is the charge associated with the most severe sentencing class. This is done since court fees are assessed at the case level, and because for many low-level offenses when more than one charge is made, defendants are fined only for the offense carrying the highest fine.^{60,61} Additionally, in order to deal with outliers in LFOs, in my analysis I winsorize this variable at the 2.5 percent level.

4.1 Analysis sample

I make three main restrictions to the sample to facilitate my analysis. First, I restrict the sample to defendants charged with Class 3 misdemeanors as their most serious offense. I do this in order to limit what Mueller-Smith (2015) calls “omitted treatment bias” that stems from judges having influence over several different court outcomes (e.g., guilt or innocence, incarceration versus probation, etc.). As mentioned above, following North Carolina’s 2013 Appropriations Act, defendants charged with Class 3 misdemeanors can face, in addition to court fees, at most a fine. This greatly limits the scope for omitted treatment bias. I focus, then, on defendants with at most 3 prior convictions that are being charged with at most a Class 3 misdemeanor after December 1, 2013.

Second, I restrict my sample to offenses where defendants cannot waive their right to be present at trial. The right to be present at trial is a personal right, which may be waived in all cases except capital ones.⁶² This means that non-capital trials may be held *in absentia*, when the defendant has waived the right to be present (Smith, 2013).⁶³ These trial *in absentia* present a problem for my identification as they are usually handled by magistrates, who are not judges and, thus, are not randomly assigned. As mentioned above, every year the Conference of Chief District Judges puts out a list of offenses for which magistrates and clerks of court may accept written appearances, waivers of trial or hearing and pleas of guilty or admissions of responsibility, as well as a list of “non-waivable” offenses.⁶⁴ I restrict my sample to those cases in the “non-waivable” list.

Finally, I also drop all cases where the defendant is also facing any traffic offense, as

⁶⁰N.C. GEN. STAT. 7A-148

⁶¹Estimates considering monetary sanctions aggregated to the case level are available upon request.

⁶²State v. Braswell, 312 N.C. 553, 558 (1985); State v. Daniels, 337 N.C. 243, 256 (1994); State v. Huff, 325 N.C. 1, 29 (1989), vacated on other grounds sub nom., Huff v. North Carolina, 497 U.S. 1021 (1990); ; State v. Hayes, 291 N.C. 293, 296-97 (1976).

⁶³However, there can be no sentencing in absentia when corporal punishment is imposed, i.e., imprisonment. Therefore, appearance in court is mandatory for all felonies.

⁶⁴List that also establishes the schedule of penalties or fines for these offenses (N.C. GEN. STAT. §7A-148)

non-payment of monetary sanctions in those cases also carries the possibility of driver’s license revocation.⁶⁵ Additionally, I also drop cases for repeat offenders where the reoffending upgrades the misdemeanor to Class 2, as is the case of shoplifting under [N.C. GEN. STAT. §14-72.1](#).

In combination, these restrictions leave me with 25,242 cases (out of 4,435,571 total cases filed in North Carolina in the period, and 3,395,066 Class 3 misdemeanors), overseen by 104 judges (out of ~ 270). See Tables [A6](#) and [A7](#) for more details on the sample selection.

Additionally, I further restrict my estimation sample to those Class 3 misdemeanor cases overseen by a district judge who oversees at least 50 other Class 3 misdemeanor cases, and to those cases that are not “singletons” within the set of district-by-time fixed effects.

4.2 Descriptive statistics

Table [4](#) reports descriptive statistics for my analysis sample. The main data set includes 10,373 cases with final dates of disposition between 2013 and 2019. Details on this population’s demographic characteristics are provided in Panel A. The sample is predominantly black (57%) and male (73%), overrepresented relative to North Carolina’s population (22% and 37%, respectively). The sample is quite young as well, with 67% of defendants below the age of 35, and 42% below the age of 24.

The study population is middle-class: based on addresses from the court records, the average defendant lives in a neighborhood in which the median income is \$51,000, and where 20% of households earn below the poverty line.

Cases are all Class 3 misdemeanors. The majority of which are drug possession offenses; the rest being property and other, such as liquor laws violations (open container violations, being intoxicated and disruptive in public, etc.). There are no violent charges. 70% of these cases result in a conviction, with almost all of these achieved via pleas.

46% of defendants face some monetary sanction. These stem either from fines (27%) or courts fees (45%), with no restitution being levied on any defendant in the sample.

Monetary sanctions average \$243 for those that receive any, with the breakdown between fines and fees being \$48 and \$224, respectively.

As we can see in Table [A5](#) Class 3 misdemeanor cases where defendants face no monetary sanctions are clearly different from cases where defendants do. Defendants not facing any monetary sanction tend to be minorities more frequently, as well as somewhat younger. They also tend to live in neighborhoods with larger median household incomes. Defendants that end up paying any monetary sanction are charged for less offenses and have more

⁶⁵For this same reason I also drop cases of underage purchase of alcohol, pursuant to [N.C. GEN. STAT. §18B-302](#)

priors. Additionally, they are more likely to be facing a drug charge and less likely to have been charged for a property offense. Cases also tend to move faster; they’re more likely to be disposed of via guilty pleas as well. Defendants levied monetary sanctions are also less likely to have public representation and more likely to represent themselves. Finally, defendants levied monetary sanctions are also slightly less likely to engage in any criminal activity within two years.

5 Identification approach

I want to estimate the effect of monetary sanctions on future criminal involvement—proxied by arrests.⁶⁶ Unobservables (to us) associated with future criminality that influence judges’ decisions regarding monetary sanctions would render OLS regressions biased. I address this endogeneity of monetary sanctions with an IV approach, leveraging the random assignment of cases to district court judges, i.e., using a “judge fixed effects” design.

In judge fixed effects designs it is crucial that the treatment variable of interest be binary (Frandsen et al., 2019, so I consider a dummy variable indicating if the defendant gets levied any LFO, Any LFO = $\mathbb{1}_{LFO>0}$). I consider, then, the following model:

$$Y_{ict} = \beta_1 \text{Any LFO}_{ict} + \beta_2 \mathbf{X}_{ict} + \gamma_{ct} + \varepsilon_{ict} \quad (2)$$

where Y_{ict} is the outcome of interest for individual i in case c and year t , such as future criminality, for example, \mathbf{X}_{ict} is a vector of case- and defendant-level control variables, γ_{ict} are district-by-time fixed effects, and ε_{ict} is an error term.

The key problem for causal inference in this setting is that OLS estimates of equation (2) are likely biased, due to correlation between the having been levied monetary sanctions and unobserved defendant characteristics that are correlated with the outcome. The sign of this correlation, and therefore the bias stemming from it, is unclear. For example, judges may be more likely to fine on defendant that display less regret who, in turn, are more likely to reoffend. At the same time, judges could be inclined to fine to defendants they perceive as having a higher ability to pay; defendants with a higher ability to pay probably have a stronger attachment to the legal labor market, and are thus less likely to reoffend.

In order to address this issue I need variation in whether a defendant gets levied fines or fees that is orthogonal to unobserved defendant characteristics. The quasi-random assignment of district judges provides exactly this type of variation. In this way I can use the quasi-

⁶⁶Police officers are the charging agency in North Carolina so court records capture close to the universe of arrests (Rose, 2018).

randomly-assigned judges as instruments for whether defendants get monetary sanctions, suggesting the following first stage in a 2SLS setup:

$$\text{Any LFO}_{ict} = \sum_j \alpha_{1j} \mathbb{1}_{j(i)=j} + \alpha_2 \mathbf{X}_{ict} + \gamma_{ct} + \eta_{ict} \quad (3)$$

with j indexing judges and $j(i)$ indicating judge assignment for individual i . This design identifies the local average treatment effect (LATE) for each pair of judges and corresponds to the average treatment effect for individuals who would get a fine or fee if assigned to the stricter judge of the two, but would not if assigned to the more lenient judge.

The problem with this approach is that it is well known that when many instruments are used, 2SLS may be severely biased ([Bound et al., 1995](#)). The usual recommendation to address this is to use JIVE or LIML. JIVE—jackknife instrumental variable estimator—, which seems to be the solution the literature has settled on, first suggested by [Phillips and Hale \(1977\)](#) and later by [Angrist et al. \(1999\)](#) and [Blomquist and Dahlberg \(1999\)](#), attempts to improve finite-sample properties by replacing the usual fitted values from the reduced form regression(s) by “omit-one” fitted values which omit observation i when estimating the i -th fitted value, thus eliminating the correlation between the fitted values and the structural equation errors.

It has been argued, though, that LIML is a better alternative than JIVE ([Davidson and MacKinnon, 2006](#)), as even though the small-sample bias of JIVE does not depend on the degree of overidentification, it does increase in the number of exogenous covariates present in the second-stage equation ([Akerberg and Devereux, 2009](#)). However, LIML is not consistent with heteroskedastic data ([Chao and Swanson, 2004](#) and [Hausman et al., 2012](#)) and, additionally, [Kolesár \(2013\)](#) shows that in the presence of treatment effect heterogeneity the estimand of LIML may even lie outside of the convex hull of LATEs. [Kolesár \(2013\)](#) proposes a modification of the JIVE, the unbiased JIVE (UJIVE) estimator, that remains consistent even in the presence of many instruments and covariates.

In my setting, judge assignment is random only when conditioned on district-by-time fixed effects, as-if randomization of cases to judges takes place within judicial districts and within time periods. Therefore, the construction of the leave-out mean of JIVE requires that first I residualize out district-by-time fixed effects, in order to limit the comparison to defendants at risk of being assigned the same set of judges. Because of this large number of fixed effects I present results using the UJIVE estimator in my main tables.⁶⁷

JIVE and UJIVE are equivalent to 2SLS, in that sense that they initially construct a

⁶⁷I also explore additional estimation strategies, 2SLS using all judge dummies, LIML, JIVE, and [Belloni et al. \(2014\)](#)’s IV Lasso in Appendix B.2.

single instrument, a predictor of treatment status based on the first-stage and, on a second step, they use this constructed instrument as a single instrument to estimate the treatment effect. For the case of UJIVE that constructed instrument is algebraically equivalent to

$$Z_{ict} = \left(\frac{1}{n_{tj(i)} - n_{itj(i)}} \right) \left(\sum_{k=0}^{n_{tj(i)}} \text{Any LFO}_{ikt}^* - \sum_{l=0}^{n_{itj(i)}} \text{Any LFO}_{ilt}^* \right) \quad (4)$$

where $n_{tj(i)}$ is the number of cases assigned to judge j and $n_{itj(i)}$ is the number of cases involving defendant i seen by judge j in year t . Any LFO $_{ict}^*$ is the residual likelihood of receiving a monetary sanction after removing the effect of district-by-time fixed effects.

I estimate the causal effect of having to pay a fine or court fees, then, using this measure of the likelihood of being levied a monetary sanction by a quasi-randomly-assigned judge as an instrument for having any legal financial obligation at the conclusion of a defendant’s trial. Essentially, I compare future criminal involvement for defendants assigned to judges with different propensities to levy financial obligations, and interpret the differences as the causal effect of being levied monetary sanctions associated with the difference in fining propensities of the assigned judges.

Variation in judge leniency

As mentioned above, I restrict the sample to exclude cases overseen by judges assigned to fewer than 50 cases, as well as cases that are “singletons” within the set of district-by-time fixed effects. 30% percent of judge-by-year cells have more than 50 cases. After dropping these cases my sample includes 104 district judges.⁶⁸

Figure 1 reports the distribution of the residualized judge leniency measure for monetary sanctions. My sample comprises 104 judges. The median number of cases overseen by a judge is 79 cases and the average is 100 cases. See Table A4 for more details. After residualizing out the set of district-by-time effects, the judge measure ranges from -0.708 to 0.749, with a standard deviation of 0.108. Moving from the first to the ninety-ninth percentile of judge leniency increases the likelihood of receiving a fine or a fee by 64 percentage points, a 139% change from the mean likelihood of 46%.

As mentioned above, the variation in the judge leniency measure comes from two sources, as there are no cases warranting restitution in my sample. Judges may choose to levy harsher or more lenient fines, as well as whether to waive—all or part— court fees. Figure A1 shows the distribution of residualized judge leniency for these two margins separately. In my preferred

⁶⁸As mentioned above, in any given year there are around 270 district judges in North Carolina (see Table C1), and these are elected through-partisan-elections that take place every 2 years.

specification I collapse both of these measures into one, as that captures what I consider the relevant margin for defendants.

Finally, as mentioned above, I use this variation in judge leniency to instrument for whether a defendant gets levied a monetary sanction in order to identify the (local) average treatment effect of monetary sanctions for defendants whose likelihood to be levied any monetary obligations vary due to judge assignment. I do this via 2SLS estimation of Equation 2, with the first stage given by Equation 5 below. In order to interpret these two-stage least squares estimates as causal I need the usual LATE assumptions to hold: (i) for judge assignment to be associated with monetary sanctions (relevance), (ii) for judge assignment to impact future criminal involvement only through monetary sanctions (restriction), and (iii) for defendants facing a fine with a lenient judge to be at least as likely to face a fine if facing a stricter judge (monotonicity).

5.1 Instrument validity

5.1.1 First stage

To consider the first-stage relationship between judge assignment and the amount of monetary sanctions, I estimate the following equation for defendant i and case c , assigned to judge $j(i)$ at time t :

$$\text{Any LFO}_{ict} = \alpha_1 Z_{ict} + \alpha_2 \mathbf{X}_{ict} + \gamma_{ct} + \eta_{ict} \quad (5)$$

where the vector \mathbf{X}_{ict} includes case- and defendant-level covariates, Z_{ict} are the leave-out measures of judge leniency described above, and γ_{ct} are district-by-time fixed effects. Robust standard errors are clustered at the individual and judge level.

Figure 1 illustrates graphically the first-stage relationship, described in Equation (5), between the residualized measure of judge leniency and whether a defendant gets levied any monetary sanctions, controlling for district-by-time fixed effects, overlaid over the distribution of judge leniency. It plots a local linear regression of the likelihood of receiving a monetary sanctions against judge leniency, after controlling for district-by-time fixed effects. This likelihood of receiving a monetary sanction is monotonically, and approximately linearly, increasing in the judge leniency measure. A 10 percentage point increase in the residualized judge's fining rate in other cases is associated with an approximately 6.8 percentage points increase in the likelihood of being levied a monetary sanction.

Table 5 presents formal first-stage results from Equation (5). Column 2 begins by reporting results only with district-by-time fixed effects. Column 3 adds baseline case and defendant controls: race, gender, age, the number of charged offenses, indicators for crime type and the type of defense representation, as well as the median household income for the

census block group where the defendant resides. The results in Table 5 are consistent with Figure 1: the residualized judge instrument is highly predictive of whether a defendant faces any monetary sanctions. Including controls in column 3 changes very little the magnitude of the estimated first-stage effect, consistent with the quasi-randomness of judge assignment. With all controls my results show that a defendant assigned to a district judge that is 10 percentage points more likely to levy a fine or court fees on a defendant is 6.8 percentage points more likely to receive a monetary sanction.

The instrument is strong, with first stage F-statistics greater than 120. These F-statistics are Kleibergen-Paap robust F-statistics, which in the just-identified case are equivalent to the effective F-statistic of Montiel Olea and Pflueger (2013). Both of these F-statistics exceed 12.28, which is the critical value they propose for just-identified models with $\tau = 10\%$ of worst case bias.^{69,70}

5.1.2 Conditional independence

In order to be able to interpret my IV estimates as a LATE, it must be the case that judge assignment only impacts defendant outcomes through monetary sanctions, i.e., that judge assignment is orthogonal to unobserved defendant and case characteristics (conditional on court-by-time fixed effects).

I can study this by examining whether observed characteristics of defendants and their cases differ by judge. Table 6 provides strong empirical evidence of the random assignment of cases to district judges within each court in a given time period. The first column of Table 6 tests whether case and defendant characteristics are predictive of whether a defendant receives a monetary sanction. I control for court-by-time fixed effects and cluster the standard errors at the individual and judge level. I find that for each additional concurrent offense defendants are 12 percentage points less likely to be levied any fines or fees, a 26 percent decrease from the from the baseline mean of 46 percent. Defendants with a prior offense are 12 percentage points more likely to be to be fined, compared to defendants with no prior offense, a 26 percent increase. Additionally, defendants arrested for property offenses are almost 7 percentage points less likely to be fined than those arrested for XX, a 15 percent decrease. Finally, individuals who have private representation or that represent themselves are both close to 14 percentage points more likely to be fined compared to those under public representation, a 30 percent increase. Column 2 assesses whether these same case and defendant characteristics are predictive of the judge leniency measure under the same

⁶⁹This cutoff corresponds to a test of IV relative bias of no more than 10 % with a significance level of 5 %, analogous to the Stock and Yogo (2005)’s cutoff of 10.

⁷⁰It is not clear how to evaluate many-weak-instrument bias in leniency/examiner designs though (Hull, 2017; Frandsen et al., 2019; Bhuller et al., 2020).

specification. I cannot reject the null hypothesis of all coefficients being zero (joint p -value = 0.37). I find evidence, then, in support of district judges of differing tendencies being assigned very similar defendants.⁷¹

5.1.3 Monotonicity

The impact of judge assignment on monetary sanctions needs to be monotonic across defendants in order for me to be able to interpret my estimates as a well-defined LATE. This monotonicity assumption implies that defendants who are spared any fines by stricter judges would also be spared by more lenient judges, and that defendants levied fines by more lenient judges would be levied fines as well by stricter judges.

However, I cannot test this directly. A testable implication of the monotonicity assumption, though, is that first-stage estimates should be positive for any subsample. Tables A2 and A3 present these first-stage results separately by type of offense, type of representation, whether defendants have a prior record, by defendant race, and by income quintile (using the full sample of cases to calculate judge leniency). I find that the residualized measure of judge leniency is consistently positive and sizable in all subsamples.

Furthermore, Frandsen et al. (2019) provide a test for the joint null hypothesis that the exclusion and monotonicity assumptions hold. Table A1 shows that I fail to reject this null within each district in my data, controlling for all the case and defendant characteristics, as well as time fixed effects.

5.2 Understanding the LATE

The IV estimates represent the LATE for defendants who would have received a different fining decision had their case been assigned to a different judge. To better understand this LATE, I characterize the number of compliers and their characteristics following the approach developed by Abadie (2003) and extended by Dahl et al. (2014) and Frandsen et al. (2019).⁷² See online Appendix B.1 for a more detailed description of these calculations.

In Table A8 I estimate these shares. I find that the complier share is approximately 48 percent, thus the IV estimates are relevant for a large share of the sampled population. 36

⁷¹In Table ?? I pool judges according to their leniency and test whether the characteristics of defendants differ based on whether they are assigned to a judge with a high, medium, or low fining propensity (defined by bottom, middle, or top tercile of the distribution of fining propensity) relative to other judges in the same district-by-time cell. Results also show that judges with high, medium, and low fining propensities are assigned defendants that are extremely similar in terms of their age, gender, race, and income.

⁷²Frandsen et al. (2019) show that the weighted complier mean for a characteristic can be recovered through a regression of the treatment interacted with that characteristic on the treatment instrumented with the judge IV. This result generalizes the Abadie (2003) approach to estimating complier means, which is formulated in terms of a binary instrument.

percent of the sample are “never takers,” and 15 percent are “always takers.”⁷³

Individual compliers cannot be identified, but it is possible to describe their observable characteristics following Frandsen et al. (2019). I do this in Table See A9. Compliers in the sample are 6 percentage points less likely to be charged with more than one offense, 13 percentage points less likely to be charged with a property offense, 10 percentage points more likely to be charged with a drug offense, 14 percentage points less likely to be represented by a private attorney, 16 percentage points more likely to represent themselves in court, 8 percentage points less likely to be younger than 25 years old, 7 percentage points more likely to be between 25 and 34 years old, and 6 percent less likely to be in the first quartile of household income and 11 percentage points more likely to be in the fourth, compared to the average defendant.⁷⁴ Compliers are not systematically different from the average defendant by race or gender, however.

6 Results

In this section, I present my main results on the effects of fines and fees on the likelihood of defendants reoffending on financially and non-financially motivated offenses. I then report the heterogeneity of these results with respect to income, as all the channels through which fines and fees operate may interact with income. Finally, I distinguish different types of financially motivated crimes in order to provide some clarity in regards to which channels dominate.

6.1 Main effects

Table 7 presents OLS and UJIVE estimates of the impacts of fines and fees on future criminal involvement that is financially (Panel A) and non-financially (Panel B) motivated. Columns (1)–(3) report OLS estimates. Column (1) begins by reporting results only with district-by-time fixed effects. Column (2) adds baseline case and defendant controls. Column (3) reports OLS estimates under the same specification as Column (2), but reweighted so that the proportion of compliers matches the share of the estimation sample. Finally, Columns (4) and (5) report UJIVE estimates where I instrument for whether the defendant was levied any fines or fees using the leave-out measure of judge leniency described in Section 5, with

⁷³Under Frandsen et al. (2019)’s weaker average monotonicity condition $\alpha(Z_{1-\rho} - Z_\rho)$ is a lower bound on the complier share. This can be seen by noting that under this definition, compliers are all individuals whose treatment status varies across judges. For any two judges $j' > j$, $\alpha(Z_{j'} - Z_j)$ bounds the share of compliers, but by construction this bound is largest for judges $1 - \rho$ and ρ .

⁷⁴Where household income is proxied with ACS’ median household income in the census tract where they reside.

(Column 4) and without (Column 5) baseline controls. All standard errors are clustered at the individual- and judge-level.

Panel A results show that for all specifications, fines and fees are negatively associated with financially motivated reoffending. The magnitudes of the OLS estimates are moderately sensitive to the addition of baseline case and defendant controls: in OLS results with only district-by-time fixed effects I find that a defendant who is levied a fine or fee is 4.3 percentage points less likely to reoffend, a 48.9 percent decrease from the sample mean (Column 1). When I add case and defendant controls, the estimate drops to 3.3 percentage points (Column 2).

Estimates in Column (2) could still be biased if judges are choosing on average to levy fines or fees on defendants who have lower risks of reoffending, despite controlling for a rich set of district-by-time fixed effects and case and defendant controls as well. It is for this reason that my identification strategy involves using the quasi-randomly assigned judges as instruments for whether defendants get levied any fines or fees. Recall from Section 5, however, that in overidentified models such as that of Equation (3) where you instrument one endogenous variable with many instruments (hundreds of judge dummies in this case), first-stage overfitting will generate small-sample bias. Arguably the best way to address this bias, the JIVE estimator, is biased as well if there are many covariates in the second stage, as is my case with the large number of district-by-time fixed effects. It is for this reason that my preferred specification in Column (5) uses the UJIVE estimator proposed by [Kolesár \(2013\)](#). Results using this specification show that marginal defendants experiencing fines or fees are 6.9 percentage points less likely to engage in any criminal activity within two years, a 78.4 percent decrease from the sample mean (138 percent decrease relative to the mean for compliers). The direction of the selection bias then was positive, judges on average levy fines and fees on defendants more likely to recidivate.

Panel B reports estimates for the effects of monetary sanctions on non-financially motivated reoffending. OLS results in Panel B paint the opposite picture as Panel A: fines and fees seem to drive non-financially motivated reoffending. Estimates from Column (1) indicate that defendants are 2.3 percentage points more likely to reoffend when levied fines or fees. OLS estimates are again somewhat sensitive to the addition of baseline case and defendant controls, their magnitude is increased 0.5 percentage points when moving from Column (1) to Column (2). Taking UJIVE estimates from Column (5) as my preferred specification suggests that after controlling for selection bias there is no relationship between fines and fees and non-financially motivated recidivism.

It is important to remember that IV estimates an average treatment effect for the complier population and that therefore, besides selection bias, another possible explanation

for differences between IV and OLS estimates is effect heterogeneity, in that the average causal effect for compliers may differ to the mean impact for the whole sample. In order to explore this possibility, it is useful to characterize compliers by their observable characteristics. I follow a procedure similar to that developed by [Bhuller et al. \(2020\)](#). Specifically, I begin by splitting the sample into 10 mutually exclusive and collectively exhaustive subgroups based on the predicted probability of being levied any fines or fees. This predicted probability is a composite index of all the observable characteristic. I then estimate the first-stage equation (5) separately for each subgroup, calculating the proportion of compliers in each. I then reweight the estimation sample so that the proportion of compliers in a given subgroup matches the share of the estimation sample for that subgroup. Reweighted OLS estimates are presented in Column (3) of Table 7. Results suggest that the differences between the UJIVE and OLS estimates cannot be accounted for by heterogeneity in effects, at least due to observables.

Finally, my main results use a two-year follow-up period for all defendants when considering the effects of fines and fees on reoffending. Figure 2 shows the evolution over time of these effects. The figure presents UJIVE estimates of Equation 2 similar to Column (5) of Table 7 but for one-month increments in the follow-up period. There is a steady drop in the likelihood of a new financially motivated criminal involvement within the first year which then remains steady throughout.

6.2 Heterogeneity and mechanisms

In this section, I study different types of heterogeneity in my results which in turn helps me examine the different potential mechanisms through which fines and fees may affect defendants reoffending and thus understand my results better.

Results from Table 7 show negative effects of fines and fees on reoffending. However, these are average effects in the population and they could be masking important heterogeneity across different types of defendants.

There are three possible mechanisms driving through which fines and fees may affect reoffending. As described in Section 2 these are: deterrence, signaling, and income. Following the classic [Becker \(1968\)](#) model of crime, defendants in my sample will face a gamble when choosing whether to recidivate. They can either choose to commit a crime and receive a criminal benefit (albeit with an associated risk of apprehension and subsequent punishment) or not to commit a crime (which yields no criminal benefit but is risk free). Defendants, through their experience of being levied a fine or court fees, will update their expectations regarding (monetary) punishment. If their expectation was lower than what they turned out

to be, they should be somewhat deterred from reoffending in financially motivated crimes, as their expected returns from crime would be lower.

The signaling channel would predict increased reoffending across the board, for all types of crimes, for example, while both the deterrence and income channels should impact only financially motivated reoffending. At the same time, the signaling channel should impact defendants in the same way, regardless of their financial status. The income channel should impact only poorer defendants, while the deterrence channel could go either way, as poorer defendants may have held different priors regarding monetary sanctions.

I next turn to explore 3 possible mechanism that may be driving...

One paragraph per mechanism!

There are three possible mechanisms that may be driving these findings. First, there's a deterrence effect: defendants update their priors regarding monetary sanctions. Second, high monetary sanctions may erode trust in the public enforcer, signaling revenue instead of social welfare maximization. Altruistic defendants may then revise downwards their expectations of the social costs of their actions. And third, monetary sanctions may be relatively high enough that, some defendants may engage in criminal activity to satisfy their consumption needs.

I will study heterogeneous responses by types of crime and then by income. I will also distinguish between different type of financial reoffending in order to better get at the income channel.

6.2.1 Types of offenses

results both in Panel A and B in Table 7 are consistent with a deterrence story, where defendants revise upwards their expectations of monetary sanctions and behave accordingly in the future when assessing whether to commit economically motivated offenses. If there were signaling effects one would expect effects on non-financially motivated offenses as well.⁷⁵

First, the negative coefficient for financially motivated offenses and the null results for non-financially motivated ones in table 7 are evidence against a signaling channel and in favor of a deterrence one. The argument against signaling is buttressed by estimates in tables ?? and ?? where I see no effects of fines and fees on any broad crime categories except for property offenses (and if anything, the point estimates are negative) as well as from results in table A12 that indicate that it is defendants with no prior knowledge of the criminal justice system the ones that are driving the results. When looking at heterogeneity by income in tables ?? and ??, however, the pattern is still consistent with an income story

⁷⁵Results from table ??, which disaggregates reoffending offenses by category (violent, property, drug, or other) also show effects only for property crime, again emphasizing the deterrence channel.

(for poorer defendants, who are the only ones who should be affected by the income channel).

6.2.2 Income

One limitation of the data is that i don't have the income... I deal with this...

Tables ?? and ?? present no evidence of a signaling story again. However, the heterogeneity in income could be consistent with either a deterrence or an income story. In Table A12 I study the effects by whether defendants had any prior engagement with the criminal justice system. If what's going on is that defendants are revising their expectations regarding criminal sanctions, it would make sense for defendants already acquainted with the criminal justice system to experience no effects at all. In table A12 all the effects seem to stem from defendants without any prior criminal justice engagement, which is consistent with a deterrence story, and not an income one.

Additionally, if there is an income story going on one may expect defendants to firstly run into some issues paying their fines and fees. I explore this in table A15, where I can see that defendants are not differentially likely to pay their fines or fees across income groups. I cannot reject the null that all coefficients are the same (the joint F -test of the null that all coefficients across samples are the same has an F -value of 0.27 and a p -value of 0.7640). However, it is important to note that a timeline just as plausible is for defendants to prioritize the payment of monetary sanctions over, say, their rent or utilities and then getting into financial distress and crime. And this seems to be the case as I see in the next subsection.

Estimates in A15 provide some suggestive evidence against an income channel, as marginal defendants are not differentially likely to default in payment across income groups. Estimates from tables ?? and ??, when taking into account "poverty" offenses, provide even more evidence against an income channel as estimates become now negative for lower income defendants.

6.2.3 Poverty crimes

A second way to test at Heterogeneity bt income is to further examine the types of crimes committed (Heterogeneity by type of financially committed crime)

In the US there are certain behaviors that are criminalized that would not fit the usual standard of crimes. For example what are dubbed "vagrancy" crimes according to the FBI Uniform Crime Reports, such as panhandling or sleeping in public places. For the present study I consider as well offenses such as driving with a license revoked due to the nonpayment of fines or court fees, which is the most common reoffending crime in my sample (see Figure A3). It is important to distinguish if these are the types of offenses driving the income

heterogeneity we see in Table ??, as these offenses are essentially undeterrable and effects stemming from these would be misleading. Results from Tables Table ?? and ?? show that fines and fees do indeed drive up poverty offenses among poorer defendants. However, results for financially-motivated offenses still stand.

7 Robustness checks

In this section I explore possible threats to both the causal and conceptual interpretation of my results.

7.1 Complier population heterogeneity

An alternative explanation for the results in tables ?? and ?? is treatment effect heterogeneity. After all, instrumental variables estimations recover local average treatment effects, local as in for the complier population. When analyzing heterogeneity by income quartiles I am effectively looking at different populations and, therefore, possibly different complier populations as well. If treatment effects vary across these different population, it could be the case that this is what is driving the heterogeneity.

Individual compliers are not identified, but it is possible to describe their observable characteristics (Frandsen et al., 2019). Columns (2)-(7) of Table 3 show the results. Heuristically, if the instrument has a stronger (weaker) relationship with incarceration in a particular subsample, compliers are more (less) heavily concentrated in that group. In the table, we also calculate the weighted average share of that group among compliers relative to the share of that group in the full sample. For most subgroups, their representation among compliers is nearly the same as in the overall sample. Drug charges are somewhat overrepresented among compliers, which may indicate more judicial discretion for these cases. In contrast, low-severity crimes are somewhat underrepresented, likely because very few defendants charged with low-level crimes are incarcerated regardless of their judge’s severity. Compliers are slightly more likely to be parents than the overall sample (complier ratio of 1.184).

7.2 Idiosyncratic subsets of judges per income quartile

When looking at the heterogeneity by income one wonders if it could be the case that different judges, therefore estimating different LATEs, serve population of different income. From Figures XX and XX one can see that there is considerable heterogeneity in income within judicial districts in order to ignore this concern. Additionally, Figure XX shows the distribution of judge leniency by income quartile.

7.3 Model misspecification

The results in Tables XX and XX suggest the possibility of model misspecification, as predicted values lie outside of an acceptable range. In order to gauge the extent of the problems this poses for my analysis I estimate these same tables again in Tables XX and XX using alternative specifications (logit and probit).

The results are consistent with... I

7.4 External validity

On August 16, 2018 the School of Government of the University of North Carolina, Chapel Hill published a “bench card”⁷⁶ written by James Markham with the intent to bring clarity regarding monetary sanctions and ability to pay in North Carolina. There had been instances where judges had pleaded ignorance regarding their discretion in setting monetary sanctions as the reason for nonleniency.

The main objective of the card was to help bring greater precision to matters related to money in criminal court. First, there is precision as to the type of obligation in question, as there are many different types of monetary obligations—costs, attorney fees, other fees, fines, and restitution—and the statutory rules applicable to them vary. The card groups all of the possible obligations into categories and lists them.

As mentioned above, there is precision as to available relief. There has been a lot of talk about the limitations on judges’ authority to waive and remit certain obligations, but waiver and remission are not the only avenues for relief. The card shows five distinct categories of permissible relief (waiver, ordering partial restitution, exemption, remission, and modification upon default), each of which derives from a different statute, and only some of which require findings, notice, or a hearing.

The card includes some suggested guideposts for thinking about a defendant’s ability to pay any monetary obligation—both on the front end when imposing it, and on the back end when responding to a failure to pay it. It also includes a collection of additional issues (like installment plans, civil judgments, and driver license revocation) related to monetary obligations.

Though the card catalogues the available options for each type of monetary obligation, it takes no position on what a judge ought to do in any case. A district may wish to consider local policies on issues related to money (for example, a presumption of just cause to waive costs based on pre-defined circumstances, or a limitation on the use of arrest or imprisonment

⁷⁶Sort of “cheat sheet” that provides judges with useful questions and guidelines to help make decisions on certain topics.

in money-only cases).

Because the Mecklenburg judicial district had already implemented reforms regarding ability-to-pay considerations, I can study the impact of the publishing of this bench card taking Mecklenburg as a control group.

7.5 Exclusion restriction

As mentioned above, in order to be able to interpret my results as causal, the instrument needs to affect defendants' outcomes only through monetary sanctions. In this setting there is one more channel through which defendant outcomes may be affected, as defendants, besides monetary sanctions, face a misdemeanor record, which we know impacts reoffending (Agan et al., 2021, Mueller-Smith and T. Schnepel, 2020).

In order to address this concern, first I test whether the judge leniency measure is predictive of defendants getting a criminal conviction. Second, I test whether a separate leave-out measure based on conviction has any additional predictive value for conviction beyond my preferred leave-out instrument. These results are reported in online Appendix Table XX. Consistent with the exclusion restriction, I find that my preferred leave-out instrument is not predictive of conviction and that there is no additional explanatory value of the separate conviction leave-out measure.

7.6 Alternative identification approaches

Table A16 in the Appendix explores alternative specifications that account for potential biases from the construction of the leniency measure: using all the judge dummies directly as instruments, using Lasso to pick the most informative dummies (Belloni et al., 2014), and using the unbiased JIVE estimation strategy proposed by Kolesár, 2013. Across all these different estimations strategies I consistently find a negative relationship between monetary sanctions and financial—as well as overall—recidivism.

8 Conclusion

Over 16 million people go through the criminal justice system every year. Most don't suffer any consequence beyond having to pay a fine or the court-associated fees. Little, if anything is known regarding what effects these sanctions have on reoffending. As the system continues to expand and become more dependent on these sanctions for financing, it is of great relevance to understand what consequences, if any, levying monetary sanctions has on defendants.

I report the first estimates of the causal effects of monetary sanctions on rates of future criminal involvement. To do this, I leverage the as-if random assignment of cases to district judges in the state of North Carolina. My findings imply that monetary sanctions don't increase the likelihood of defendants engaging in any criminal activity and, in fact, strongly deter offenses that entail economic gains. Wealthy defendants—as proxied by their address—are the most strongly deterred, most likely due to them holding lower prior expectations regarding the extent of monetary sanctions. There are no effects for defendants living in poorer areas. It is important to note, however, that I do see evidence, if not of monetary sanctions pushing poorer defendants into crime, of monetary sanctions pushing them into poverty. For defendants living in poorer areas I see a higher likelihood of being involved in crimes associated with poverty, such as panhandling, sleeping in public spaces, or driving with a revoked license due to unpaid fines or court fees.

My results provide a justification for perhaps higher fines and court fees, as they point towards expectations systematically lower than actual amounts. I don't find evidence towards the possibility of criminalizing the poor. However, some of my results are suggestive of fines and fees being excessively onerous on poorer defendants. Monetary sanctions that took ability to pay more into account may be advisable. Allowances for more judicial discretion or payment plans, for example. Ability to pay inquiries should already be taken into consideration by statute in North Carolina. However, they are done after the defendant defaults on his payments. These inquiries should, at least, be done before assessing any sanctions. Alternatively, alternative proportional punishments may be preferred, i.e., “day-fines” that scale monetary sanctions according to defendants' income.

In this way it will not be the case that defendants may go out of their way, foregoing rent or utility payments, trying to make payments, while also saving courts having to spend time and money trying to collect money that cannot be collected.

References

- Abadie, A. (2003). Semiparametric instrumental variable estimation of treatment response models. *Journal of econometrics*, 113(2):231–263.
- Abrams, D., Galbiati, R., Henry, E., and Philippe, A. (2019). When in Rome... on local norms and sentencing decisions. Sciences Po Economics Discussion Papers 2019-04, Sciences Po Department of Economics.
- Ackerberg, D. A. and Devereux, P. J. (2009). Improved JIVE Estimators for Overidentified Linear Models with and without Heteroskedasticity. *The Review of Economics and Statistics*, 91(2):351–362.
- Agan, A. Y., Doleac, J. L., and Harvey, A. (2021). Misdemeanor prosecution. NBER Working Paper 28600.
- Ahrens, A., Hansen, C. B., and Schaffer, M. (2019). ivlasso and pdlasso: Programs for post-selection and post-regularization ols or iv estimation and inference.
- Aizer, A. and Doyle Jr, J. J. (2015). Juvenile incarceration, human capital, and future crime: Evidence from randomly assigned judges. *The Quarterly Journal of Economics*, 130(2):759–803.
- Alm, J. and Shimshack, J. (2014). Environmental enforcement and compliance: Lessons from pollution, safety, and tax settings. *Foundations and Trends in Microeconomics*, 10(4):209–274.
- Andrews, I., Stock, J. H., and Sun, L. (2019). Weak instruments in instrumental variables regression: Theory and practice. *Annual Review of Economics*, 11(1):727–753.
- Angrist, J. and Frandsen, B. (2019). Machine labor. NBER Working Paper 26584.
- Angrist, J. D., Imbens, G. W., and Krueger, A. B. (1999). Jackknife instrumental variables estimation. *Journal of Applied Econometrics*, 14(1):57–67.
- Angrist, J. D. and Krueger, A. B. (1991). Does compulsory school attendance affect schooling and earnings? *The Quarterly Journal of Economics*, 106(4):979–1014.
- Bannon, A., Nagrecha, M., and Diller, R. (2010). *Criminal justice debt: A barrier to reentry*. New York: Brennan Center for Justice.

- Bayer, P., Hjalmarsson, R., and Pozen, D. (2009). Building criminal capital behind bars: Peer effects in juvenile corrections. *The Quarterly Journal of Economics*, 124(1):105–147.
- Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76(2):169–217.
- Beckett, K. and Harris, A. (2011). On cash and conviction: Monetary sanctions as misguided policy. *Criminology & Public Policy*, 10(3):505–507.
- Beckett, K. A., Harris, A. M., and Evans, H. (2008). *The assessment and consequences of legal financial obligations in Washington state*. Washington State Minority and Justice Commission Olympia.
- Bekker, P. A. (1994). Alternative approximations to the distributions of instrumental variable estimators. *Econometrica: Journal of the Econometric Society*, pages 657–681.
- Bell, B., Jaitman, L., and Machin, S. (2014). Crime Deterrence: Evidence from the London 2011 Riots. *The Economic Journal*, 124(576):480–506.
- Belloni, A., Chen, D., Chernozhukov, V., and Hansen, C. (2012). Sparse models and methods for optimal instruments with an application to eminent domain. *Econometrica*, 80(6):2369–2429.
- Belloni, A., Chernozhukov, V., and Hansen, C. (2014). Inference on Treatment Effects after Selection among High-Dimensional Controls. *The Review of Economic Studies*, 81(2):608–650.
- Bhuller, M., Dahl, G. B., Løken, K. V., and Mogstad, M. (2020). Incarceration, recidivism, and employment. *Journal of Political Economy*, 128(4):1269–1324.
- Blomquist, S. and Dahlberg, M. (1999). Small sample properties of liml and jackknife iv estimators: Experiments with weak instruments. *Journal of Applied Econometrics*, 14(1):69–88.
- Bound, J., Jaeger, D. A., and Baker, R. M. (1995). Problems with instrumental variables estimation when the correlation between the instruments and the endogenous explanatory variable is weak. *Journal of the American Statistical Association*, 90(430):443–450.
- Carson, E. A. and Anderson, E. (2015). Prisoners in 2014. *US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, NCJ*, 247282:2.

- Chalfin, A. and McCrary, J. (2017). Criminal deterrence: A review of the literature. *Journal of Economic Literature*, 55(1):5–48.
- Chao, J. C. and Swanson, N. R. (2004). Estimation and testing using jackknife iv in heteroskedastic regressions with many weak instruments.
- Cohen, R. L. (1991). *Prisoners in 1990*. US Department of Justice, Bureau of Justice Statistics.
- Council of Economic Advisers (2015). Fines, fees, and bail: Payments in the criminal justice system that disproportionately impact the poor [issue brief].
- Dahl, G. B., Kostøl, A. R., and Mogstad, M. (2014). Family welfare cultures. *The Quarterly Journal of Economics*, 129(4):1711–1752.
- D’Antoni, M. and Galbiati, R. (2007). A signaling theory of nonmonetary sanctions. *International Review of Law and Economics*, 27(2):204–218.
- Davidson, R. and MacKinnon, J. G. (2006). The case against jive. *Journal of Applied Econometrics*, 21(6):827–833.
- Dobbie, W., Goldin, J., and Yang, C. S. (2018). The effects of pretrial detention on conviction, future crime, and employment: Evidence from randomly assigned judges. *American Economic Review*, 108(2):201–40.
- Drago, F., Galbiati, R., and Vertova, P. (2009). The deterrent effects of prison: Evidence from a natural experiment. *Journal of Political Economy*, 117(2):257–280.
- Earnhart, D. (2004a). Panel data analysis of regulatory factors shaping environmental performance. *Review of Economics and Statistics*, 86(1):391–401.
- Earnhart, D. (2004b). Regulatory factors shaping environmental performance at publicly-owned treatment plants. *Journal of Environmental Economics and Management*, 48(1):655–681.
- Earnhart, D. and Segerson, K. (2012). The influence of financial status on the effectiveness of environmental enforcement. *Journal of Public Economics*, 96(9-10):670–684.
- Eckert, H. (2004). Inspections, warnings, and compliance: the case of petroleum storage regulation. *Journal of Environmental Economics and Management*, 47(2):232–259.
- Frandsen, B. (2020). Testjfe: Stata module to perform test for instrument validity in the judge fixed effects design.

- Frandsen, B. R., Lefgren, L. J., and Leslie, E. C. (2019). Judging judge fixed effects. *National Bureau of Economic Research Working Paper 25528*.
- Garoupa, N. (1997). The theory of optimal law enforcement. *Journal of Economic Surveys*, 11(3):267–295.
- Glicksman, R. L. and Earnhart, D. H. (2007). The comparative effectiveness of government interventions on environmental performance in the chemical industry. *Stan. Envtl. LJ*, 26:317.
- Gordon, M. A. and Glaser, D. (1991). The use and effects of financial penalties in municipal courts. *Criminology*, 29(4):651–676.
- Gray, W. B. and Deily, M. E. (1996). Compliance and enforcement: Air pollution regulation in the us steel industry. *Journal of environmental economics and management*, 31(1):96–111.
- Gray, W. B. and Jones, C. A. (1991). Longitudinal patterns of compliance with occupational safety and health administration health and safety regulations in the manufacturing sector. *Journal of Human Resources*, pages 623–653.
- Gray, W. B. and Shadbegian, R. J. (2005). When and why do plants comply? paper mills in the 1980s. *Law & Policy*, 27(2):238–261.
- Harris, A. (2016). *A pound of flesh: Monetary sanctions as punishment for the poor*. Russell Sage Foundation.
- Harris, A., Evans, H., and Beckett, K. (2011). Courtesy stigma and monetary sanctions: Toward a socio-cultural theory of punishment. *American Sociological Review*, 76(2):234–264.
- Harris, A., Huebner, B., Martin, K., Pattillo, M., Pettit, B., Shannon, S., Sykes, B., Uggen, C., and Fernandes, A. (2017). Monetary sanctions in the criminal justice system.
- Hausman, J. A., Newey, W. K., Woutersen, T., Chao, J. C., and Swanson, N. R. (2012). Instrumental variable estimation with heteroskedasticity and many instruments. *Quantitative Economics*, 3(2):211–255.
- Heckman, J. J. and Vytlacil, E. (2005). Structural equations, treatment effects, and econometric policy evaluation¹. *Econometrica*, 73(3):669–738.

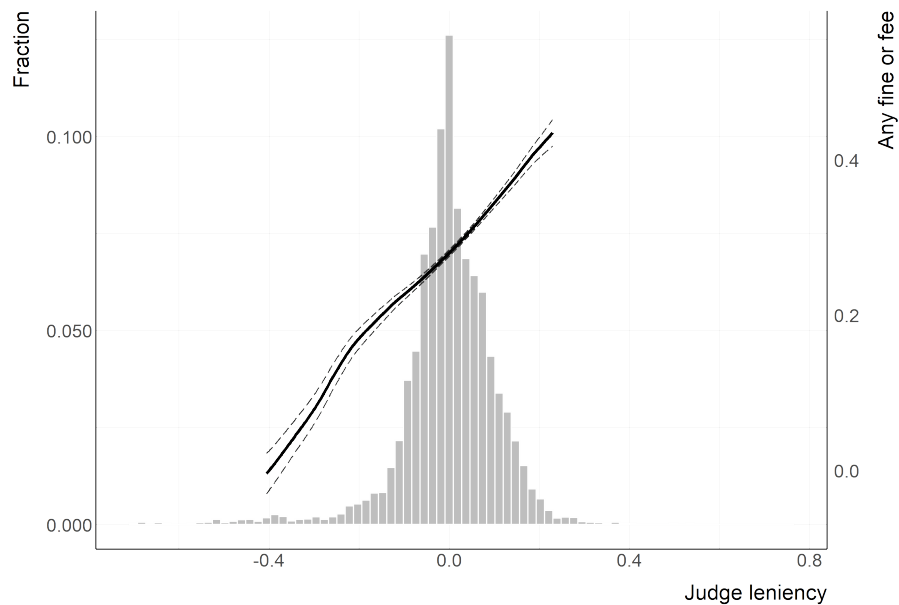
- Helland, E. and Tabarrok, A. (2007). Does three strikes deter? a nonparametric estimation. *Journal of human resources*, 42(2):309–330.
- Hull, P. (2017). Examiner designs and first-stage f statistics: A caution.
- Keohane, N. O., Mansur, E. T., and Voynov, A. (2009). Averting regulatory enforcement: Evidence from new source review. *Journal of Economics & Management Strategy*, 18(1):75–104.
- Kling, J. R. (2006). Incarceration length, employment, and earnings. *American Economic Review*, 96(3):863–876.
- Ko, K., Mendeloff, J., and Gray, W. (2010). The role of inspection sequence in compliance with the us occupational safety and health administration’s (osha) standards: Interpretations and implications. *Regulation & Governance*, 4(1):48–70.
- Kolesár, M. (2013). Estimation in an instrumental variables model with treatment effect heterogeneity. *Unpublished Working Paper*.
- Laplante, B. and Rilstone, P. (1996). Environmental inspections and emissions of the pulp and paper industry in quebec. *Journal of Environmental Economics and management*, 31(1):19–36.
- Lurigio, A. J. and Davis, R. C. (1990). Does a threatening letter increase compliance with restitution orders?: A field experiment. *Crime & Delinquency*, 36(4):537–548.
- Magat, W. A. and Viscusi, W. K. (1990). Effectiveness of the epa’s regulatory enforcement: The case of industrial effluent standards. *The Journal of Law and Economics*, 33(2):331–360.
- Makofske, M. P. (2020). Disclosure policies in inspection programs: The role of specific deterrence. *Economics Letters*, 196:109533.
- Markham, J. M. (2018). Monetary obligations in north carolina criminal cases. *University of North Carolina School of Government Technical report*, pages 572–606.
- Montiel Olea, J. L. and Pflueger, C. (2013). A robust test for weak instruments. *Journal of Business & Economic Statistics*, 31(3):358–369.
- Mueller-Smith, M. (2015). The criminal and labor market impacts of incarceration. *Unpublished Working Paper*.

- Mueller-Smith, M. and T. Schnepel, K. (2020). Diversion in the Criminal Justice System. *The Review of Economic Studies*, 88(2):883–936.
- Nadeau, L. W. (1997). Epa effectiveness at reducing the duration of plant-level noncompliance. *Journal of Environmental Economics and Management*, 34(1):54–78.
- Natapoff, A. (2018). *Punishment without crime : how our massive misdemeanor system traps the innocent and makes America more unequal*. Basic Books, New York.
- Nichol, G. and Hunt, H. (2018). Criminalizing poverty in north carolina: Fines and fees. *North Carolina Central Law Review*, 41:25.
- Norris, S., Pecenco, M., and Weaver, J. (2021). The effects of parental and sibling incarceration: Evidence from ohio. *American Economic Review*, 111(9):2926–63.
- Pérez, R. L. and Kiss, H. J. (2012). Do people accurately anticipate sanctions? *Southern Economic Journal*, 79(2):300–321.
- Phillips, G. D. A. and Hale, C. (1977). The bias of instrumental variable estimators of simultaneous equation systems. *International Economic Review*, 18(1):219–228.
- Piquero, A. R. and Jennings, W. G. (2017). Research note: Justice system-imposed financial penalties increase the likelihood of recidivism in a sample of adolescent offenders. *Youth Violence and Juvenile Justice*, 15(3):325–340.
- Polinsky, A. M. and Shavell, S. (1984). The optimal use of fines and imprisonment. *Journal of Public Economics*, 24(1):89–99.
- Polinsky, A. M. and Shavell, S. (2000). The economic theory of public enforcement of law. *Journal of Economic Literature*, 38(1):45–76.
- Rose, E. (2018). The effects of job loss on crime: evidence from administrative data. *SSRN Electronic Journal*.
- Ruback, R. B. and Bergstrom, M. H. (2006). Economic sanctions in criminal justice: Purposes, effects, and implications. *Criminal Justice and Behavior*, 33(2):242–273.
- Shimshack, J. P. and Ward, M. B. (2005). Regulator reputation, enforcement, and environmental compliance. *Journal of Environmental Economics and Management*, 50(3):519–540.
- Shimshack, J. P. and Ward, M. B. (2008). Enforcement and over-compliance. *Journal of Environmental Economics and Management*, 55(1):90–105.

- Smith, J. (2013). *North Carolina Superior Court Judges' Benchbook*. UNC School of Government.
- Stafford, S. L. (2003). Assessing the effectiveness of state regulation and enforcement of hazardous waste. *Journal of Regulatory Economics*, 23(1):27–41.
- Stafford, S. L. (2014). Will additional federal enforcement improve the performance of pipelines in the us? *International Review of Law and Economics*, 37:137–146.
- Stevenson, M. (2017). Breaking bad: Mechanisms of social influence and the path to criminality in juvenile jails. *Review of Economics and Statistics*, 99(5):824–838.
- Stevenson, M. and Mayson, S. (2018). The scale of misdemeanor justice. *Boston University Law Review*, 98:731.
- Stock, J. H. and Yogo, M. (2005). *Identification and inference for econometric models: Essays in honor of Thomas Rothenberg*. Cambridge University Press.
- Tuttle, C. (2019). Snapping back: Food stamp bans and criminal recidivism. *American Economic Journal: Economic Policy*, 11(2):301–27.
- Weil, D. (1996). If OSHA is so bad, why is compliance so good? *The RAND Journal of Economics*, pages 618–640.

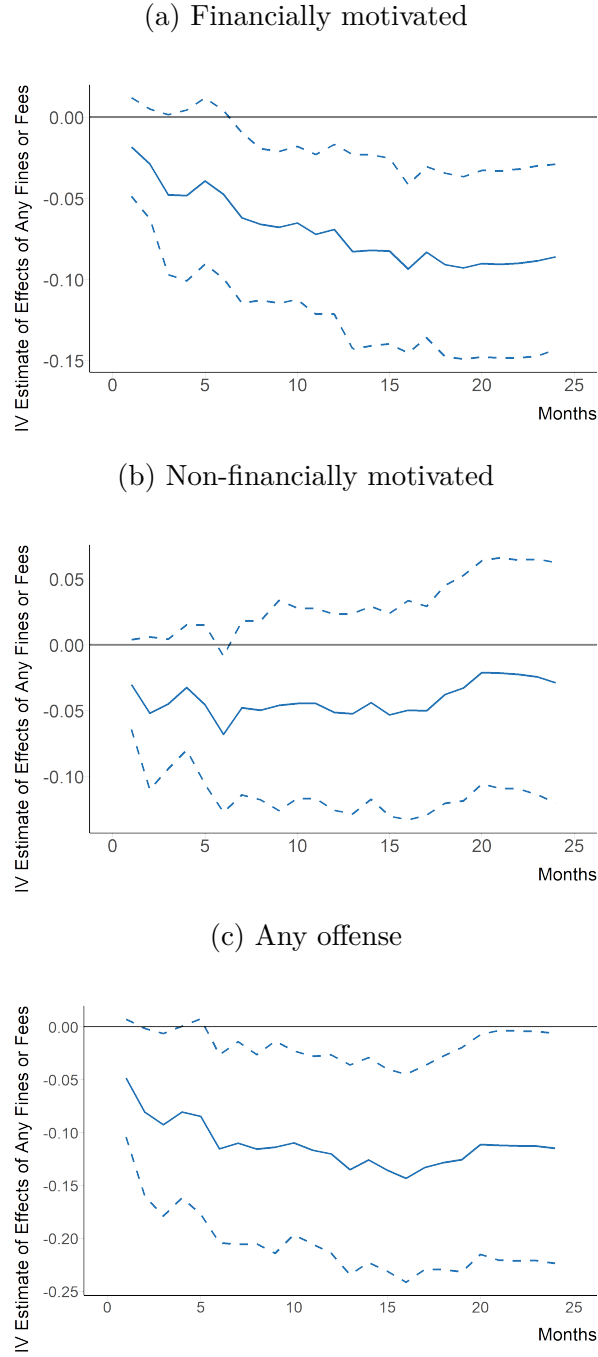
9 Figures and tables

Figure 1: Distribution of judge leniency and first stage



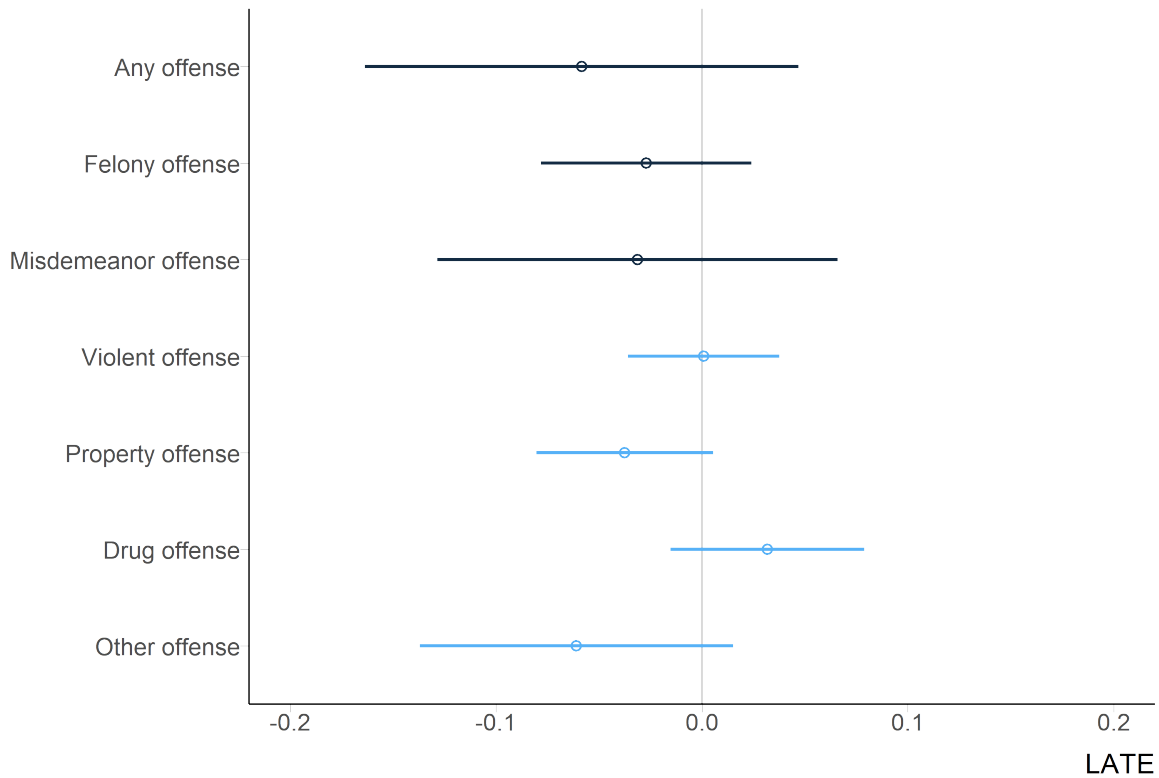
Notes: This figure shows the distribution of my measure of judge leniency, constructed from leave-out means of judge fining decisions, residualizing out district-by-time fixed effects as described in section 5, as well as a graphical representation of the first-stage relationship between judge leniency and the probability of levying any fines or fees, described in Equation (5). More lenient judges levy higher fines and fees. The solid line is a local linear regression of whether a defendant is sanctioned with any fines or fees on judge leniency, along with the 95% confidence interval, estimated from the 1st to 99th percentiles of judge leniency.

Figure 2: Treatment effects over time by financial incentives



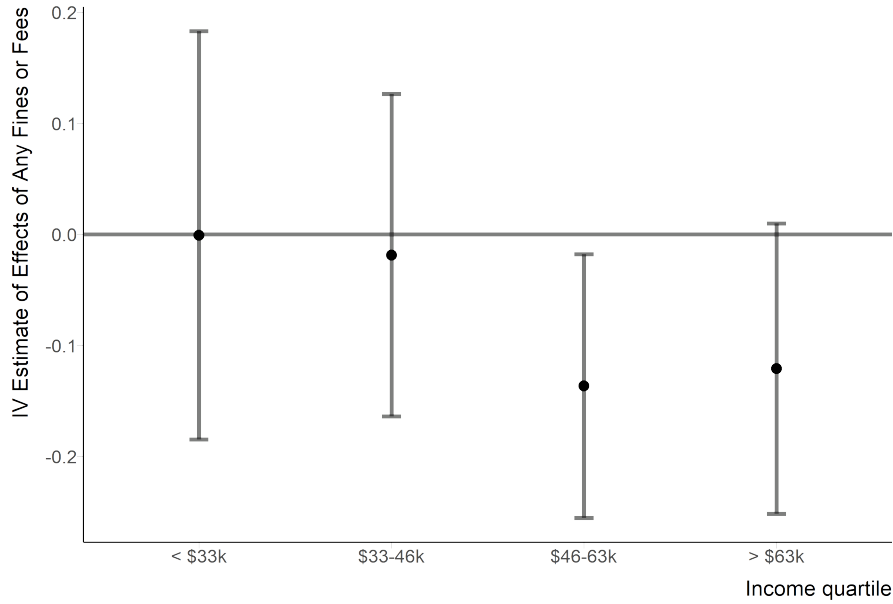
Notes: This figure shows the local average treatment effect of being levied any fines or fees on the likelihood of criminal involvement within a given number of months after disposition. Estimates are based on UJIVE regressions including covariates (the equivalent of Column (5) in Table 7). Dashed lines represent 95% confidence intervals clustered at the judge and defendant level.

Figure 3: Treatment effects over by seriousness and type of recidivating offense



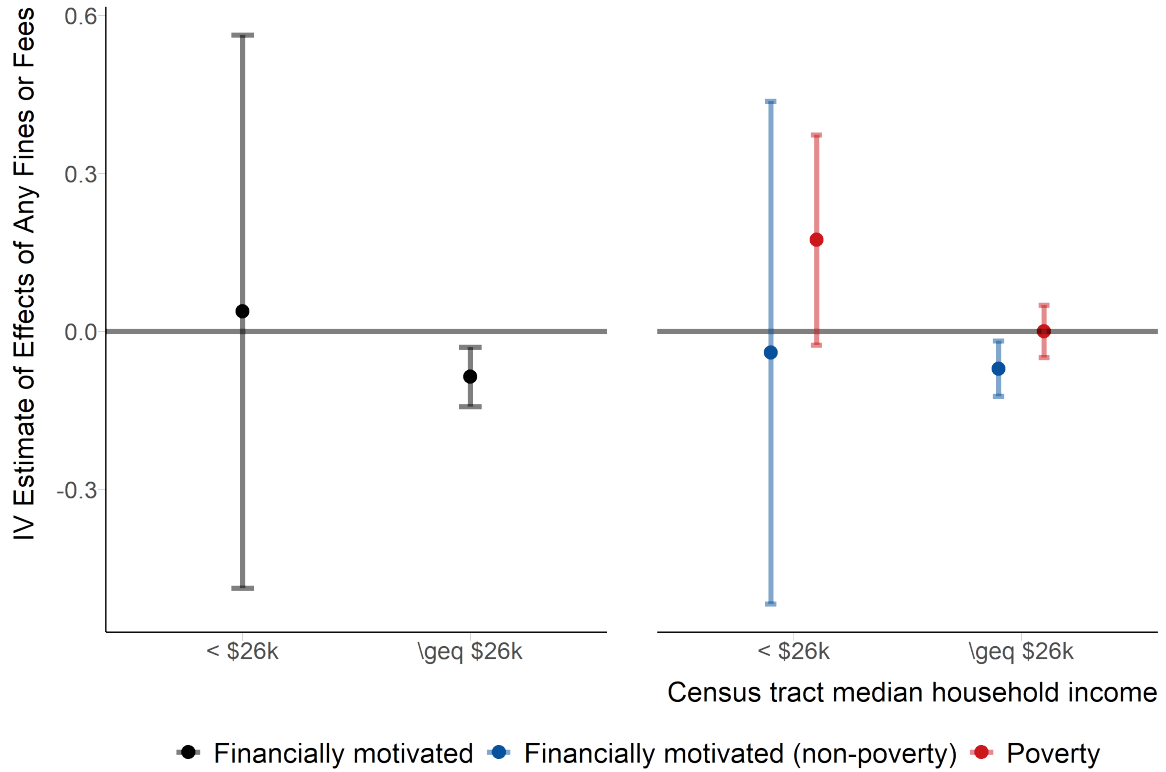
Notes: This figure shows the local average treatment effect of being levied any fines or fees on the likelihood of criminal involvement within two years of disposition. Estimates are based on UJIVE regressions including covariates (the equivalent of column (5) in Table 7). Dashed lines represent 95% confidence intervals clustered at the judge and defendant level.

Figure 4: Fines and fees and financially motivated criminal involvement within 2 years by census tract median household income



Notes: This figure reports LATE estimates of being levied any fines or fees on the likelihood of financially motivated criminal involvement within two years after disposition by defendants' income level. Estimates are based on UJIVE regressions including covariates (the equivalent of column (5) in Table 7). "Financially motivated" crimes are: property crimes (excluding property damage crimes such as vandalism), selling/manufacturing/distributing drugs, drug trafficking, fraud, forgery, racketeering, prostitution, counterfeiting, crimes containing "sale", or "sell" in the charge description, and begging/panhandling. "Poverty" offenses correspond to Vagrancy offenses, such as panhandling, begging for money, sleeping in a public place, etc., as well as offenses such as driving with a revoked license due to unpaid traffic tickets. \$26k corresponds to North Carolina's federal poverty income threshold. "Income" is proxied by the ACS median household income in the defendant's home address census tract and is in 2019 dollars. Dashed lines represent 95% confidence intervals clustered at the judge and defendant level.

Figure 5: Treatment effects over by seriousness and type of recidivating offense



Notes: This figure reports LATE estimates of being levied any fines or fees on the likelihood of different types of criminal involvement within two years after disposition. Estimates are based on UJIVE regressions including covariates (the equivalent of column (5) in Table 7). “Financially motivated” crimes are: property crimes (excluding property damage crimes such as vandalism), selling/manufacturing/distributing drugs, drug trafficking, fraud, forgery, racketeering, prostitution, counterfeiting, crimes containing “sale”, or “sell” in the charge description, and begging/panhandling. “Poverty” offenses correspond to Vagrancy offenses, such as panhandling, begging for money, sleeping in a public place, etc., as well as offenses such as driving with a revoked license due to unpaid traffic tickets. \$26k corresponds to North Carolina’s federal poverty income threshold. “Income” is proxied by the ACS median household income in the defendant’s home address census tract and is in 2019 dollars. Dashed lines represent 95% confidence intervals clustered at the judge and defendant level.

Table 4: Case characteristics and outcomes

	Mean	Std. Dev.	Observations		Mean	Std. Dev.	Observations
<i>Panel A: Defendant Characteristics</i>				<i>Panel D: Case Outcomes</i>			
Male	0.729		10,373.000	Monetary bail	0.218		10,373.000
Non-Hispanic White	0.359		10,373.000	Bail amount (\$1,000s)	1.124	5.103	2,266.000
Black	0.565		10,373.000	Method of disposition			
Hispanic	0.049		10,373.000	Dismissed	0.300		10,373.000
Other	0.027		10,373.000	Judge	0.700		10,373.000
Age	29.946	12.481	10,373.000	Convicted	0.688		10,373.000
Income (\$1,000s)	51.184	24.100	10,373.000	Guilty plea	0.674		10,373.000
<i>Panel B: Charge Characteristics</i>				Any fine	0.267		10,373.000
Number of offenses	1.243	0.436	10,373.000	Fine (\$)	47.836	44.833	2,767.000
Any prior record	0.232		10,373.000	Any court fees	0.448		10,373.000
Previous criminal charges	1.604	0.738	2,406.000	Court fees (\$)	223.548	74.101	4,646.000
Type of offense				Unpaid fines or fees	0.383		4,794.000
Property	0.247		10,373.000	<i>Panel E: Recidivism outcomes</i>			
Drug	0.517		10,373.000	Reoffend within 2 years	0.365		10,373.000
Other	0.235		10,373.000	Type of offense			
<i>Panel C: Attorney Characteristics</i>				Violent	0.097		3,783.000
Court appointed	0.047		10,373.000	Property	0.165		3,783.000
Public defender	0.094		10,373.000	Drug	0.158		3,783.000
Privately retained	0.676		10,373.000	Other	0.166		3,783.000
Self-represented	0.184		10,373.000				

Notes: This table reports descriptive statistics for the analysis sample described in Section 4.1. “Income” is proxied by the ACS median household income in the defendant’s home address census tract and is in 2019 dollars.

Table 5: First stage: Judge leniency and fines and fees

	(1)	(2)
Judge leniency	0.748***	0.680***
	(0.064)	(0.060)
District \times Time FE	Yes	Yes
Case/Def. controls	No	Yes
Mean any fines or fees	0.462	
Kleibergen-Paap rk Wald F-Stat	137.70	127.03
Observations	10,373	10,373

Notes: This table reports first-stage results. Judge leniency is estimated using data from other cases assigned to the same district judge following the procedure described in the text. Column (1) reports results controlling for my full set of district-by-time fixed effects. Column (2) adds defendant and case controls: defendant race, defendant gender, defendant age, number of offenses, indicators for the type of offense the defendant is arrested for, and census block group median income. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses in columns (1) and (2).

Table 6: Testing for random assignment of cases to judges

	Any fines or fees	Judge leniency
Age	-0.00082 (0.00057)	-0.00030 (0.00021)
Male	-0.00338 (0.01080)	-0.00337 (0.00285)
Minority	0.00679 (0.01085)	-0.00279 (0.00365)
Number of offenses	-0.12255* * *	-0.00194 (0.00309)
Property offense	-0.06477* * *	-0.01538* (0.00620)
Drug offense	0.02585 (0.02177)	0.00490 (0.00457)
Prior record	0.12113* * *	-0.00642 (0.00394)
Private attorney	0.15011* * *	0.00854 (0.00599)
Self-represented	0.13828* * *	0.00997 (0.01107)
Income below poverty level	-0.03537 (0.02324)	0.00454 (0.00277)
Joint F -test p -value	0.00000	0.29845
Observations	10,373	10,373

Notes: This table reports regressions testing the random assignment of cases to district judges. Judge leniency is estimated following the procedure described in the text. Column (1) reports estimates from an OLS regression of whether the defendant is levied any fines or fees on the variables listed and district-by-time fixed effects. Column (2) reports estimates from an OLS regression of judge leniency on the variables listed and district-by-time fixed effects. A defendant is a minority if their reported race/ethnicity is either Black, Hispanic, or Other. “Income” is proxied by the ACS median household income in the defendant’s home address census tract and is in 2019 dollars. Poverty is defined as having an income below the federal poverty income threshold. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses. The p -value reported at the bottom of columns (1) and (2) is for an F -test of the joint significance of the variables listed with standard errors two-way clustered at the individual and judge level. * * * $p < 0.01$, * * $p < 0.05$, * $p < 0.10$.

Table 7: Fines and fees and criminal involvement within 2 years

	OLS			UJIVE	
	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Financially motivated criminal involvement within 2 years</i>					
Any fines or fees	-0.043*** (0.009)	-0.033*** (0.008)	-0.025*** (0.008)	-0.118*** (0.028)	-0.069** (0.030)
Mean of dep. var.	0.088				
Mean of dep. var. for compliers	0.050				
<i>Panel B: Non-financially motivated criminal involvement within 2 years</i>					
Any fines or fees	0.023** (0.010)	0.028*** (0.010)	0.027** (0.011)	0.035 (0.041)	0.010 (0.044)
Mean of dep. var.	0.276				
Mean of dep. var. for compliers	0.295				
District \times Time FE	Yes	Yes	Yes	Yes	Yes
Case/Def. controls	No	Yes	Yes	No	Yes
Complier weights	No	No	Yes	No	No
Observations	10,373	10,373	10,373	10,373	10,373

Notes: This table reports OLS and UJIVE estimates of the impact of fines and fees on the probability of a subsequent criminal involvement within two years. UJIVE estimates instrument monetary sanctions using a judge leniency measure that is estimated using data from other cases assigned to a judge following the procedure described in the text. “Financially motivated” crimes are: property crimes (excluding property damage crimes such as vandalism), selling/manufacturing/distributing drugs, drug trafficking, fraud, forgery, racketeering, prostitution, counterfeiting, crimes containing “sale”, or “sell” in the charge description, and begging/panhandling. Crimes with a non-financial motive are defined as all crimes that are not categorized as financially motivated. All specifications control for district-by-time fixed effects. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses in Columns (1)-(4). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

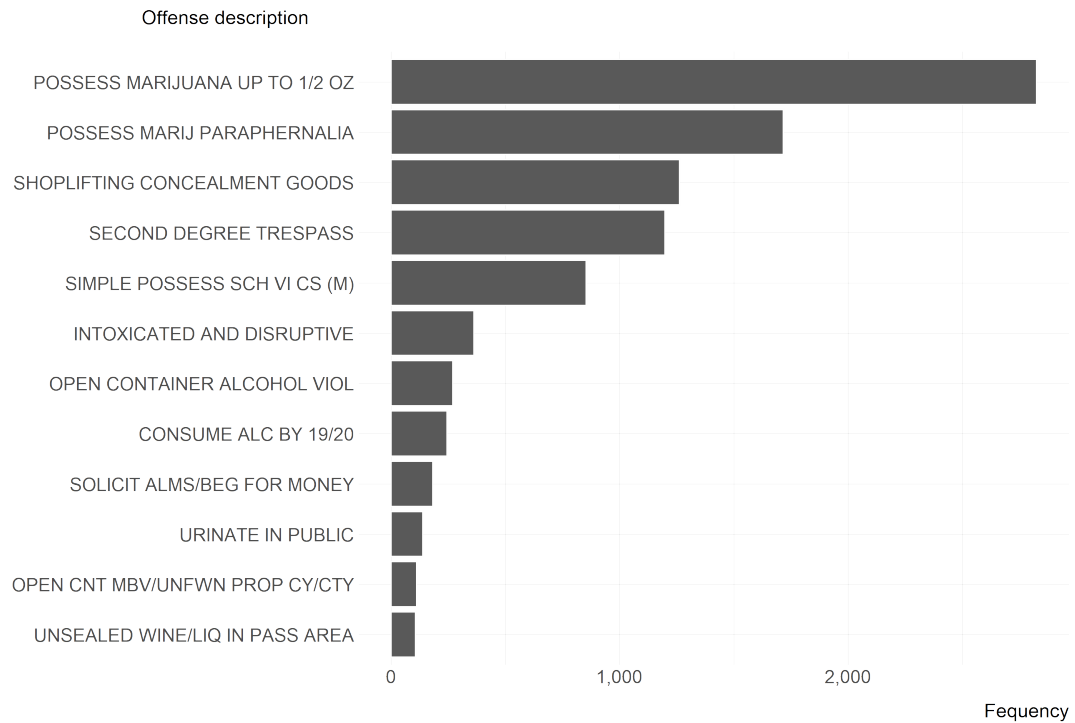
Appendices

A Additional figures and tables

Figure A1: Distribution of judge leniency for fines and court fees

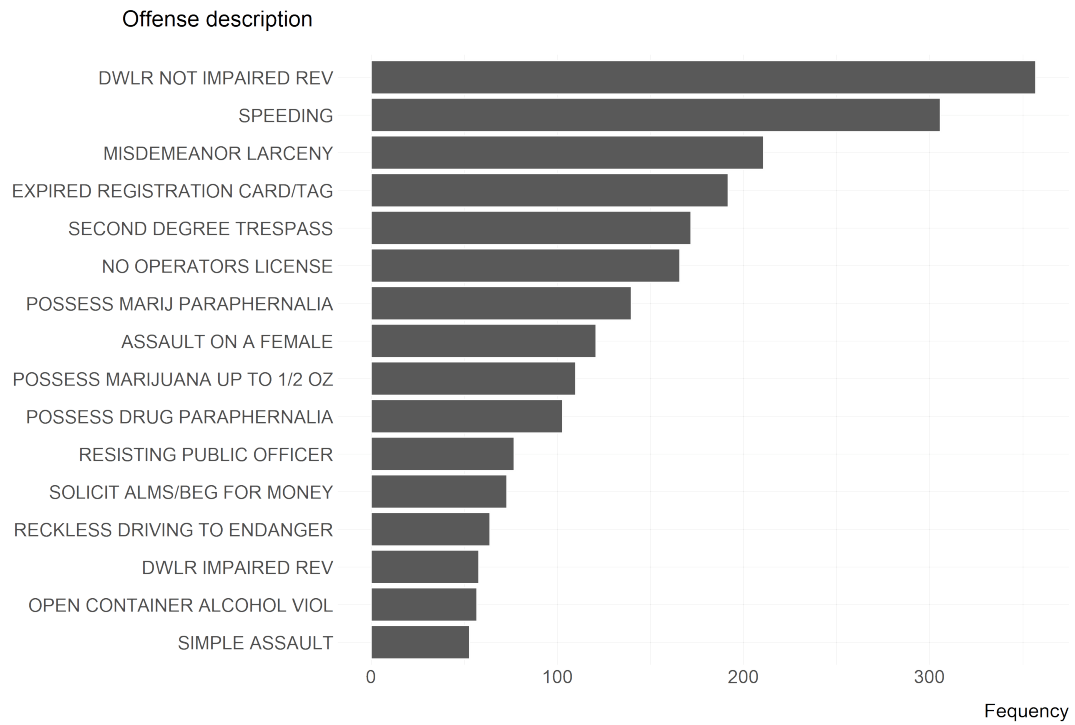
Notes: This figure shows the distribution of my leave-out mean measure of judge leniency, residualized by district-by-time fixed effects. More lenient judges levy higher fines and fees. The solid line is a local linear regression of the amount of fines and fees on judge leniency, along with the 95% confidence interval.

Figure A2: Most common offenses



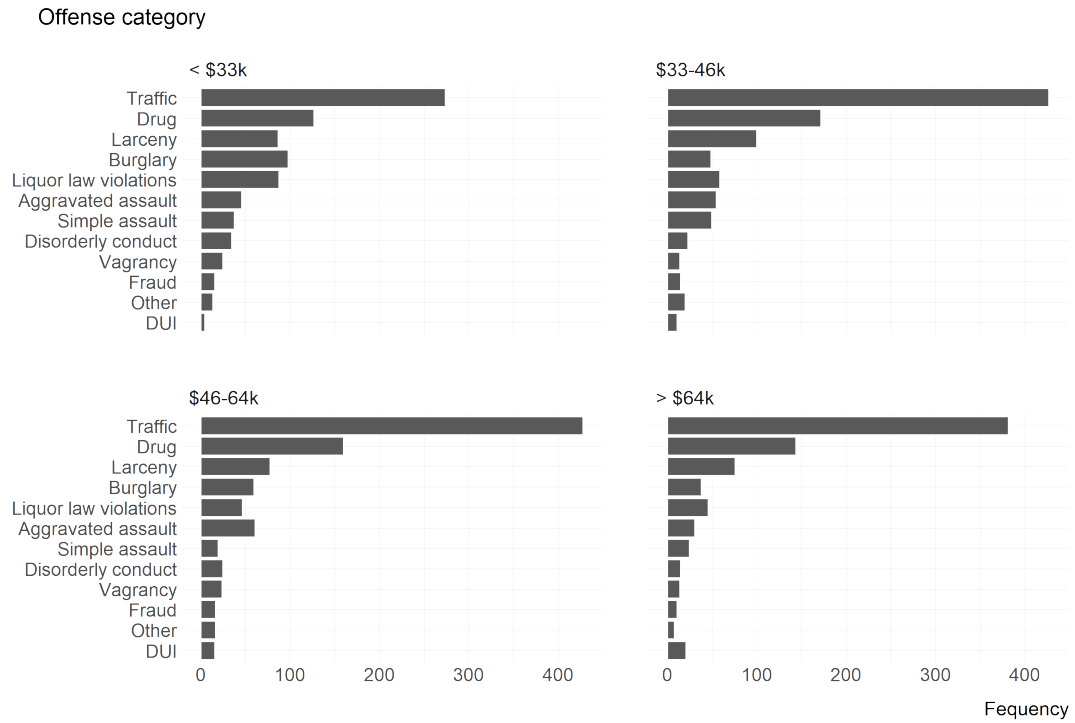
Notes: This figure shows the frequency of the most common charges defendants face in my sample.

Figure A3: Most common reoffending offenses



Notes: This figure shows the frequency of the most common offenses defendants commit when reoffending—within 2 years— in my sample.

Figure A4: Most common reoffending offenses by income



Notes: This figure shows the frequency of the most common offenses defendants commit when reoffending—within 2 years— in my sample.

Table A1: [Frandsen et al. \(2019\)](#) Test of Joint Null of Exclusion and Monotonicity by District Court district

Notes: This table presents results from the test proposed in [Frandsen et al. \(2019\)](#) for the joint null hypothesis that the monotonicity and exclusion restrictions hold. I test this null within each District Court district in the data, controlling by day of week-by-court session as well as year-by-month fixed effects along with case and defendant characteristics. A failure to reject the null implies that I cannot reject the hypothesis that the monotonicity and exclusion restrictions hold jointly. This test was implemented in Stata using the package `testjfe` ([Frandsen, 2020](#)).

Table A2: First stage results by case and attorney characteristics

	Offense type				Attorney type		
	Property	Drug	Other	Financial	Private	Public	Self
Judge leniency	0.951*** (0.087)	0.559*** (0.058)	0.760*** (0.111)	0.905*** (0.083)	0.575*** (0.091)	0.694*** (0.120)	0.945*** (0.074)
Mean of dep. var.	0.247	0.517	0.235	0.285	0.676	0.141	0.184
Mean of dep. var. for compliers	0.123	0.616	0.262	0.146	0.529	0.125	0.346
District \times Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Case/Def. controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,395	5,250	2,272	2,793	6,934	1,265	1,786

Notes: This table reports first stage results for selected case types. The regressions are estimated on the sample as described in the notes to Table XX. Judge leniency is estimated using all cases assigned to a district judge in the same year following the procedure described in Section XX. All specifications control for court-by-time fixed effects. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses and the mean of the dependent variable is reported in brackets in all specifications. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A3: First stage results by defendant characteristics

	Prior record		Defendant race		Defendant HH income quintile				
	Any prior	No prior	White	Minority	< \$30k	\$30–40k	\$40–52k	\$52–67k	> \$67k
Judge leniency	0.861*** (0.088)	0.671*** (0.094)	0.701*** (0.105)	0.813*** (0.047)	0.952*** (0.107)	0.861*** (0.115)	0.794*** (0.092)	0.676*** (0.086)	0.716*** (0.090)
Mean of dep. var.	0.232	0.768	0.359	0.641	0.195	0.194	0.196	0.195	0.220
Mean of dep. var. for compliers	0.265	0.735	0.295	0.705	0.166	0.161	0.186	0.194	0.293
District \times Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Case/Def. controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,234	7,904	3,572	6,518	1,843	1,793	1,839	1,810	2,106

Notes: This table reports first stage results for selected case types. The regressions are estimated on the sample as described in the notes to Table XX. Judge leniency is estimated using all cases assigned to a district judge in the same year following the procedure described in Section XX. All specifications control for court-by-time fixed effects. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses and the mean of the dependent variable is reported in brackets in all specifications. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A4: District judges case distribution

Notes: This table presents results from the test proposed in [Frandsen et al. \(2019\)](#) for the joint null hypothesis that the monotonicity and exclusion restrictions hold. We test this null within courts using day-of-week and year-month fixed effects along with our main covariates. A failure to reject the null implies that we cannot reject the hypothesis that the monotonicity and exclusion restrictions jointly hold. This test was implemented in Stata via the package `testjfe` ([Frandsen, 2020](#)).

Table A5: Case characteristics and outcomes

	All	No fines nor fees	Any fines or fees
Defendant Characteristics			
Any fines or fees	0.462	0.000	1.000
Non-Hispanic White	0.359	0.378	0.337
Minority	0.641	0.622	0.663
Male	0.729	0.710	0.752
Age	29.946	30.002	29.880
	12(481)	13(042)	11(795)
Income (\$1,000s)	51.165	48.409	54.357
	26(314)	25(650)	26(713)
Charge Characteristics			
Property offense	0.247	0.284	0.204
Drug offense	0.517	0.488	0.551
Other offense	0.235	0.227	0.244
Number of offenses	1.243	1.280	1.200
	0(436)	0(459)	0(403)
Outcomes			
Case dismissed	0.300	0.558	0.000
Case disposed by judge	0.700	0.442	1.000
Convicted	0.688	0.420	1.000
Guilty plea	0.674	0.412	0.978
Case length (days)	218.803	232.847	202.460
	218(478)	215(197)	221(138)
Attorney Characteristics			
Male	0.719	0.701	0.750
Court appointed	0.047	0.048	0.046
Public defender	0.094	0.124	0.058
Privately retained	0.676	0.683	0.667
Observations	10,373	5,579	4,794

Notes: This table reports descriptive statistics for the analysis sample described in Section 4.1. “Poverty” offenses correspond to Vagrancy offenses, such as panhandling, begging for money, sleeping in a public place, etc., as well as offenses such as driving with a revoked license due to unpaid traffic tickets. A defendant is a minority if their reported race/ethnicity is either Black, Hispanic, or Other. “Income” is proxied by the ACS median household income in the defendant’s home address census tract and is in 2019 dollars.

Table A6: Analysis sample description

Sample	Observations
All NC criminal cases	4,435,571
Class 3 misdemeanors	3,395,066
Only fines	2,879,730
Non-waived court appearance	316,045
Non motor vehicle cases	25,242

Notes: This table reports sample sizes and basic descriptive statistics as I restrict the universe of criminal offenses in North Carolina to construct my analysis sample.

Table A7: Analysis sample comparison

Notes: This table reports descriptive statistics for both the full sample (Class 3 misdemeanors that can be subject to a fine at most), as well as the analysis sample described in Section 4.1. “Poverty” offenses correspond to Vagrancy offenses, such as panhandling, begging for money, sleeping in a public place, etc., as well as offenses such as driving with a revoked license due to unpaid traffic tickets. “Income” is proxied by the ACS median household income in the defendant’s home address census tract and is in 2019 dollars.

Table A8: Sample share by compliance type

	Linear model			Local linear model		
	1%	1.5%	2%	1%	1.5%	2%
Compliers	0.48	0.43	0.37	0.49	0.44	0.39
Always takers	0.16	0.19	0.24	0.18	0.20	0.24
Never takers	0.37	0.38	0.39	0.34	0.36	0.37

Notes: This table estimates the shares of the sample that are compliers, always-takers, and never-takers. The fraction of always-takers, π_a , is estimated by the share of the defendants who are fined by the most lenient district judge; the fraction of never-takers, π_n , by the share not fined by the least lenient district judge; and compliers as $1 - \pi_a - \pi_n$. Most lenient district judges are defined by being at the 1st, 2nd, or 3rd percentile of the residualized district judge leniency distribution, and least lenient are defined as being at the 99, 98, or 97th percentile. The first three columns use a linear specification of the first stage, as in Equation (5); the latter three use a local linear specification.

Table A9: Characteristics of marginal defendants

	$\Pr[X = x]$	$\Pr[X = x \mid D(1) > D(0)]$	Ratio
Offenses = 1	0.76	0.82	1.08
Offenses > 1	0.24	0.18	0.75
Any prior record	0.23	0.27	1.14
Property offense	0.25	0.12	0.50
Drug offense	0.52	0.62	1.19
Other offense	0.24	0.26	1.12
Private attorney	0.68	0.53	0.78
Indigent defense	0.14	0.13	0.89
Self-represented	0.18	0.35	1.88
Age ≤ 24	0.42	0.35	0.83
Age 25–34	0.25	0.31	1.23
Age 35–44	0.12	0.13	1.08
Age 45–54	0.10	0.08	0.85
Age ≥ 55	0.06	0.07	1.15
< \$33k	0.22	0.17	0.75
\$33–46k	0.28	0.26	0.91
\$46–63k	0.27	0.24	0.90
> \$63k	0.22	0.33	1.49
Male	0.73	0.73	1.00
Minority	0.64	0.70	1.10
White	0.36	0.29	0.82

Notes: This table describes the observable characteristics of the complier sample, relative to the full sample. Column (1) shows the probability that an individual has a given characteristic in the full analysis sample. Column (2) shows the probability that someone in the complier group has that characteristic. Column (3) shows the ratio of the two (Column (2) divided by Column (1)). The estimates in Column (2) are constructed by calculating the shares of compliers within these various subsamples. The complier share calculations here rely on a linear first-stage estimation and a 1% cut-off to define district judge leniency.

Table A10: Characteristics of marginal defendants relative to overall sample by household income quartile

	< \$33k		\$33–46k		\$46–63k		> \$63k	
	Subsample	Compliers	Subsample	Compliers	Subsample	Compliers	Subsample	Compliers
Offenses = 1	0.77	0.76	0.75	0.77	0.79	0.76	0.92	0.81
Offenses > 1	0.23	0.25	0.25	0.23	0.21	0.24	0.08	0.19
Any prior record	0.27	0.23	0.22	0.21	0.44	0.34	0.12	0.22
Property offense	0.32	0.25	0.21	0.22	0.16	0.16	0.07	0.11
Drug offense	0.43	0.54	0.55	0.54	0.54	0.59	0.74	0.58
Other offense	0.26	0.22	0.23	0.24	0.30	0.25	0.19	0.30
Private attorney	0.71	0.68	0.66	0.65	0.64	0.55	0.49	0.49
Indigent defense	0.18	0.13	0.14	0.10	0.17	0.12	0.12	0.11
Self-represented	0.11	0.19	0.19	0.25	0.19	0.34	0.39	0.41
Age ≤ 24	0.33	0.43	0.42	0.49	0.27	0.24	0.30	0.51
Age 25–34	0.27	0.26	0.25	0.23	0.28	0.33	0.39	0.25
Age 35–44	0.14	0.12	0.13	0.10	0.26	0.22	0.07	0.05
Age 45–54	0.13	0.09	0.09	0.08	0.08	0.09	0.08	0.08
Age ≥ 55	0.08	0.05	0.06	0.05	0.09	0.05	0.09	0.06
Male	0.71	0.71	0.74	0.75	0.70	0.68	0.87	0.68
Minority	0.75	0.70	0.62	0.49	0.90	0.68	0.78	0.57
White	0.26	0.30	0.38	0.51	0.10	0.32	0.22	0.43

Notes: This table describes the observable characteristics of the complier sample relative to the full sample for each different quartile of household income, where the latter is proxied by census tract median household income. Each column shows the ratio of the share of compliers, within the subsample defined by the respective covariate, relative to the share for the overall sample. The complier share calculations here rely on a linear first-stage estimation and a 1% cut-off to define district judge leniency. See Section XX for more detail.

Table A11: Characteristics of marginal defendants relative to overall sample by whether household income is below or above poverty line

	< \$26k		≥ \$26k	
	Subsample	Compliers	Subsample	Compliers
Offenses = 1	0.77	0.76	0.73	0.83
Offenses > 1	0.23	0.24	0.27	0.17
Any prior record	0.30	0.22	0.44	0.25
Property offense	0.35	0.24	0.15	0.12
Drug offense	0.35	0.54	0.55	0.62
Other offense	0.30	0.23	0.30	0.26
Private attorney	0.73	0.67	0.60	0.52
Indigent defense	0.19	0.14	0.19	0.12
Self-represented	0.08	0.20	0.22	0.36
Age ≤ 24	0.27	0.44	0.28	0.35
Age 25–34	0.26	0.25	0.23	0.32
Age 35–44	0.16	0.12	0.36	0.12
Age 45–54	0.17	0.09	0.06	0.08
Age ≥ 55	0.11	0.06	0.08	0.07
Male	0.74	0.73	0.72	0.73
Minority	0.68	0.64	0.88	0.69
White	0.32	0.36	0.12	0.31

Notes: This table describes the observable characteristics of the complier sample relative to the full sample for each different quartile of household income, where the latter is proxied by census tract median household income. Each column shows the ratio of the share of compliers, within the subsample defined by the respective covariate, relative to the share for the overall sample. The complier share calculations here rely on a linear first-stage estimation and a 1% cut-off to define district judge leniency. See Section XX for more detail.

Table A12: Fines and fees and criminal involvement within 2 years by prior criminal record

	Defendant prior criminal record	
	Any prior record	No prior record
<i>Panel A: Financially motivated criminal involvement within 2 years</i>		
Any fines or fees	-0.086 (0.080)	-0.091** (0.039)
Mean of dep. var.	0.108	0.082
Mean of dep. var. for compliers	0.040	0.053
<i>Panel B: Non-financially motivated criminal involvement within 2 years</i>		
Any fines or fees	0.127 (0.135)	-0.004 (0.066)
Mean of dep. var.	0.290	0.272
Mean of dep. var. for compliers	0.363	0.271
Observations	2,225	7,902

Notes: This table reports UJIVE estimates of the impact of fines and fees on the probability of a subsequent criminal involvement within two years. UJIVE estimates instrument monetary sanctions using a judge leniency measure that is estimated using data from other cases assigned to a judge following the procedure described in the text. “Financially motivated” crimes are: property crimes (excluding property damage crimes such as vandalism), selling/manufacturing/distributing drugs, drug trafficking, fraud, forgery, racketeering, prostitution, counterfeiting, crimes containing “sale”, or “sell” in the charge description, and begging/panhandling. Crimes with a non-financial motive are defined as all crimes that are not categorized as financially motivated. All specifications control for district-by-time fixed effects. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses in Columns (1)-(4). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A13: Fines and fees and criminal involvement within 2 years for defendants with no prior criminal record by census tract median household income

	Household income	
	< \$26k	≥ \$26k
<i>Panel A: Financially motivated criminal involvement within 2 years</i>		
Any fines or fees	-0.219 (0.562)	-0.108*** (0.038)
Mean of dep. var.	0.135	0.077
Mean of dep. var. for compliers	0.013	0.055
<i>Panel B: Non-financially motivated criminal involvement within 2 years</i>		
Any fines or fees	0.174 (0.528)	-0.005 (0.064)
Mean of dep. var.	0.269	0.273
Mean of dep. var. for compliers	0.393	0.264
District × Time FE	Yes	Yes
Case/Def. controls	Yes	Yes
Observations	572	7,142

Notes: This table reports UJIVE estimates of the impact of fines and fees on the probability of a subsequent criminal involvement within two years. UJIVE estimates instrument monetary sanctions using a judge leniency measure that is estimated using data from other cases assigned to a judge following the procedure described in the text. “Financially motivated” crimes are: property crimes (excluding property damage crimes such as vandalism), selling/manufacturing/distributing drugs, drug trafficking, fraud, forgery, racketeering, prostitution, counterfeiting, crimes containing “sale”, or “sell” in the charge description, and begging/panhandling. Crimes with a non-financial motive are defined as all crimes that are not categorized as financially motivated. All specifications control for district-by-time fixed effects. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses in Columns (1)-(4). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A14: Fines and fees and criminal involvement within 2 years for white and minority defendants

	Defendant race	
	White	Minority
<i>Panel A: Financially motivated criminal involvement within 2 years</i>		
Any fines or fees	-0.068 (0.076)	-0.073*** (0.028)
Mean of dep. var.	0.089	0.086
Mean of dep. var. for compliers	0.034	0.019
<i>Panel B: Non-financially motivated criminal involvement within 2 years</i>		
Any fines or fees	0.077 (0.126)	-0.048 (0.054)
Mean of dep. var.	0.267	0.282
Mean of dep. var. for compliers	0.253	0.313
Observations	3,563	6,507

Notes: This table reports UJIVE estimates of the impact of fines and fees on the probability of a subsequent criminal involvement within two years. UJIVE estimates instrument monetary sanctions using a judge leniency measure that is estimated using data from other cases assigned to a judge following the procedure described in the text. A defendant is a minority if their reported race/ethnicity is either Black, Hispanic, or Other. All specifications control for district-by-time fixed effects. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses in Columns (1)-(4). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A15: “Failure to comply” by census tract median household income

	HH income quartile			
	< \$33k	\$33–46k	\$46–63k	> \$63k
Any fines or fees	0.576*** (0.110)	0.438*** (0.101)	0.589*** (0.135)	0.477*** (0.123)
Mean of dep. var.	0.181	0.201	0.219	0.210
Mean of dep. var. for compliers	0.552	0.391	0.545	0.455
District \times Time FE	Yes	Yes	Yes	Yes
Case/Def. controls	Yes	Yes	Yes	Yes
Observations	2,089	2,733	2,588	2,144

Notes: This table reports OLS and UJIVE estimates of the impact of fines and fees on the probability of a defendant’s “failure to comply”, i.e., pay the total amount of fines and fees owed, within 40 days of conviction. These are UJIVE estimates that instrument whether the defendant was levied any fines or fees using a judge leniency measure that is estimated using data from other cases assigned to a judge following the procedure described in the text. All specifications control for district-by-time fixed effects. Robust standard errors two-way clustered at the individual and judge level are reported in parentheses in Columns (1)-(4).

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

Table A16: Alternative IV strategies

	(1)	(2)	(3)	(4)	(5)
	UJIVE	JIVE	2SLS	LIML	IV Lasso
Any fines or fees	-0.066 (0.050)	-0.067 (0.049)	-0.059 (0.036)	-0.065 (0.043)	-0.125*** (0.016)
District \times Time FE	Yes	Yes	Yes	Yes	Yes
Attorney type FE	Yes	Yes	Yes	Yes	Yes
Case/Def. controls	Yes	Yes	Yes	Yes	Yes
Kleibergen-Paap rk Wald F-Stat	127.03	183.87	2,420.66	2,420.66	287.10
Any fine or fee	0.462				
Observations	10,373	10,373	10,373	10,373	10,373

Notes: This table reports two-stage least squares estimates using various estimation strategies for the instrument, as indicated in the column headers. All specifications control for court-by-time fixed effects and case/defendant covariates. The OLS estimate for this specification can be found in Table XX Column (2), and is XX (se=XX). Robust standard errors two-way clustered at the individual and judge level are reported in parentheses. Column (1) repeats my main 2SLS estimates using [Kolesár \(2013\)](#)'s UJIVE estimator. In Column (2) I present estimates using the JIVE estimator. In Column (3) I use all XX judge dummy variables directly as instruments in the first stage. Column (3) uses limited information maximum likelihood estimation with all of the dummies as instruments as well. Column (5) uses post-lasso from [Belloni et al. \(2014\)](#) to choose the most informative judge dummy variables; the algorithm chooses XX of the judge dummies as instruments. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

B Technical appendix

B.1 Understanding compliers

This section includes additional details on how I calculate the number and characteristics of defendants categorized as always takers, never takers, and compliers in my sample.

Overview: Following [Dahl et al., 2014](#), I define compliers as defendants whose fining decision would have been different had their case been assigned to the most lenient instead of the most strict judge:

$$\pi_c = \Pr [\text{Any LFO}_i = 1 \mid Z_i = \bar{z}] - \Pr [\text{Any LFO}_i = 1 \mid Z_i = \underline{z}] = \Pr [\text{Any LFO}_i(\bar{z}) > \text{Any LFO}_i(\underline{z})]$$

where \bar{z} represents the maximum value of our judge instrument (the most lenient judge) and \underline{z} represents the minimum value of our instrument (the most strict judge).

Always-takers are defendants who would always be fined, regardless of the judge assigned to their case. Because of the monotonicity and independence assumptions, the fraction of always takers is given by the probability of being fined for the most strict judge:

$$\pi_a = \Pr [\text{Any LFO}_i = 1 \mid Z_i = \underline{z}] = \Pr [\text{Any LFO}_i(\bar{z}) = \text{Any LFO}_i(\underline{z}) = 1]$$

Finally, never-takers are defendants who would never be fined, with the fraction of never-takers given by the probability of being fined by the most lenient judge:

$$\pi_n = \Pr [\text{Any LFO}_i = 0 \mid Z_i = \bar{z}] = \Pr [\text{Any LFO}_i(\bar{z}) = \text{Any LFO}_i(\underline{z}) = 0]$$

Number of compliers: I calculate the shares of defendants in each category by looking at the pretrial release rates for defendants assigned to the “most lenient” and “most strict” judges. Following [Dahl et al., 2014](#), we begin by defining the “most strict” judge as the bottom 1 percentile of judge leniency and the “most lenient” judge as the top 1 percentile of judge leniency.

In the first three columns of Table [A8](#), I estimate a local linear regression of receiving any LFO on my residualized measure of judge leniency controlling for court-by-time fixed effects. Under this more flexible analog to my first stage equation, I find that XX percent of my sample are compliers, XX percent are never takers, and XX percent are always takers.

In the last XX columns of Table [A8](#), I estimate the linear specification of the first stage, given by Equation 5. Under this specification, I can recover π_c as $\hat{\alpha}_1(\bar{z} - \underline{z})$, π_a as $\hat{\alpha}_0 + \hat{\alpha}_1\underline{z}$, and π_n as $1 - \hat{\alpha}_0 - \hat{\alpha}_1\bar{z}$ where $\hat{\alpha}_0$ and $\hat{\alpha}_1$ are the estimated first stage coefficients. Under this linear specification, I find that XX percent of my sample are compliers, XX percent

are never takers, and XX percent are always takers. I also explore the sensitivity of the estimated share of compliers, always takers, and never takers to the exact choice of cutoff for the most lenient and most strict judge. My results are robust to the particular model specification and cutoff.

B.2 Alternative estimating strategies

My main instrument is a residualized leave-out mean leniency measure that is estimated from the other cases that a judge has decided on. For my main analyses I proceed by implementing this instrument in an ‘as-if just-identified’ manner: I report robust F-statistics that do not adjust for the fact that the instrument is estimated (although I also do not use these F-statistics directly in a threshold test). Performing the estimation in this way is standard (Dahl et al., 2014; Aizer and Doyle Jr, 2015; Dobbie et al., 2018; Bhuller et al., 2020) and has some attractive properties. I have XX judges in my sample, each of whom could serve as a potential instrument. With this many instruments, estimation using the judge dummies can suffer from bias from many (potentially weak) instruments (Bekker, 1994; Bound et al., 1995; Hausman et al., 2012). I also have many fixed effects in the covariate set, necessary to identify the set of cases for which judges are as-if randomly assigned, which can also cause bias in jackknife instrumental variable estimators (JIVE) (Akerberg and Devereux, 2009; Kolesár, 2013). It is also clear in the just-identified case how to handle inference in the second stage that is robust to (potential) weak instrument issues (Andrews et al., 2019). The continuous instrument also allows for the estimation of marginal treatment effects (Heckman and Vytlačil, 2005). While this estimation strategy is convenient for the reasons mentioned above, it does not take into account that the instrument itself is constructed. In this subsection we explore the robustness of our main estimates to alternative estimation strategies in this setting. One alternative approach is to estimate the 2SLS model using the full set of XX judge dummy variables as instruments in the first stage. These results are shown in Table B.2, Column (XX) (Column (XX) repeats our main 2SLS results using the residualized leave-out mean leniency as an instrument). The estimated coefficient is XX, smaller in absolute value and closer to OLS than our main leave-out mean 2SLS estimate, which is unsurprising given that the bias from weak instruments moves estimates closer to the OLS estimate. Several strategies are suggested when IV estimates suffer from bias from many (weak) instruments. In Column (XX) I estimate a limited information maximum likelihood (LIML) model with all the dummies as instruments (Bekker, 1994; Chao and Swanson, 2004; Angrist and Frandsen, 2019). The coefficient in this model is XX, closer to our main leave-out mean 2SLS estimate than the estimate in Column (XX) with all the judge dummy variables. LIML however is not consistent with heteroskedastic errors or with heterogeneous

treatment effects (Hausman et al., 2012; Kolesár, 2013), which is the motivation for the UJIVE estimator we also use. In Column (XX) I estimate the unbiased JIVE (UJIVE) estimator of Kolesár (2013).⁴⁸ JIVE estimators are generally suggested when the number of instruments is large Angrist et al. (1999), although they can be biased with many covariates Kolesár (2013). The UJIVE estimator is consistent (for a convex combination of LATE estimates) with a large number of covariates. Here the coefficient is XX, again closer to my main leave-out mean 2SLS estimate than the estimate in Column (XX) with all the judge dummy variables. Another way to handle the potential bias from many (weak) instruments is to reduce the number of instruments by using lasso to pick the most informative judge dummies in a 2SLS regression. We do this in Column (5) using a post-lasso first stage via the procedures of Belloni et al. (2014).⁷⁷ In each case the coefficients I estimate with the alternative strategies are XX, XX, and XX, implying that XX decreases XX within two years post-arraignment between XX-X% relative to XX compliers. For the most part, given the estimated standard errors, I cannot reject the null that these coefficients are the same as the UJIVE estimates.⁷⁸

⁷⁷In practice implemented via the user-written package `ivlasso` in Stata (Ahrens et al., 2019), using the post-lasso results and using the `ivlasso` defaults with a plug-in penalty. The procedure retains XX out of XX instruments (similarly in the Angrist and Frandsen (2019) implementation of the plug-in penalty, lasso retains two instruments out of 180 in a re-estimation of the Angrist and Krueger (1991) QOB study). We also implemented a version of `ivlasso` with a cross-validated penalty; see Angrist and Frandsen (2019) for details on implementation. The algorithm with the CV penalty chooses more instruments, namely 173 out of the 315 in our case. The estimated post-lasso coefficient is smaller in absolute value (XX, se=XX). The simulation results of Angrist et al. (1999) and Belloni et al. (2012) imply that the plug-in penalty will have less bias although will also be less precise than the CV penalty estimates.

⁷⁸Standard errors reported here for 2SLS or LIML using all the dummy variables have been adjusted to take into account the potential for weak instruments, following Montiel Olea and Pflueger (2013).

C Taxonomy of monetary sanctions

Fines represent a punishment imposed upon conviction for a criminal offense

Restitution is sentenced to compensate victims for losses or damages as a result of a particular offense. These damages could include damage to property, medical expenses, child support, or other costs recognized by the court caused by the offense.

User fees and costs are charged to people with criminal justice contact to offset the expenses associated with the administration of justice or for services provided by courts or policing or supervisory agencies. These include, but are not limited to, court costs, probation costs, fees for screening and use of public attorneys, costs associated with the prosecution of a case, and costs of incarceration.

Surcharges (sometimes called “assessments”) are proportional or flat charges imposed on broad categories of convictions. Like fees and costs, surcharges are often used to fund criminal justice and other government services. Surcharges are generally directed to particular funds for designated purposes such as law enforcement training, indigent defense, or jail and prison construction ([Harris et al., 2017](#)).

D North Carolina institutional information

The General Court of Justice consists of three divisions: the appellate division, the superior court division and the district court division. The appellate division comprises the Supreme Court and the Court of Appeals. The Supreme Court is the state’s highest court. This court has a Chief Justice and six associate justices, who sit as a body and decide cases appealed from lower courts (including the Court of Appeals). The Court of Appeals is an intermediate appellate court that was created to relieve the Supreme Court of a portion of its heavy caseload. It has fifteen judges, who sit in panels of three to hear cases. One of the judges is the Chief Judge of the Court of Appeals, appointed by the Chief Justice of the Supreme Court. Most of the court’s sessions are held in Raleigh, but individual panels sometimes meet in other locations throughout the state. The Supreme Court and the Court of Appeals are located in downtown Raleigh. Each court has a clerk, who is the court’s administrative officer. see Figure C1 for a brief overview of the courts’ organizational structure.

The Superior and District Court divisions are the trial court divisions. The superior court division consists of the superior court, which is the court with general trial jurisdiction. The superior court “sits” (holds court) at least twice a year in each county of the state. In the busiest counties, several sessions may be held concurrently each week. The district court sits in the county seat of each county as well, although it may sit in certain other cities and towns if authorized by the General Assembly. Most counties have only one seat of court, but a few counties have several.

The State is divided into superior court districts for both electoral and administrative purposes. Where the superior court district is composed of less than a full county for electoral purposes, several electoral districts become one district for administrative purposes. For example, Wake County has four superior court electoral districts—10A, 10B, 10C and 10D—each of which has a separate election for the judge(s) from that district, but all are joined together for administrative purposes as the 10th District.

Each administrative superior court district has a senior resident superior court judge who manages the administrative duties of the court. The superior court sits only in the county seat of each county, except for Guilford County where the court sits in Greensboro (the county seat) and High Point.⁷⁹ There are 46 superior court districts, which are further grouped into eight divisions (48 districts and 5 divisions as of 2019—see Figure ??), and the State’s constitution requires superior court judges to rotate, or “ride the circuit,” from one

⁷⁹In addition to meeting in the county seat of each county, the superior court must meet regularly in any city in the state that was not a county seat but had a population over 35,000 in the 1960 U.S. census. G.S. 7A-42(a). High Point was the only city in North Carolina that fit that description in 1960.

district to another within their divisions. Judges are assigned to a judicial district for a six-month period and then rotated to another district for the same time period, and so on.

Like the superior court division, the state is divided into district court districts, of which there are 41, for electoral purposes and administrative purposes (see Figure ??). Unlike the superior court though, the district court districts are not grouped into larger judicial divisions. Each administrative district court district has a chief district court judge who manages the administrative duties of the court.

Finally, Magistrates hold court in both civil and criminal matters as officers of the district court under the supervisory authority of the chief district court judge. Magistrates do not preside over a separate trial division of the General Court of Justice, so technically there is no such court as “magistrate’s court.” In the civil context, magistrates generally are assigned by the chief district court judge to preside over “small claims” court. For criminal matters, magistrates conduct certain preliminary proceedings and are authorized to dispose of some cases by pleas of guilty or by trial.

The criminal jurisdiction of the trial courts depends on the type of offense charged, but ultimately all crimes are within the jurisdiction of the superior court. With a few exceptions, the superior court has exclusive jurisdiction over all felonies. The district court has jurisdiction over a felony to conduct a preliminary hearing to determine whether or not there is probable cause to believe that the defendant committed the offense. If so, the district court orders that the defendant stand trial in superior court and the case is transferred there. With the consent of the district attorney and the defendant, the district court also may take guilty pleas to certain less serious felonies, but the district court in those cases operates as if the plea was entered in superior court and must follow the superior court’s procedures.

For misdemeanor cases, the district court has exclusive “original” jurisdiction, which means that all misdemeanor crimes are tried initially in district court (unless the misdemeanor was committed as part of the same act as a felony, in which case both are tried together in superior court). A criminal trial in district court is always a “bench trial”—in which the judge decides the verdict instead of a jury. However, because the Sixth Amendment to the United States Constitution guarantees a person charged with a crime the right to be tried by a jury, a defendant convicted of a misdemeanor in district court has the right to appeal his conviction to the superior court for a new trial (also called a trial “de novo”), in which the trial must be before a jury. If a defendant pleads guilty to a low-level felony in district court and appeals the judgment, there is no new trial in superior court. Because the plea is treated as if it had been done in superior court, any appeal from the judgment goes to the appellate division.

In addition to misdemeanors, the district court has original jurisdiction over infractions.

An infraction is not a criminal offense and may be punished only by a fine. A person charged with an infraction initially appears before the district court, but if the person is found responsible for committing the infraction he may appeal to the superior court for a new hearing. Unlike felonies and misdemeanors, a person found responsible for an infraction cannot be sent to jail or prison for the infraction, so the state constitution’s requirement that a jury decide criminal cases does not apply. A person who appeals a district court finding of responsibility for an infraction, therefore, can have a bench trial in superior court.

As officers of the district court, magistrates generally are the first judicial officials involved in criminal cases, because they usually issue the criminal process (e.g., a warrant for arrest) that begins most criminal cases. The magistrate also generally sets the initial conditions for pretrial release (bail) for persons who have been arrested. In disposing of criminal cases, magistrates have jurisdiction to accept waivers of trial and guilty pleas to certain minor misdemeanors and pleas of responsibility to infractions. If specifically authorized by the chief district court judge, a magistrate also may try cases and enter judgment for defendants who plead not guilty to charges of writing worthless checks.

The minor misdemeanors and infractions for which magistrates may accept waivers of trial and pleas of guilt or responsibility generally are traffic, wildlife, boating, marine fisheries, state park recreation and alcoholic beverage offenses. The fine for each offense for which the magistrate can accept a plea of guilty is set by uniform statewide schedules (called the “waiver lists”), which are developed by the chief district court judges at their annual conference.

D.1 Indigent Defense

Counsel for criminal defendants in North Carolina may be provided either by privately retained attorneys or by what’s known as indigent defense representation. In the U.S., indigent people accused of crimes have a constitutional right to legal representation free of charge. Depending on the jurisdiction this can be provided either by public defenders—full-time state employees— or by private attorneys who choose to participate in an assigned counsel system.

More specifically, for misdemeanors, a defendant has a Sixth Amendment right to counsel only if an active or suspended sentence of imprisonment is imposed⁸⁰. In contrast, the Sixth

⁸⁰The formulation of this right has developed over a series of U.S. Supreme Court decisions. See *Argersinger v. Hamlin*, 407 U.S. 25 (1972) (recognizing basic right to counsel in misdemeanor cases); *Scott v. Illinois*, 440 U.S. 367, 373–74 (1979) (in misdemeanor cases, “the Sixth and Fourteenth Amendments to the United States Constitution require only that no indigent criminal defendant be sentenced to a term of imprisonment unless the State has afforded him the right to assistance of appointed counsel”); *Alabama v. Shelton*, 535 U.S. 654 (2002) (indigent defendant has right to appointed counsel in misdemeanor case if court imposes

Amendment guarantees the right to counsel to any indigent person accused of a felony, regardless of the possible punishment.⁸¹

North Carolina law provides indigent criminal defendants with a slightly broader right to counsel, providing for appointed counsel in “[a]ny case in which imprisonment, or a fine of five hundred dollars . . . or more, is likely to be adjudged.”⁸² This provision will not come into play for most Class 3 misdemeanors if the defendant has three or fewer prior convictions: following 2013’s Appropriations Act, for Class 3 misdemeanors imprisonment is generally impermissible; and under other structured sentencing rules, the maximum fine is usually limited to \$200. This has always been the case for traffic violations.

Public defender offices are present in 17 judicial districts in North Carolina (see Figure XXXXX). Additionally, specialty or “statewide” offices provide representation in capital cases (Office of the Capital Defender), appeals (Office of the Appellate Defender), parent representation (Office of Parent Representation), and special proceedings (Office of Special Counsel).

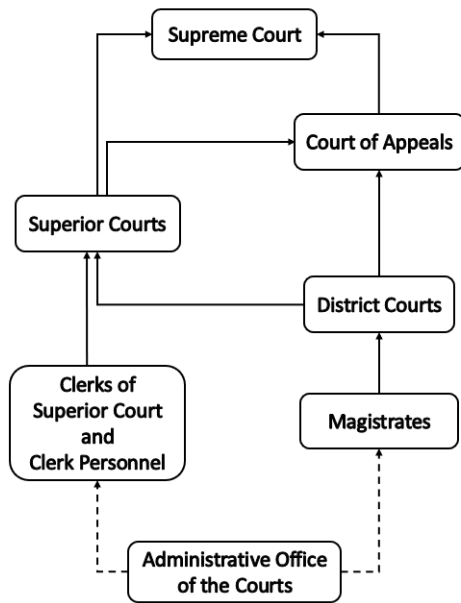
In those judicial districts where there is no public defender’s office, as well as cases in which the public defender has a conflict of interest or is overloaded, indigent defendants are entitled to representation by court-appointed private attorneys. It bears noticing that these counsel services are not actually free or charge. They are provided at a subsidized rate and, in the event of a conviction, the defendant has to reimburse the state.

suspended sentence of imprisonment).

⁸¹Gideon v. Wainwright, 372 U.S. 335 (1963).

⁸²N.C. GEN. STAT. §7A-451(a)(1)

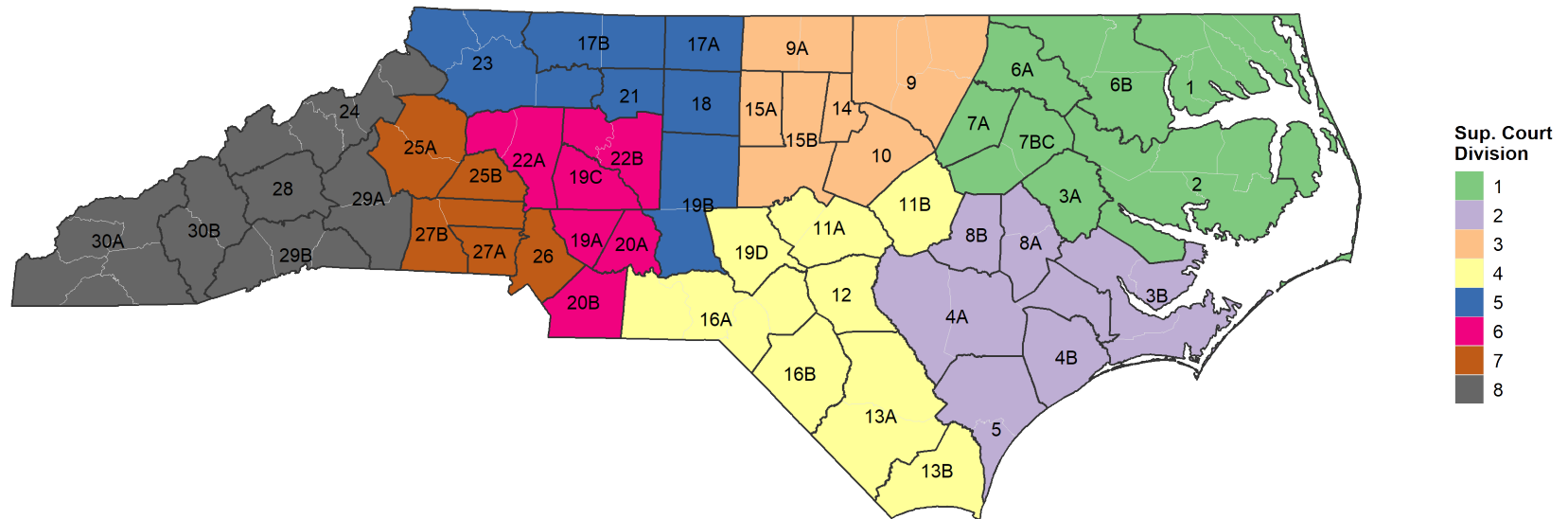
Table C1: North Carolina Judicial System



Judicial Branch Personnel	
Supreme Court justices	7
Court of appeal judges	15
Superior Court judges	107
District Court judges	273
Clerks of superior court	100
District attorneys	43
Public defenders	287

Sources: North Carolina Judicial Branch Statistics—Fiscal Year 2019-20— and North Carolina Office of Indigent Defense Services Workload Assessment, February 2019.

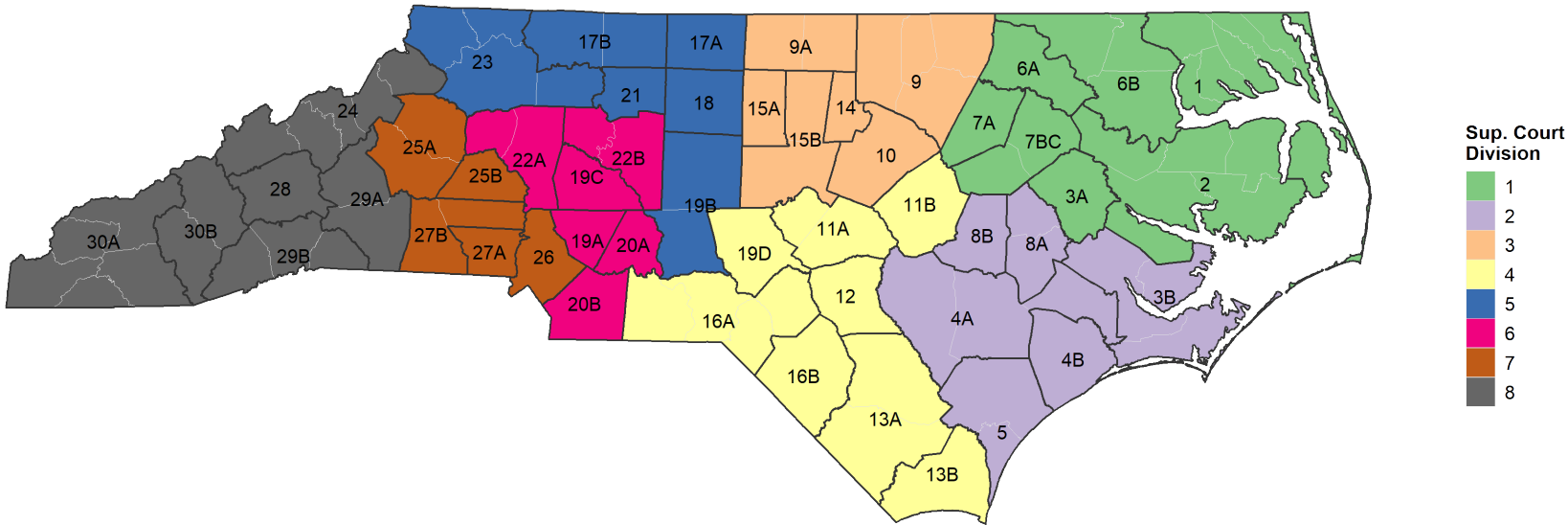
Figure C1: North Carolina Superior Court districts and divisions



Notes: Effective January 1, 2015–January 1, 2019.

Sources: N.C. General Assembly and UNC Chapel Hill School of Government.

Figure C2: North Carolina District Court districts



Notes: Effective January 1, 2015–January 1, 2019.
Sources: N.C. General Assembly and UNC Chapel Hill School of Government.

Figure C3: Sentencing guidelines for felonies

OFFENSE CLASS	PRIOR RECORD LEVEL						
	I 0-1 Pt	II 2-5 Pts	III 6-9 Pts	IV 10-13 Pts	V 14-17 Pts	VI 18+ Pts	
	Death or Life Without Parole						
	Defendant Under 18 at Time of Offense: Life With or Without Parole						
	A	A	A	A	A	A	DISPOSITION
					Life Without Parole	Life Without Parole	Aggravated Range
	240 - 300	276 - 345	317 - 397	365 - 456	336 - 420	386 - 483	PRESUMPTIVE RANGE
	144 - 192	166 - 221	190 - 254	219 - 292	252 - 336	290 - 386	Mitigated Range
	A	A	A	A	A	A	
	157 - 196	180 - 225	207 - 258	238 - 297	273 - 342	314 - 393	
B1	125 - 157	144 - 180	165 - 207	190 - 238	219 - 273	251 - 314	
	94 - 125	108 - 144	124 - 165	143 - 190	164 - 219	189 - 251	
	A	A	A	A	A	A	
B2	73 - 92	83 - 104	96 - 120	110 - 138	127 - 159	146 - 182	
	58 - 73	67 - 83	77 - 96	88 - 110	101 - 127	117 - 146	
	44 - 58	50 - 67	58 - 77	66 - 88	76 - 101	87 - 117	
C	A	A	A	A	A	A	
	64 - 80	73 - 92	84 - 105	97 - 121	111 - 139	128 - 160	
	51 - 64	59 - 73	67 - 84	78 - 97	89 - 111	103 - 128	
D	38 - 51	44 - 59	51 - 67	58 - 78	67 - 89	77 - 103	
	I/A	I/A	A	A	A	A	
	25 - 31	29 - 36	33 - 41	38 - 48	44 - 55	50 - 63	
E	20 - 25	23 - 29	26 - 33	30 - 38	35 - 44	40 - 50	
	15 - 20	17 - 23	20 - 26	23 - 30	26 - 35	30 - 40	
	I/A	I/A	I/A	A	A	A	
F	16 - 20	19 - 23	21 - 27	25 - 31	28 - 36	33 - 41	
	13 - 16	15 - 19	17 - 21	20 - 25	23 - 28	26 - 33	
	10 - 13	11 - 15	13 - 17	15 - 20	17 - 23	20 - 26	
G	I/A	I/A	I/A	I/A	A	A	
	13 - 16	14 - 18	17 - 21	19 - 24	22 - 27	25 - 31	
	10 - 13	12 - 14	13 - 17	15 - 19	17 - 22	20 - 25	
H	8 - 10	9 - 12	10 - 13	11 - 15	13 - 17	15 - 20	
	C/I/A	I/A	I/A	I/A	I/A	A	
	6 - 8	8 - 10	10 - 12	11 - 14	15 - 19	20 - 25	
I	5 - 6	6 - 8	8 - 10	9 - 11	12 - 15	16 - 20	
	4 - 5	4 - 6	6 - 8	7 - 9	9 - 12	12 - 16	
	C	C/I	I	I/A	I/A	I/A	
	6 - 8	6 - 8	6 - 8	8 - 10	9 - 11	10 - 12	
	4 - 6	4 - 6	5 - 6	6 - 8	7 - 9	8 - 10	
	3 - 4	3 - 4	4 - 5	4 - 6	5 - 7	6 - 8	

A – Active Punishment I – Intermediate Punishment C – Community Punishment
Numbers shown are in months and represent the range of minimum sentences

Revised: 09-09-13

Sources: N.C. General Assembly and UNC Chapel Hill School of Government.

Figure C4: Sentencing guidelines for misdemeanors

CLASS	PRIOR CONVICTION LEVEL		
	I	II	III
	No Prior Convictions	One to Four Prior Convictions	Five or More Prior Convictions
A1	C/I/A 1 - 60 days	C/I/A 1 - 75 days	C/I/A 1 - 150 days
1	C 1 - 45 days	C/I/A 1 - 45 days	C/I/A 1 - 120 days
2	C 1 - 30 days	C/I 1 - 45 days	C/I/A 1 - 60 days
3	C Fine Only* 1 - 10 days	One to Three Prior Convictions	Four Prior Convictions
		C Fine Only* 1 - 15 days	C/I 1 - 15 days
			C/I/A 1 - 20 days

*Unless otherwise provided for a specific offense, the judgment for a person convicted of a Class 3 misdemeanor who has no more than three prior convictions shall consist only of a fine.

A – Active Punishment I – Intermediate Punishment C – Community Punishment
Cells with slash allow either disposition at the discretion of the judge

Sources: N.C. General Assembly and UNC Chapel Hill School of Government.

Figure C5: Court fees schedule

COURT COSTS AND FEES CHART

The chart below shows court costs in effect as of **December 1, 2019**¹ and applies to all costs assessed or collected on or after that date, except where otherwise noted, and unless subject to the “waiver exception” of G.S. 7A-304(g).

CRIMINAL COURT COSTS G.S. 7A-304, unless otherwise specified		AMOUNT
An additional summary chart of criminal costs has been attached to this cost chart as “Appendix - Criminal Costs Summary.” The appendix summarizes the basic costs common to all dispositions in a particular trial division. It does not include additional cost items that must be assessed depending on individual factors for each case (e.g., FTA fees, supervision fees, jail fees, etc.) or for specific offenses of conviction (e.g. improper equipment or impaired driving); those costs are assessed separately. Neither does it apply to offenses for which the relevant statute assesses specific costs or prohibits the imposition of costs.		
DISTRICT COURT (including criminal cases before magistrates)		
General Court of Justice Fee. G.S. 7A-304(a)(4).	General Fund	146.55
	State Bar Legal Aid Account (LAA)	.95 ²
		147.50
Facilities Fee. G.S. 7A-304(a)(2).		12.00
Telecommunications and Data Connectivity Fee. G.S. 7A-304(a)(2a). ³		4.00
LEO Retirement/Insurance. G.S. 7A-304(a)(3) & (3a).		7.50
LEO Training and Certification Fee. G.S. 7A-304(a)(3b).		2.00
TOTAL		173.00
Chapter 20 Fee. G.S. 7A-304(a)(4a) (for conviction of any Chapter 20 offense).		+10.00 ⁴
DNA Fee. G.S. 7A-304(a)(9) (criminal offenses, only; does not apply to infractions).		+2.00
Plus \$5.00 service fee for each arrest or service of criminal process, including citations and subpoenas. G.S. 7A-304(a)(1).		+5.00
SUPERIOR COURT		
General Court of Justice Fee. G.S. 7A-304(a)(4).	General Fund	153.55
	State Bar Legal Aid Account (LAA)	.95 ⁵
		154.50
Facilities Fee. G.S. 7A-304(a)(2).		30.00
Telecommunications and Data Connectivity Fee. G.S. 7A-304(a)(2a).		4.00
LEO Retirement/Insurance. G.S. 7A-304(a)(3) & (3a).		7.50
LEO Training and Certification Fee. G.S. 7A-304(a)(3b).		2.00
TOTAL		198.00 ⁶
Chapter 20 Fee. G.S. 7A-304(a)(4a) (for conviction of any Chapter 20 offense).		+10.00
DNA Fee. G.S. 7A-304(a)(9) (criminal offenses, only; does not apply to infractions).		+2.00
Plus \$5.00 service fee for each arrest or service of criminal process, including citations and subpoenas.		+5.00

Figure C6: Court fees schedule (continued)

OTHER CRIMINAL FEES	AMOUNT
Appointment of Counsel Fee for Indigent Defendants. G.S. 7A-455.1.	60.00
Certificate of Relief Fee. G.S. 15A-173.2(h). ⁷	50.00
Civil Revocation Fee (impaired driving CVRs, only). G.S. 20-16.5(j).	100.00
Community Service Fee. G.S. 143B-708.	250.00
Continuous Alcohol Monitoring (CAM) Fee (offenses prior to Dec. 1, 2012). G.S. 20-179. ⁸	Varies ⁹
Continuous Alcohol Monitoring (CAM) Fee (parolees, only). G.S. 15A-1374. ¹⁰	Varies
Criminal Record Check Fee. G.S. 7A-308(a)(17).	25.00
Dispute Resolution Fee. G.S. 7A-38.3D and G.S. 7A-38.7.	60.00 per mediation
Expunction Fee, petitions under G.S. 15A-145, 15A-145.1, 15A-145.2, 15A-145.3, 15A-145.4, and 15A-145.7.	175.00
Expunction Fee, petitions under G.S. 15A-145.5.	175.00
Expunction Fee, petitions under G.S. 15A-146. ¹¹	175.00
Failure to Appear Fee. G.S. 7A-304(a)(6).	200.00
Failure to Comply Fee. G.S. 7A-304(a)(6).	50.00
House Arrest with Electronic Monitoring (EHA) One-Time Fee. G.S. 15A-1343(c2).	90.00
House Arrest with Electronic Monitoring (EHA) Daily Fee. G.S. 15A-1343(c2).	4.48/day
Impaired Driving Fee. G.S. 7A-304(a)(10).	
Note: Applies only to offenses committed on or after December 1, 2011.	100.00
Improper Equipment Fee. G.S. 7A-304(a)(4b). ¹²	50.00
Installment Payments Fee. G.S. 7A-304(f).	20.00
Jail Fees (pre-conviction). G.S. 7A-313.	10.00 per 24 hours or fraction thereof
Jail Fees (split sentence served in local facility). G.S. 7A-313 and G.S. 148-29.	40.00 per day
Limited Driving Privilege Fee – Petitions under G.S. 20-20.1.	At petition/Application: CVD Costs
	If Issued: (G.S. 20-20.2). +100.00
Limited Driving Privilege Fee – Other than under G.S. 20-20.1.	If Issued: (G.S. 20-20.2)
Note: If there is no underlying conviction in the county, Charge civil filing fees as explained on form AOC-CV-350.	+100.00
Pretrial Release Service Fee (county). G.S. 7A-304(a)(5). ¹³	15.00
Satellite-Based Monitoring Fee for Sex Offenders. G.S. 14-208.45.	90.00
State Crime Lab Fee. G.S. 7A-304(a)(7).	600.00
Local Government Lab Fee. G.S. 7A-304(a)(8).	600.00
Private Hospital Lab Fee. G.S. 7A-304(a)(8a). ¹⁴	600.00
State Lab Analyst Expert Witness Fee. G.S. 7A-304(a)(11). ¹⁵	600.00
Local Lab Analyst Expert Witness Fee. G.S. 7A-304(a)(12). ¹⁶	600.00
Private Hospital Analyst Expert Witness Fee. G.S. 7A-304(a)(13). ¹⁷	600.00
State Crime Lab Digital Forensics Fee. G.S. 7A-304(a)(9a). ¹⁸	600.00
Local Lab Digital Forensics Fee. G.S. 7A-304(a)(9b). ¹⁹	600.00
Seat Belt Violations (adult, front seat) and Motorcycle/Moped Helmet Violations. G.S. 20-135.2A and G.S. 20-140.4.	25.50 fine +costs below:
General Court of Justice Fee, G.S. 7A-304(a)(4).	147.50 (Dist.) 154.50 (Sup.)
Telecommunications and Data Connectivity Fee. G.S. 7A-304(a)(2a).	4.00
LEO Training and Certification Fee, G.S. 7A-304(a)(3b).	2.00
TOTAL	179.00 (Dist.) 186.00 (Sup.)
Seat Belt Violations (adult, rear seat). G.S. 20-135.2A(e).	No Costs 10.00 fine only
Supervision Fee. G.S. 15A-1343, G.S. 15A-1368.4, and G.S. 15A-1374.	40.00 per month
Worthless Check Program Fee. G.S. 7A-308(c). ²⁰	60.00



Figure C7: Judicial Discretion

Criminal Monetary Obligations 2018			PERMISSIBLE RELIEF					CIVIL JUDGMENT	
		AMOUNT	Waive	Order Partial	Exempt	Remit	Modify upon Default	Permissibility	Interest
Basic Costs <i>(applicable by default)</i>									
General Court of Justice Fee (District)	G.S. 7A-304(a)(4)	\$147.50				▲	●	● ¹	
General Court of Justice Fee (Superior)	G.S. 7A-304(a)(4)	154.50				▲	●	●	
Facilities Fee (District)	G.S. 7A-304(a)(2)	12				▲	●	●	
Facilities Fee (Superior)	G.S. 7A-304(a)(2)	30				▲	●	●	
Telecom/Data Fee	G.S. 7A-304(a)(2a)	4				▲	●	●	
LEO Retirement Fee	G.S. 7A-304(a)(3)-(3a)	7.50				▲	●	●	
LEO Training Fee	G.S. 7A-304(a)(3b)	2				▲	●	●	
DNA Fee ²	G.S. 7A-304(a)(9)	2				▲	●	●	
Contingent Costs <i>(applicable in certain circumstances)</i>									
Arrest/Process Fee	G.S. 7A-304(a)(1)	5/service				▲	●	●	
Chapter 20 Fee	G.S. 7A-304(a)(4a)	10				▲	●	●	
Improper Equipment Fee	G.S. 7A-304(a)(4b)	50				▲	●	●	
Impaired Driving Fee ³	G.S. 7A-304(a)(10)	100				▲	●	●	
Pretrial Jail Fee ⁴	G.S. 7A-313	10/day				▲	●	●	
Pretrial Release Services Fee ⁵	G.S. 7A-304(a)(5)	15				▲	●	●	
State/Local/Hospital Lab Fee ⁶	G.S. 7A-304(a)(7)-(8a)	600	R			▲	●	●	
Digital Forensics Lab Fee ⁷	G.S. 7A-304(a)(9a)-(9b)	600				▲	●	●	
Testifying Lab Expert Fee ⁸	G.S. 7A-304(a)(11)-(13)	600	R			▲	●	●	
Witness Fee	G.S. 7A-314	Varies ⁹				▲	●	●	
Blood Test (Parentage) Fee	G.S. 8-50.1	Varies				▲	●	●	
Installment Plan Setup Fee ¹⁰	G.S. 7A-304(f)	20				▲	●	●	
Failure to Appear Fee ¹¹	G.S. 7A-304(a)(6)	200				▲	●	●	
Failure to Comply Fee ¹²	G.S. 7A-304(a)(6)	50				▲	●	●	
Discretionary Costs									
Probationary Jail Fee ¹³	G.S. 7A-313	40/day				▲	●	●	
Non-Cost Fees									
Probation Supervision Fee	G.S. 15A-1343(c1)	40/month			●				
EHA Fee	G.S. 15A-1343(c2)	90+4.48/day			●				
Community Service Fee ¹⁴	G.S. 143B-708(c)	250							
Satellite-Based Monitoring (SBM) Fee	G.S. 14-208.45	90			●				
Attorney Fees									
Attorney Fees	G.S. 7A-455	IDS Rules						● ¹⁵	●
Attorney Appointment Fee ¹⁶	G.S. 7A-455.1	60	Mandatory; shall not be remitted or revoked ¹⁷					● ¹⁸	
Fines									
Fines	G.S. 15A-1361	Varies				▲	●	● ¹⁹	●
Restitution									
Crime Victims' Rights Act (CVRA) Restitution ²⁰		Varies		▲		▲		● ²¹	● ²²
Non-CVRA Restitution		Varies		▲		▲			
Non-Victim Restitution		Varies		▲		▲			

Note: Blank areas on the table indicate that no law expressly allows or prohibits the indicated action.

● The court has clear statutory authority to take the indicated action, with no requirement for findings or notice to affected parties.

▲ The court may take the indicated action after satisfying the following requirement:
Order partial restitution. The court must state on the record the reasons for ordering partial restitution. G.S. 15A-1340.36(a).
Remit costs or fines. The court must give 15-day written notice and an opportunity to be heard for directly affected government entities. G.S. 7A-304(a). The AOC's statewide monthly notice might satisfy this requirement.
Remit restitution. The court must give 15-day written notice and an opportunity to be heard for the district attorney, the victim, the victim's estate, or any other recipient of restitution. G.S. 15A-1340.39.

■ The court may take the indicated action after satisfying the following two requirements:
 1. The court must enter a written order, supported by findings of fact and conclusions of law, determining that there is just cause for the waiver; and
 2. The court must give 15-day written notice and an opportunity to be heard for directly affected government entities. G.S. 7A-304(a). The AOC's statewide monthly notice might satisfy this requirement.

R Indicates that the authority to waive the cost includes the authority to reduce it at the point of imposition.