THE DOWNSTREAM CONSEQUENCES OF MISDEMEANOR PRETRIAL DETENTION

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Abstract: In misdemeanor cases, pretrial detention poses a particular problem because it may induce otherwise innocent defendants to plead guilty in order to exit jail, potentially creating widespread error in case adjudication. While practitioners have long recognized this possibility, empirical evidence on the downstream impacts of pretrial detention on misdemeanor defendants and their cases remains limited. This Article uses detailed data on hundreds of thousands of misdemeanor cases resolved in Harris County, Texas—the third largest county in the U.S.—to measure the effects of pretrial detention on case outcomes and future crime. We find that detained defendants are 25% more likely than similarly situated releasees to plead guilty, 43% more likely to be sentenced to jail, and receive jail sentences that are more than twice as long on average. Furthermore, those detained pretrial are more likely to commit future crime, suggesting that detention may have a criminogenic effect. These differences persist even after fully controlling for the initial bail amount as well as detailed offense, demographic, and criminal history characteristics. Use of more limited sets of controls, as in prior research, overstates the adverse impacts of detention. A quasi-experimental analysis based upon case timing confirms that these differences likely reflect the casual effect of detention. These results raise important constitutional questions, and suggest that Harris County could save millions of dollars a year, increase public safety, and reduce wrongful convictions with better pretrial release policy.

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INTRODUCTION

The United States likely detains millions of people each year for inability to post modest bail. There are approximately eleven million admissions into local jails annually.[1] Many of those admitted remain jailed pending trial. At midyear 2014 there were an estimated 467,500 people awaiting trial in local jails, up from 349,800 in 2000 and 298,100 in 1996.[2] Available evidence suggests that the vast majority of pretrial detainees are detained because they cannot afford their bail, and that even bail of a few thousand dollars or less results in systemic detention.[3]

This expansive system of pretrial detention has profound consequences, within and beyond the criminal justice system. A person detained for even a few days may lose her job, her housing, or custody of her children. There is also substantial reason to believe that detention affects case outcomes. A detained defendant "is hindered in his ability to gather evidence, contact witnesses, or otherwise prepare his defense."[4] This is thought to increase the likelihood of conviction, either by trial or by plea, and may also increase the severity of any sanctions imposed. More directly, a detained person may plead guilty—even if innocent—simply to get out of jail. Not least important, a money bail system that selectively detains the poor violates basic constitutional protections.[5]

These problems are particularly extreme in the misdemeanor context. "Misdemeanor" may sound synonymous with "trivial," but that connotation is misleading. Misdemeanors matter. Misdemeanor convictions can result in jail time, heavy fines, invasive probation requirements, and collateral consequences that include deportation, loss of child custody, ineligibility for public

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[1] TODD D. MINTON AND ZHEN ZENG, JAIL INMATES AT MIDYEAR 2014, 1 (Bureau of Justice Statistics, 2015).

[2] *Id.* at 3; DARRELL K. GILLIARD AND ALLEN J. BECK, PRISON AND JAIL INMATES AT MIDYEAR 1996, 7 (Bureau of Justice Statistics, 1997). Pretrial detention rates rose steadily between 1980 and 2007, accompanying a shift away from release on recognizance and toward reliance on cash bail. Whereas between the years 1990 and 1994, 41% of pretrial releases were on recognizance and 24% were by cash bail, between 2002 and 2004 the relation was reversed: 23% of releases were on recognizance and 42% were by cash bail. BUREAU OF JUSTICE STATISTICS, PRETRIAL RELEASE OF FELONY DEFENDANTS IN STATE COURTS 1990-2004, 2 (2007); JUSTICE POLICY INSTITUTE, FOR BETTER OR FOR PROFIT, at 5 (2012); BRENNAN CENTER FOR JUSTICE, REDUCING RACIAL AND ETHNIC DISPARITIES IN JAILS 9 (June 2015); RAM SUBRAMANIAN, ET AL., VERA INST. OF JUSTICE, INCARCERATION'S FRONT DOOR: THE MISUSE OF JAILS IN AMERICA 8-10 (2015). As of 2015, financial conditions of release were imposed in 61% of all criminal cases and 70% of felony cases nationwide. BRENNAN CENTER, *supra*, at 9.

[3] *See* BRIAN A. REAVES, FELONY DEFENDANTS IN LARGE URBAN COUNTIES, 2009-STATISTICAL TABLES (Bureau of Justice Statistics, 2013) (reporting that nine in ten felony defendants detained until disposition had bail set); THOMAS H. COHEN & BRIAN A. REAVES, PRETRIAL RELEASE OF FELONY DEFENDANTS IN STATE COURTS 1 (Bureau of Justice Statistics, 2007) (reporting that five in six felony defendants detained until disposition had bail set, and that approximately 30% of felony defendants with bail set at $5000 or less were detained); NEW YORK CITY CRIMINAL JUSTICE AGENCY, ANNUAL REPORT 2013, 22 (2014) (documenting bail less than $500 in 33% of non-felony cases and 3% of felony cases in New York City, and reporting that 30% of felony defendants and 46% of non-felony defendants whose bail was $500 or less were detained until the disposition of their case). What is unclear is how many of the defendants detained despite bail are there for inability to pay, and how many may have elected not to post bail for reasons other than financial inability (for instance, because they have a probation detainer, or plan to plead guilty and expect a custodial sentence). *See also infra*, Tbl.1 and accompanying text (discussing rates of misdemeanor pretrial detention in Harris County).

[4] Barker v. Wingo, 407 U.S. 514, 533 (1972).

[5] *See infra* note 123 and accompanying text. Note that wealth-based detention also exacerbates racial inequality. *See* BESIKI LUKA KUTATELADZE & NANCY R. ANDILORO, PROSECUTION AND RACIAL JUSTICE IN NEW YORK COUNTY – TECHNICAL REPORT FOR THE NATIONAL INSTITUTE OF JUSTICE ii–iii (2014), www.ncjrs.gov/pdffiles1/ nij/grants/247227.pdf (finding that, controlling for other relevant variables, racial minorities are disproportionately detained).

services and barriers to finding employment and housing.[6] Beyond the consequences of misdemeanor convictions for individuals, the misdemeanor system has a profound impact as a whole, because it is enormous; it represents the majority of criminal prosecutions in the United States. While national data on misdemeanors are lacking, one analysis finds that misdemeanors represent more than three quarters of the criminal caseload in state courts.[7]

Existing data suggest that a substantial percentage of misdemeanor defendants are detained pretrial for inability to post bail.[8] For this group, the worst punishment may come before conviction.[9] Conviction generally means getting out of jail; people detained on misdemeanor charges are routinely offered sentences for "time served" or probation in exchange for tendering a guilty plea. The incentives to take the deal are overwhelming. For defendants with a job or apartment on the line, the chance to get out of jail may be impossible to pass up. Misdemeanor pretrial detention therefore seems especially likely to induce guilty pleas, including wrongful ones.[10] This is also, perversely, the realm where the utility of cash bail or pretrial detention is most attenuated, because these defendants' incentives to abscond should be relatively weak, and the public-safety benefit of detention is dubious.[11]

Despite these structural problems, money-bail practices that result in systemic misdemeanor pretrial detention have persisted nationwide. In Harris County, the site of our

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[6] Jenny Roberts, *Crashing the Misdemeanor System*, 70 WASH. & LEE L. REV. 1089, 1090-91 (2013) (noting that misdemeanor convictions "can affect future employment, housing, and many other basic facets of daily life"); Alexandra Natapoff, *Misdemeanors*, 85 S. CAL. L. REV. 1313, 1316-17 (2012) (reporting that a misdemeanor conviction can limit a person's access to "employment, as well as educational and social opportunities;" can limit eligibility for "professional licenses, child custody, food stamps, student loans, health care" or public housing; can "lead to deportation;" and "heightens the chances of subsequent arrest, and can ensure a longer felony sentence later on").

[7] *See* Roberts, *supra* (reporting that a "2010 analysis of seventeen state courts revealed that misdemeanors comprised 77.5% of the total criminal caseload in those courts"); Natapoff, *supra*, at 1315 ("Most U.S. convictions are misdemeanors, and they are generated in ways that baldly contradict the standard due process model of criminal adjudication.").

[8] *See, e.g.*, Charlie Gerstein, *Plea Bargaining and the Right to Counsel at Bail Hearings*, 111 MICH. L. REV. 1513, 1534 (2013) ("In New York . . . 25 percent of nonfelony defendants are held on bail. In Baltimore, that number is closer to 50 percent."); Natapoff, *Misdemeanors*, *supra* note 6, at 1321-22 ("In New York, the vast majority of such defendants cannot pay their bail."); ROBERT C. BORUCHOWITZ ET AL., MINOR CRIMES, MASSIVE WASTE: THE TERRIBLE TOLL OF AMERICA'S BROKEN MISDEMEANOR COURTS 11 (Nat'l Ass'n of Criminal Def. Lawyers, 2009), www.nacdl.org/public.nsf/defenseupdates/misdemeanor /$FILE/Report.pdf (estimating based on a sample of twelve states) ("If the whole country behaves about as well as New York State does, approximately 2.5 million people nationwide are held on bail they cannot pay for misdemeanor charges each year.").

[9] *Cf.* MALCOLM FEELEY, THE PROCESS IS THE PUNISHMENT: HANDLING CASES IN A LOWER CRIMINAL COURT (1979); Stack v. Boyle, 342 U.S. 1, 4 (1951) (noting that the "traditional right to freedom before conviction . . . serves to prevent the infliction of punishment prior to conviction").

[10] *See, e.g.*, Natapoff, *supra* note 6 at 1315 ("[E]very year the criminal system punishes thousands of petty offenders who are not guilty."); *id.* at 1347-50 (cataloging pressures that lead innocent misdemeanor defendants to plead guilty); Samuel Gross, *Frequency and Predictors of False Conviction: Why We Know So Little, and New Data on Capital Cases*, 5 J. EMPIRICAL LEGAL STUD. 927, 930-31 (2008) (noting that it is "entirely possible" that most wrongful convictions are "based on negotiated guilty pleas to comparatively light charges" to avoid "prolonged pretrial detention"); Alexandra Natapoff, *Negotiating Accuracy: DNA in the Age of Plea Bargaining*, http://papers.ssrn.com/sol3 /papers.cfm?abstract_id=2693218 (asserting that, "[b]ecause most of those arrested [for public-order offenses pursuant to aggressive broken-windows policing in New York City] pled out to avoid pretrial detention, that police policy resulted in numerous wrongful convictions").

[11] That is both because people accused of misdemeanors are likely to pose much less of a threat than people charged with more serious offenses, and because detention for the life of a misdemeanor case constitutes only very short-term incapacitation—which may be outweighed by criminogenic effects. *See infra* Part III(C).

study, more than 50% of misdemeanor defendants are detained.[12] Other jurisdictions also detain people accused of misdemeanors at surprising rates.[13] There are several possible reasons. A money-bail system may be easier to operate than a system of broad release with effective pretrial services. The bail bondsman lobby is a potent political force. In some jurisdictions, the local sheriff or jail administrator is paid on the basis of jail beds occupied, and so has a financial incentive to support policies that keep jails full. The individual judges or magistrates who make pretrial custody decisions, finally, suffer political blowback if they release a person (either directly or via affordable bail) who subsequently commits a violent crime, but few consequences, if any, for setting unaffordable bail that keeps misdemeanor defendants detained. In short, institutional actors in the misdemeanor system have had strong incentives to rely on money-bail practices that result in systemic pretrial detention.[14]

Given the inertia, misdemeanor bail policy is unlikely to shift in the absence of compelling empirical evidence that the status quo does more harm than good. Policymakers may be particularly attuned to whether misdemeanor pretrial detention produces wrongful convictions, and how it affects future crime. The evidence, however, has so far been thin. There is ample documentation that those detained pretrial are convicted more frequently, receive longer sentences, and commit more future crimes than those who are not (on average). But this is precisely what one would expect if the system detained those who pose the greatest flight or public safety risk. The key question for pretrial law and policy is whether detention actually *causes* the adverse outcomes with which is linked, independently of other factors. On this question, prior empirical work is not conclusive. The literature has produced suggestive evidence of the causal effects of detention. Nearly all prior studies, however, have been limited by the data available and by the number of variables for which they have been able to control. Only one study, a report published by the New York Criminal Justice Agency, has focused on misdemeanor cases specifically.[15]

This Article presents original evidence that misdemeanor pretrial detention causally affects case outcomes and the commission of future crimes. We offer new evidence from an empirical analysis of a large dataset from Harris County, Texas, the third-most-populous county in the United States. The data include uniquely detailed information about hundreds of thousands of misdemeanor cases. Our regression analysis controls for a wide range of confounding factors: defendant demographics, extensive criminal history variables, wealth measures (ZIP code and claims of indigence), judge effects, and 121 different categories of charged offense. In addition, we undertake a quasi-experimental analysis that leverages random variation in the access that

[12] *Infra* Tbl.1.

[13] In Philadelphia and New York City around 25% of misdemeanor defendants are detained pretrial. See Megan Stevenson, *Distortion of Justice: How the Inability to Pay Bail Affects Case Outcomes* (May 2, 2016), https://www.law.upenn.edu/cf/faculty/mstevens/workingpapers/Distortion-of-Justice-April-2016.pdf and MARY T. PHILLIPS, PRETRIAL DETENTION AND CASE OUTCOMES, PART I: NONFELONY CASES (NYC Criminal Justice Agency, 2007)

[14] Although that may be changing in some places, thanks to recent reform efforts. *See, e.g.*, *Ending the American Money Bail System*, http://equaljusticeunderlaw.org/wp/current-cases/ending-the-american-money-bail-system (last visited July 7, 2016) (describing litigation campaign).

[15] PHILLIPS, *supra* note 13.

defendants have to bail money based on the timing of arrest. These quasi-experimental results are very similar to those produced through regression analysis with detailed controls.

We find that detained defendants are much more likely than similarly situated releasees to plead guilty and serve jail time. Compared to similarly situated releases, detained defendants are 14 percentage points (25%) more likely to be convicted and 17 percentage points (43%) more likely to be sentenced to jail. On average, their incarceration sentences are 9 days longer, more than double that of similar releasees. Furthermore, we find that pretrial detainees are more likely than similarly situated releases to commit future crime. Although detention exerts an incapacitative effect in the short term, by 18 months post-hearing, detention is associated with a 30% increase in felonies and a 20% increase in misdemeanors, a finding consistent with other research suggesting that even short-term detention has criminogenic effects. These results raise important constitutional questions, and suggest that, with modest changes to misdemeanor pretrial policy, Harris County could save millions of dollars a year, increase public safety, and reduce wrongful convictions.

The Article proceeds in four parts. Part I provides background on pretrial detention and surveys the existing empirical literature assessing its effects. Part II outlines the pretrial process in Harris County, which has much in common with the process in other large jurisdictions, and describes our dataset. Part II also reports the result of an empirical analysis on the relationship between wealth and detention rates. Part III presents the results from a series of empirical analyses designed to measure the effect of pretrial detention on case and crime outcomes. Part IV, finally, explores the implications of the results for ongoing constitutional and policy debates.

I. THE PRETRIAL PROCESS AND PRIOR EMPIRICAL LITERATURE

A. On Bail and Pretrial Detention

The pretrial process begins with arrest and ends with the disposition of the criminal case. Since its founding, the United States has relied heavily on a money bail system adapted from the English model to ensure the appearance of the accused at trial.[16] Bail is deposited with the court and serves as security. If the accused appears in court when ordered to do so, his bail is returned at the conclusion of the case; if not, it is forfeited. But whereas in eighteenth-century England many offenses were "unbailable," the American colonies guaranteed a broad right to bail, with a narrow exception for capital cases.[17] In 1951, the Supreme Court held that the Excessive Bail Clause prohibits bail "set at a figure higher than an amount reasonably calculated" to ensure the

[16] *See, e.g.*, Hermine Herta Meyer, *Constitutionality of Pretrial Detention*, 60 GEO. L. J. 1139, 1146 (1971-1972) (chronicling history of U.S. bail system); TIMOTHY R. SCHNACKE, FUNDAMENTALS OF BAIL: A RESOURCE GUIDE FOR PRETRIAL PRACTITIONERS AND A FRAMEWORK FOR AMERICAN PRETRIAL REFORM 21-45 (2014).

[17] *See* Meyer, *supra*; SCHNACKE, *supra*; Judiciary Act of 1789, ch. 20, 1 Stat. 91 (repealed by 18 U.S.C. §§ 3141 to 3151 (1982) (guaranteeing a right to bail in noncapital cases); JOHN S. GOLDKAMP, TWO CLASSES OF THE ACCUSED: A STUDY OF BAIL AND DETENTION IN AMERICAN JUSTICE 55-60 (1979) (explaining "classic" state constitutional bail clause).

appearance of the accused.[18] The Court ruminated that "[u]nless this right to bail before trial is preserved, the presumption of innocence, secured only after centuries of struggle, would lose its meaning."[19]

The second half of the twentieth century brought major changes to America's pretrial system. In the 1960s, the realization that many people were detained pretrial for inability to post bail led to a national reform movement that limited the use of money bail in favor of simple release on recognizance ("ROR") for many defendants, as well as non-financial conditions of release.[20] In the 1970s and 80s, concerns about rising rates of pretrial crime led to a second wave of reform, this time directed at identifying and managing defendants who posed a threat to public safety.[21] The federal government and many states enacted pretrial preventive detention statutes, and almost every jurisdiction in the country amended its pretrial laws to direct courts to consider "public safety" when setting bail or conditions of release.[22]

As of this writing, most U.S. jurisdictions have reverted to a heavy reliance on money bail as the central mechanism of the pretrial system.[23] Despite the Supreme Court's admonition that "the function of bail is limited" to ensuring appearance, so that "the fixing of bail for any individual defendant must be based upon standards relevant to the purpose of assuring the presence of that defendant," taking into account his or her financial status, many jurisdictions do not adhere to that mandate.[24] Bail hearings are typically just a few minutes long, often conducted over videoconference and without defense representation. Some jurisdictions employ bail "schedules" with predetermined bail amounts for each offense, which do not consider individual circumstances relevant to flight risk or ability to pay.[25] In many jurisdictions, judges set higher bail for defendants they perceive as dangerous, either as directed by statute or on their own initiative, despite the Supreme Court's statement that money bail is not an appropriate tool for controlling crime risk.[26]

Those who can post bail are released. Often a bail bondsman serves as a middleman; the bondsman posts the refundable bail deposit in exchange for a non-refundable fee (usually about ten percent of the total). Those who cannot post bail are detained pending trial. The length of pretrial detention various tremendously by jurisdiction and by the particulars of a given case. In most places, the state must institute formal charges and arraign the defendant within a few days

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[18] Stack v. Boyle, 342 U.S. 1, 5 (1951).

[19] *Id.* at 4.

[20] *See* GOLDKAMP, *supra* note 17, at 23-25, 84; Bail Reform Act, Pub. L. No. 98-473, 98 Stat. 1985 (1966) (codified at 18 U.S.C. §§ 3141-51) (repealed 1984), at Sec. 2 ("The purpose of this Act is to revise the practices relating to bail to assure that all persons, regardless of their financial status, shall not needlessly be detained pending their appearance . . . .").

[21] *See generally* John S. Goldkamp, *Danger and Detention: A Second Generation of Bail Reform*, 76 J. CRIM. L. & CRIMINOLOGY 1 (1985).

[22] *Id.* at 15-30.

[23] *See supra* note 2.

[24] Stack v. Boyle, 342 U.S. 1, 5 (1951).

[25] *Cf.* Standard 10-5.3(f), ABA STANDARDS ON PRETRIAL RELEASE (3rd ed. 2002) ("Financial conditions . . . should never be set by reference to a predetermined schedule of amounts fixed according to the nature of the charge.").

[26] *Cf. id.*, Standard 10-5.3(b) ("Financial conditions of release should not be set to prevent future criminal conduct during the pretrial period or to protect the safety of the community or any person.").

of arrest, and misdemeanor cases may be resolved within a few weeks. In other places the timeline is longer, so that a misdemeanor defendant may be detained for weeks or months before she is even arraigned.[27]

It has long been conventional wisdom that pretrial detention has an adverse effect on case outcomes (from the perspective of the accused). If this is true, there are at least six possible mechanisms. Most obviously, detention alters the incentives for fighting a charge. A detained defendant generally has less to lose by pleading guilty; detention may have already caused major disruption to her life. And whereas for a released defendant the prospect of a criminal sentence—custodial or otherwise—represents a serious loss of liberty, for a detainee it is, at worst, an extension of the status quo. For misdemeanor detainees, as noted above, pleading guilty usually means an *increase* in liberty, while fighting the charge means staying in jail. A second possible mechanism is that detention may limit the ability of the accused to develop a defense by working with his attorney or collecting relevant evidence. Relatedly, detention might limit the financial resources a person has to dedicate to her defense (if, for instance, it results in loss of wages). Fourth, detention prevents an accused person from engaging in commendable behavior that might mitigate her sentence or increase the likelihood of acquittal, dismissal or diversion, like paying restitution, seeking drug or mental health treatment, or demonstrating commitment to educational or professional advancement. Fifth, detention might prevent accused persons from engaging in reprehensible behaviors that have similar effects, like intimidating witnesses, destroying evidence, or engaging in bad-faith delay tactics. Finally, even if released defendants do not actively seek to delay adjudication, it may be the case that they have better outcomes simply because their cases move more slowly, which entails some inevitable degradation of evidence.

B. Challenges for Empirical Study

For policymakers and the public to properly consider changes to bail policy, such as reduction of cash bail or liberalization of ROR, they would ideally have estimates of the causal effects of pretrial detention on various outcomes of interest. The causal effect of pretrial detention represents the difference in outcomes between a representative defendant who is released pretrial as compared to an otherwise identical individual who is detained. There is, in fact, a tradition of empirical scholarship seeking to measure this effect.

As a practical matter, however, testing whether detention has a causal impact on case outcomes is complicated by the fact that those detained are systematically different from those released. Because those who are detained pretrial are likely to have committed more serious crimes, have a longer criminal history, or have less wealth, one might expect to observe differences in case outcomes between detainees and releasees even absent any causal effect of

[27] In Louisiana, people may be detained on misdemeanor arrest charges for up to 75 days without being arraigned. *See* La. C. Cr. P. § 701(B)(1)(a) (requiring that formal charges be instituted within 45 days of arrest); § 701(C) (requiring arraignment within 30 days of filing of formal charges).

pretrial custody status. To take a simple example, if crime is correlated over time, such that more frequent offenders in one period are more likely to offend in future periods, and a bail process detains defendants with more past convictions, then one would expect the future recidivism of those detained (who are high-frequency offenders) to be greater than that of those who are released even when pretrial release does not affect behavior at all. Thus, estimates of the causal effect of bail must properly account for any sorting effect of bail that occurs in the real world.

The sorting is further complicated by the fact that defendants themselves may have information about their guilt or innocence that is unobserved by the court or by researchers, but that also may alter the relative desirability of release versus detention. A defendant who is factually guilty and who plans to plead guilty may wish to forego bail simply to get the punishment over with, anticipating that she will receive credit for time served. On the other hand, a defendant who believes she has a strong case for innocence may have greater incentive to try to post bail in order to avoid being detained when innocent.

Because case-level factors such as the quality of evidence and underlying culpability of the defendant can generally not be observed in empirical studies of bail settings, all existing studies are subject to the potential for bias in measuring causal effects. The degree of bias depends on not only how significantly the unobserved factors affect the outcome of interest, but how closely correlated they are with pretrial detention. A final difficulty for measuring the effect of pretrial detention is that data on those factors known to be relevant for determining outcomes tends to be limited.

C. Prior Empirical Literature

Notwithstanding these challenges, there is a body of prior empirical work dedicated to assessing the effects of pretrial detention on criminal justice outcomes. To varying degrees, prior studies have attempted to control for underlying differences between detainees and releasees in order to estimate the true causal effect of detention. Earlier studies, which preceded the advent of computers and digitized data systems, could only control for a few variables at a time. More recent studies have been able to control for a wider variety of variables, coming closer to a causal estimate.

The first major empirical study addressed to the causal effect of detention was an innovative study conducted by the Vera Foundation in 1961, which was known as the Manhattan Bail Project.[28] The researchers conducted pretrial interviews and verifications designed to assess flight risk on the basis of community ties. They recommended release on recognizance (ROR) for all cases that met certain criteria for low flight risk. They only communicated this recommendation to the responsible judge, however, for a randomly selected subset of the cases. To a modern researcher, this experimental approach is an ideal way of determining the causal impact of pretrial detention: those for whom the ROR recommendation was communicated

[28] Charles E. Ares et al., *The Manhattan Bail Project*, 38 N.Y.U. L. REV 67 (1963).

should be statistically identical to those for whom it was not, the only difference being a higher pretrial release rate among the former. If the two groups also had differing case outcomes, one could infer that the difference was due to pretrial detention. Disappointingly, the researchers did not report overall outcomes for these two groups. They only compared case outcomes among those in the reporting group who were released versus those in the non-reporting group who were detained. They found that those detained were dramatically more likely to be found guilty and sentenced to prison. This study made a profound contribution, but was limited by its design. Because the two groups actually compared were subject to the additional filter of a release decision, they cannot be considered statistically identical. Comparing their outcomes might therefore provide a biased view of the causal impact of pretrial detention.[29]

Another important early paper came to different conclusions. John Goldkamp examined whether pretrial detention affected case outcomes at three separate stages in the criminal proceedings: whether the case was dismissed at the outset, whether the defendant entered a diversion program, and whether the defendant was ultimately adjudicated guilty.[30] Focusing on about 8000 Philadelphia court cases, Goldkamp found that after controlling for five factors – charge seriousness, detainers/warrants, number of prior arrests, open cases and number of charges – pretrial detention had no discernible impact on any of these phases. The only outcome where Goldkamp found some support for a causal channel of influence was on the likelihood of being sentenced to incarceration.

Empirical scholarship evaluating pretrial detention waned in the 1980s and 90s, but the new millennium brought new research. Since 2000, nearly a dozen correlational studies have been published on the subject. Although most of these studies have evaluated relatively small samples, they have taken advantage of improvements in data to control for a wider variety of underlying differences in characteristics. Most of these studies have found that pretrial detention was correlated with unfavorable case outcomes.[31]

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[29] A follow-up study using data on 700 of the Manhattan Bail Project cases used some basic cross-tabulations which suggest that the correlation between detention and unfavorable case outcomes is not explained away by prior record, bail amount, type of counsel, family integration or employment stability. Anne Rankin, *The Effect of Pretrial Detention*, 39 N.Y.U. L. REV. 641 (1964).

[30] John S. Goldkamp, "The Effects of Detention on Judicial Decisions: A Closer Look," 5 JUST. SYSTEM J. 234 (1980).

[31] Oleson et al., *The Effect of Pretrial Detention on Sentencing in Two Federal Districts*, JUST. Q. 16 (May 2014) (showing that pretrial detention was associated with an increased prison sentence in federal courts); Marvin D. Free Jr., *Bail and Pretrial Release Decisions*, 2 J. ETHNICITY IN CRIM. JUST. 23 (2004) (providing a review of studies looking at race and pretrial release); Christine Tartaro; Christopher M. Sedelmaier, *A Tale of Two Counties: The Impact of Pretrial Release, Race, and Ethnicity upon Sentencing Decisions*, 22 CRIM. JUST. STUD. 203 (2009) (examining heterogeneity in the effects of pretrial detention on sentences of incarceration for minority defendants in different Florida counties); Michael J. Leiber & Kristan C. Fox, *Race and the Impact of Detention on Juvenile Justice Decision Making*, 51 CRIME & DELINQ. 470 (2005) (assessing how the interaction between race and detention status affects juvenile delinquency case outcomes); Marian R. Williams, *The Effect of Pretrial Detention on Imprisonment Decisions*, 28 CRIM. JUST. REV. 299 (2003) (showing that pretrial detention is correlated with increased incarceration sentences using a small sample of Florida felony cases); Gail Kellough & Scot Wortley, *Remand for Plea: Bail Decisions and Plea Bargaining as Commensurate Decisions*, 42 BRIT. J. CRIMINOLOGY 186 (2002) (finding that a negative personality assessment by police increases the likelihood of detention in Canada, and that those detained are more likely to plead guilty).

The new millennium also brought the publication of several important research studies funded by nonprofit organizations. Although not published in peer-reviewed or academic journals, these papers represented an advance because of their large sample sizes. In 2007 and 2008, the New York Criminal Justice Agency published two reports that assessed the impact of pretrial detention on case outcomes for non-felony and felony cases respectively.[32] Several years later, the Laura and John Arnold Foundation funded a pair of studies that assessed the impact of pretrial detention on case outcomes and on future crime. [33] With sample sizes in the tens to hundreds of thousands, the CJA and Arnold Foundation studies controlled for offense type within eight main classifications along with gender, race, age, and criminal history. These studies still found substantial correlations between pretrial detention and conviction rates, sentences of incarceration and post-disposition crime. One Arnold Foundation study in particular found large effects: low-risk defendants detained throughout the pretrial period were 5.41 times more likely to be sentenced to jail and 3.76 times more likely to be sentenced to prison than similarly situated defendants who were released at some point in their detention status.[34] These large effects, however, are unlikely to represent the true causal effect of pretrial detention. The researchers did not control for the particular offense charged, only broad offense categories such as "violent offenses". Those released on a violent offense are more likely to be facing minor charges like simple assault, and those detained on a violent offense are more likely to be facing serious charges like murder or rape. Given that likely variation, the study does not necessarily compare outcomes across similarly situated individuals, and differences in outcomes would be expected even in the absence of a causal effect.

In general, then, despite major improvements in data and analysis, this prior research has controlled for only a limited set of confounding variables, making it difficult to distinguish the effect of detention from the effects of underlying differences between detainees and releasees. Prior studies have typically controlled for limited measures of prior criminal involvement, and grouped cases into a limited number of offense categories. They have also tended to lack controls for defendants' wealth, which clearly affects pretrial release in cash bail systems, and which is likely to also affect defendant access to high-quality defense counsel and services such as counseling or drug treatment that might encourage the courts to impose a more lenient sentence. It is difficult, in other words, to exclude the possibility of "omitted-variable bias."

The newest empirical work on pretrial detention effects seeks to avoid the problem of omitted-variable bias by deploying quasi-experimental design. A working paper by Megan Stevenson, one of this paper's authors, uses a natural experiment in Philadelphia to estimate the causal effect of pretrial detention on case outcomes.[35] She exploits the fact that defendants have their bail set by different bail magistrates with broad discretion. Some magistrates tend to set bail

[32] MARY PHILIPS, PRETRIAL DETENTION AND CASE OUTCOMES, PART 1: NONFELONY CASES (2007); MARY PHILIPS, BAIL, DETENTION AND FELONY CASE OUTCOMES (2008).

[33] CHRISTOPHER T. LOWENKAMP ET AL., INVESTIGATING THE IMPACT OF PRETRIAL DETENTION ON SENTENCING OUTCOMES (2013); CHRISTOPHER T. LOWENKAMP ET AL., THE HIDDEN COSTS OF PRETRIAL DETENTION (2013).

[34] LOWENKAMP ET AL., THE HIDDEN COSTS OF PRETRIAL DETENTION, *supra*.

[35] Stevenson, *supra* note 13.

at unaffordable levels, while others set bail more leniently. The group of defendants randomly assigned to a high-bail magistrate are detained pretrial at higher rates than the group assigned to the more lenient magistrate. In all other respects, however, the two groups should be similar. Stevenson finds that defendants who receive the strict magistrate are also more likely to plead guilty and receive harsher sentences. Since this quasi-experimental method eliminates the bias that results from comparing individuals with different underlying characteristics, it produces a causal estimate of the effect of pretrial detention. Stevenson also performs a standard regression analysis (controlling for a detailed set of variables) that yields very similar results, suggesting that with enough controls, researchers can produce reasonable estimates of the causal effects of pretrial detention even in the absence of a natural experiment.

This Article offers several contributions to the field. First, like Stevenson, we offer both a quasi-experimental analysis and a regression analysis with a large set of highly detailed controls. Secondly, we focus on misdemeanor defendants, and assess the effect of pretrial detention both on case outcomes and on future crime. Third, we offer the first large-scale empirical study of misdemeanor pretrial detention in Harris County—which, because its pretrial process is representative of many jurisdictions, and because of the sheer number of people it affects, presents a particularly illuminating location of study.

II. MISDEMEANOR PRETRIAL DETENTION IN HARRIS COUNTY

A. The Misdemeanor Pretrial Process

The present analysis focuses on Harris County, Texas, the third largest county in the United States, which includes Houston, the nation's fourth largest city. Harris County contains a diverse population of 4.5 million residents, 20% of whom are African-American, 42% Hispanic/Latino, 25% foreign born, and 17% living below the federal poverty line.[36] In Houston, which comprises about half of the county by population, the 2014 FBI index crime rate was 1 per 100 residents for violent crime and 5.7 per 100 residents overall, placing Houston 30th among the 111 U.S. cities with population above 200,000.[37] Countywide, around 70,000 misdemeanors are processed each year, and these cases are adjudicated by the Harris County Criminal Courts at Law.[38] Historically, indigent defense in the county was provided though an appointed private counsel system, but a public defender office was established in 2010 and has gradually expanded, although it handles only a small subset misdemeanor cases.[39]

[36] U.S. Census Bureau, *Quick Facts, Harris County, Texas*, https://www.census.gov/quickfacts/table/PST045214/48201.

[37] Authors' calculations from FEDERAL BUREAU OF INVESTIGATION, CRIME IN THE UNITED STATES (2014).

[38] We report this total misdemeanor count on the basis of the data (on file with authors).

[39] The Public Defender's office represents only those misdemeanor defendants who are severely mentally ill, as identified by a computer algorithm on the basis of three criteria: (1) they have taken prescribed psychoactive drugs in the last 90 days, (2) they have a diagnosis of Schizophrenia, Bipolar Disorder or Major Depression, or (3) they are assigned to the jail's specialty mental health housing. In total, this totals approximately 2500 persons annually. *Personal correspondence with* Alex Bunin, Harris County Public Defender (June 16, 2016).

After arrest and booking, misdemeanants are held at the county jail complex located in downtown Houston until a bail hearing occurs.[40] Bail hearings are held continuously every day during the year, and nearly always occur within 24 hours of the initial booking. To manage the large volume of new defendants that arrive each day, the county has developed a videoconferencing process for bail hearings, whereby defendants are taken to a conferencing facility within the jail, and participate in the hearing by speaking toward a split video screen that shows a prosecutor and the magistrate handling the hearing. Bail hearings are typically handled in an assembly-line fashion, with some hearings lasting under a minute. Unless they have somehow managed to retain counsel, which is very rare, defendants are not represented at the bail hearings, and although the hearings begin with a basic advisory of rights, defendants may self-incriminate or otherwise take actions that might affect their future case.

Magistrates making bail determinations have access to information from a pretrial services report that includes prior criminal record, and can also direct questions towards the defendant during the bail hearing. Texas statutory law defines bail as "the security given by the accused that he will appear and answer before the proper court the accusation brought against him."[41] Notwithstanding this unitary focus on ensuring appearance, the law also directs the officer who sets bail to consider public safety in determining the bail amount.[42] In Harris County, bail is typically set according to a bail schedule promulgated by the county courts. The schedule proposes bail of $500 for a first-time low-level misdemeanor with no prior criminal record and escalates bail in $500 increments according to the seriousness of the charged offense and the number of prior felony and misdemeanor convictions, up to a maximum of $5,000.[43] Although release without bail—referred to as a "personal bond" in Harris County—is allowed, it is not included on the schedule and occurs infrequently.[44] Prosecutors have an opportunity during the bail hearing to argue for departures form the schedule.

Nearly all misdemeanor offenders in Harris County are theoretically eligible for appointed counsel in the event of indigence, and indigent defense in misdemeanor cases is provided almost exclusively through appointed private counsel.[45] To apply for appointed counsel, defendants complete a form that asks about income and other assets and judges may also direct questions regarding defendants' financial circumstances from the bench either during

[40] Some of the processes detailed here are described in Harris County Criminal Courts at Law, *Rules of Court* (Sept. 6, 2012), available at http://www.ccl.hctx.net/criminal/Rules%20of%20Court.pdf. The others are reported as described in personal communications with Alex Bunin, Harris County Public Defender (June 16 and July 27, 2016).

[41] Tex. Crim. Proc. Code Ann. § 17.01.

[42] Tex. Crim. Proc. Code Ann. § 17.15(5).

[43] Harris County Criminal Courts at Law, *Rule 9, Setting and Modifying Bail Schedule* (July 5, 2016), available at http://www.ccl.hctx.net/attorneys/BailSchedule.pdf. A non-profit advocacy organization, Equal Justice Under Law, recently filed a civil rights lawsuit against Harris County on behalf of misdemeanor pretrial detainees, alleging that reliance on the bail schedule violates due process and equal protection. *See, e.g.*, Lise Olsen, *Harris County's Pretrial Detention Practices Challenged as Unlawful in Federal Court*, HOUSTON CHRONICLE (May 19, 2016).

[44] *See* Tex. Crim. Proc. Code Ann. § 17.03 (defining "personal bond" and judicial authority to order it).

[45] *See supra* note 39. In the analysis that follows we control for public defender representation on the theory that these cases may be systematically different for other cases.

the bail hearing or in later proceedings.[46] In some cases, when it would facilitate a more orderly transition of court business, particularly when defendants appear *pro se* (without a lawyer), the judge may appoint indigent counsel without a formal request.[47] Although Texas law and the County's written policy prohibits judges from considering whether a defendant made bail in deciding whether she qualifies for appointed counsel (except to the extent that it reflects her financial circumstances),[48] there is considerable anecdotal evidence suggesting that this rule is violated in practice.[49] Thus, under the current system one potential impact of posting bail may be to alter one's chances of receiving an appointed attorney.

B. Data Description

Study data are derived from the court docket sheets maintained by the Harris County District Clerk.[50] These docket sheets include the universe of unsealed criminal cases adjudicated in the county, and include considerable detail regarding each case. We focus attention on 380,689 misdemeanor cases filed between 2008 and 2013. For each case, we observe the defendant name, address, and demographic information; prior criminal history; and top charge. We also observe the time of the bail hearing, bail amount, whether and when bail was posted, judge and courtroom assignment, motions and other metrics of procedural progress, and final case outcome, including whether the case was resolved through a plea. In the discussion below, we focus on the bail amount set at the initial hearing, which is likely to have a disproportionate impact on detention both because it is the operative bail during the early period when most defendants who post bail do so, and because it serves as a reference point for any further negotiations over bail. However, in Harris County, as in other jurisdictions, judges can exercise discretion to adjust bail as additional facts about a particular defendant or case come to light. To obtain information about the neighborhood environment for each defendant, we linked the court data by defendant ZIP code of residence—which was available for 85% of defendants—to ZIP code level demographic data from the 2008-2012 American Community Survey.

The court data have a few important limitations. Only a single most serious charge is recorded in each misdemeanor case, so it is not possible to clearly differentiate defendants with large numbers of charges. Although court personnel have access to criminal history information

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[46] Harris County District Courts, *Standards and Procedures: Appointment of Counsel for Indigent Defendants* (Sept. 2, 2009), available at https://www.justex.net/JustexDocuments/0/FDAMS/standards.pdf.

[47] This is apparent on the basis of the data, which sometimes shows counsel appointed without a motion (often on the day of final adjudication), and was confirmed in personal correspondence with Alex Bunin, Harris County Public Defender (July 27, 2016).

[48] Tex. Crim. Proc. Code Ann. § 26.04; Harris County District Courts, *Standards and Procedures* 15 (Sept. 2, 2009), available at https://www.justex.net/JustexDocuments/0/FDAMS/standards.pdf.

[49] See, for example, Emily DePrang, *Poor Judgment*, TEXASOBSERVER.ORG (Oct. 12, 2015), https://www.texasobserver.org/poor-judgment and Paul B. Kennedy, *Who is indigent in Harris County?*, THE DEFENSE RESTS BLOG (Jan. 25, 2010), http://kennedy-law.blogspot.com/2010/01/who-is-indigent-in-harris-county.html.

[50] These are available at CHRIS DANIEL, HARRIS COUNTY DISCRICT CLERK WEBSITE, http://www.hcdistrictclerk.com/edocs/public/search.aspx.

from across the state, these data only include criminal history data covering offenses within Harris County, not other jurisdictions. A further limitation is that the data do not in all cases provide clear indications of failure to appear, an obvious outcome of interest in a comprehensive evaluation of bail. The attorney information is also less than complete—although the data do indicate the identity of court-appointed counsel, as well as the fact that they are court-appointed, the identity of counsel is not observed when privately retained, nor can we distinguish between those who proceed *pro se* and those who hire a private attorney. Race and citizenship data are not carefully verified, so they may not be fully reliable.[51] Finally, although these data represent the near universe of criminal cases in the county, a small fraction of criminal court records are sealed or otherwise unavailable on the online court docket database. Additionally, arrestees who successfully complete diversion programs through which they avoid having charges filed are not included in the data.[52]

Table 1: Characteristics of Defendants by Pretrial Release Status

	Overall	Detained	Released
Convicted	68.3%	79.4%	55.7%
Guilty plea	65.6%	76.8%	52.8%
Any jail sentence	58.7%	75.0%	40.2%
Jail sentence days	17.0	25.4	7.4
Any probation sentence	14.0%	6.2%	22.9%
Probation sentence days	49.4	22.5	79.9
Requested appointed counsel	53.2%	71.3%	32.6%
Amount of bail	$2,225	$2,786	$1,624
Level A misdemeanor	30.7%	33.5%	27.4%
Male	76.8%	79.8%	73.5%
Age (years)	30.8	31.6	30.0
Black	38.9%	45.6%	31.3%
Citizen	74.1%	71.5%	77.0%
Prior misdemeanors	1.51	2.08	0.85
Prior felonies	0.74	1.11	0.31
Sample size	380,689	202,386	178,303

Table 1 presents summary statistics describing the sample of misdemeanor defendants examined in the study. We categorize as detained any individual who did not post bond with the first 7 days following the bail hearing. The data reveal stark differences in plea rates, conviction

[51] Anecdotal reports from Harris County criminal justice system actors suggest that this is the case.

[52] An example of one such program operating in Harris County is the First Chance Intervention Program, which diverts first-time, low-level marijuana offenders and is described at https://app.dao.hctx.net/OurOffice/FirstChanceIntervention.aspx.

rates, and jail sentences for detainees as compared to those who are able to make bail. However, detainees are also different from releasees across a number of pre-existing characteristics that seem likely to be related to case outcomes. For example, detainees are much more likely to request appointed counsel due to indigence (71% vs. 33%), disproportionately commit more serious Class A misdemeanors (34% vs. 24%), and have more extensive prior criminal records. Thus, it remains unclear to what extent the differences in case outcomes reflect the effect of detention versus other pre-existing differences across the two groups.

C. Pretrial Detention and Wealth

Not listed in Table 1, because it is unobserved in our data—but probably the most obvious characteristic that would likely differ between the detained and released—is wealth. A clear concern with a predominantly cash-based bail system as exists in Harris County is that individuals with money or other liquid assets will be most able to make bail, skewing the system in favor of the wealthy. Although the individual wealth of each defendant is unobserved, we can proxy for defendant wealth based upon median income in each defendant's ZIP code of residence. To illustrate the prominent role of wealth in the system, Figure 1 calculates the pretrial detention rate for defendants residing in each of the 217 ZIP codes observed in the data that contain at least 50 defendants, and plots this against the median household income in the ZIP.

The pattern is striking. Those who come from poorer neighborhoods are substantially more likely to be detained than those coming from wealthier neighborhoods. Only about 30% of defendants coming from the wealthiest ZIP codes are detained pretrial, versus around 60-70% in the poorest ZIP codes.

Although Figure 1 suggests that wealth may be an important determinant of pretrial release, it is possible that the patterns in Figure 1 reflect differential offending by defendants from lower-income ZIP codes. If, for example, lower-income misdemeanor defendants commit more serious offenses or tend to have more extensive criminal histories, one might expect them to be assigned higher bail amounts and be more likely to be detained for legally appropriate reasons. However, Figure 2, which shows the average seriousness of the offense, demonstrates that there is no relationship between wealth and offense seriousness.[53] Figure 3, moreover, demonstrates that the strongly negative wealth/detention relationship persists when focusing attention on the pool of defendants who have no prior charges in Harris County. Thus, the wealth gradient does not seem to be explainable simply as a matter of more extensive or more serious offending by low-income defendants.

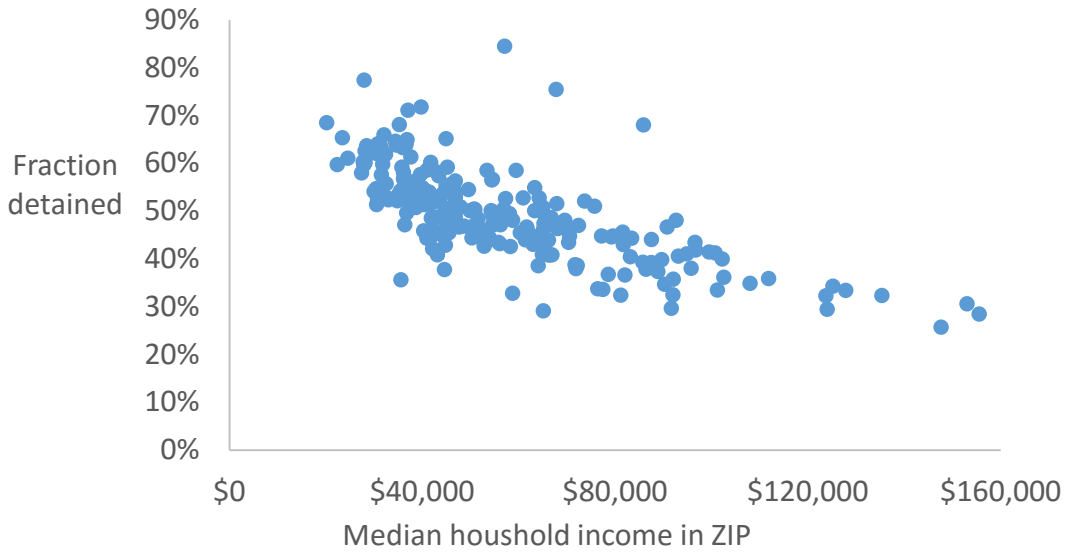
Would wealthier defendants still be detained less frequently if we could perfectly account for evidence and other factors relevant to flight or public-safety risk? To assess this question, for each defendant, we constructed an expected probability of detention by looking at the actual

[53] In a ZIP-code level regression of average seriousness on median household income, the estimated coefficient on income is practically small and not statistically significant.

detention rates of all other defendants in the sample who were assigned identical bail amounts at the initial hearing. This measure captures the average custody outcome for all defendants who were considered by the court as representing the same degree of risk, at least as expressed through the bail amount. For defendants falling within each decile of the ZIP code income distribution, we then compared this expected detention measure to the true rates of detention. The results of this analysis are reported in Figure 4.

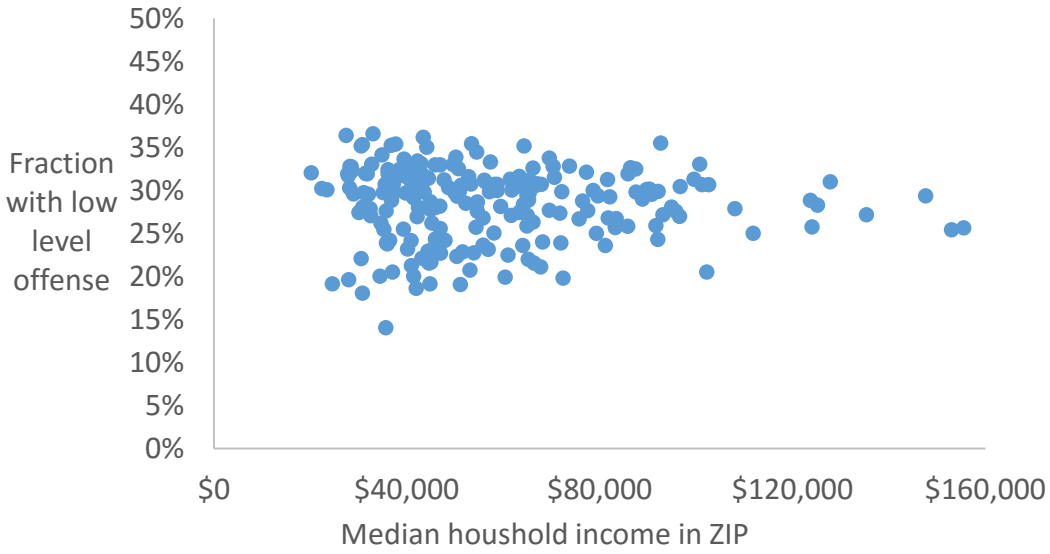
We see a striking pattern in which, for the poorest defendants, the actual detention rates are substantially above those that would be predicted based upon their assigned bail, whereas the reverse is true for the wealthiest defendants. Defendants in the lowest-income decile are about 15% (8 percentage points) more likely to be detained than would be expected based on their court assigned bail, and those in the top decile are 19% (9 percentage points) less likely to be detained. Because these comparisons already account for the bail amount, the differences cannot be plausibly attributed to anything in the court record that might implicate worthiness for bail. Thus, it appears that wealthier defendants are advantaged in their ability to obtain pretrial release beyond what would be expected simply based on the merits of their case.

Figure 1: Relationship Between Wealth and Detention Rates Among Misdemeanor Defendants in Harris County, TX



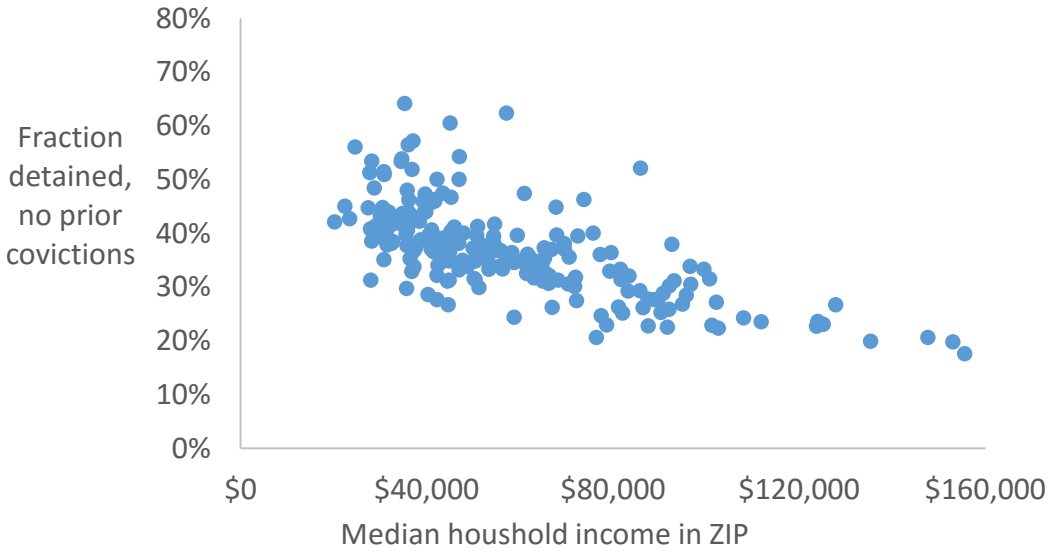
Note: This figure reports detention rates versus median income by ZIP code. Each dot in the chart represents defendants residing within a particular ZIP code.

Figure 2: Relationship Between Wealth and Offense Seriousness Among Misdemeanor Defendants in Harris County, TX



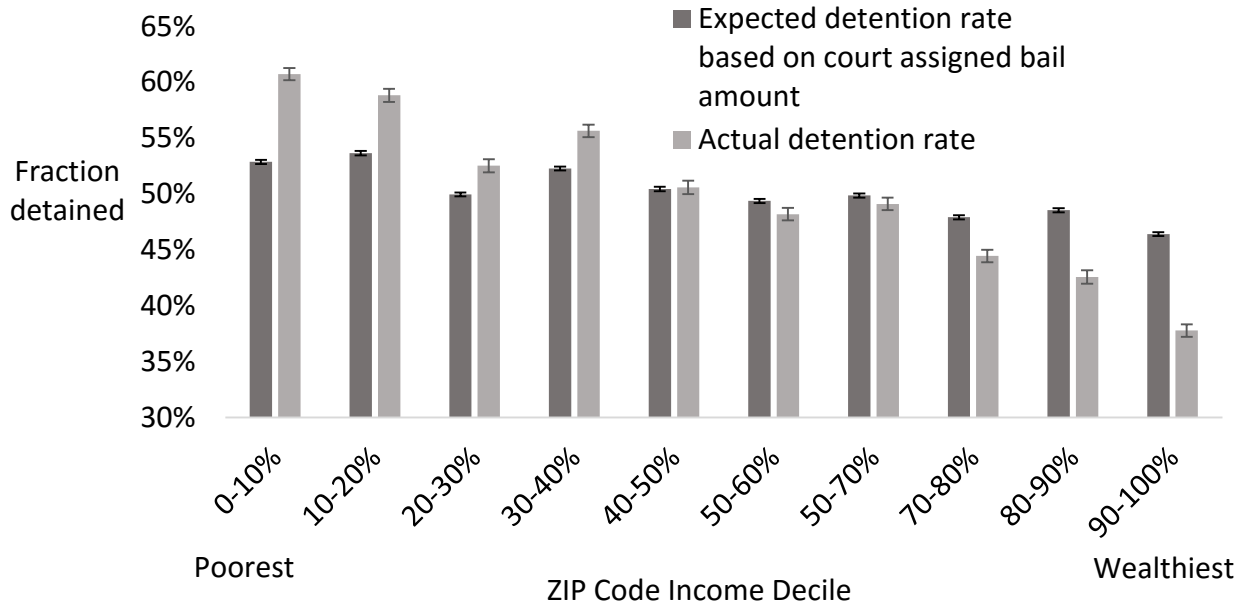
Note: This figure reports the fraction of defendants charged with a Class A misdemeanor versus median income by ZIP code. Each dot in the chart represents defendants residing within a particular ZIP code.

Figure 3: Relationship Between Wealth and Detention Rates Among Misdemeanor Defendants with No Prior Criminal Record in Harris County, TX



Note: This figure reports detention rates versus median income by ZIP code. Each dot in the chart represents defendants residing within a particular ZIP code.

Figure 4: Expected Detention Rates Versus Actual Detention Rates by Income Decline



Note: Expected detention rates are calculated by comparing defendants to all other defendants with equal bail amounts. Whiskers represent 95% confidence intervals.

III. ANALYSIS OF THE EFFECTS OF PRETRIAL DETENTION

A. Regression Analysis

Does this apparent unequal access to release have implications for the outcomes of cases? To begin to assess the impacts of bail, we estimate a series of regression models where the unit of observation is a case, the outcome is whether the case resulted in conviction, and the primary explanatory variable is a 0/1 indicator for whether a particular defendant was detained pretrial. We progressively introduce richer and richer sets of control variables to assess the extent to which the measured "effects" of detention might simply be attributable to uncontrolled factors other than detention.[54] As we progressively add additional controls we may get closer to the true causal estimate, but these estimates are all subject to the limitation that there may be uncontrolled, unobserved factors such as defendant wealth or quality of evidence that bias these as estimates of the causal effect of detention.

[54] We do not seek, by this methodology, to measure the effect of any of the variables we progressively introduce. For that purpose, this methodology would be flawed. *See* Jonah Gelbach, *When Do Covariates Matter? And Which Ones, and How Much?* 34 J. LABOR ECON. 509 (2016). We simply seek to assess the impact of detention under various specifications of increasing complexity.

Table 2 reports the regression estimates. The first specification reports a coefficient from a bivariate regression with no controls. The baseline conviction rate for those not detained is 56%, so detainees are 23.6 percentage points, or 42% more likely to be convicted. In Specification 2, we add controls for the charged offense along with the age, race, gender, and citizenship status of the defendant. In contrast to prior research, which tends to group crimes into a small number of general categories (e.g. "sex offense" or "minor public order offense"), in our regression we control for 121 different offense categories representing a wide range of different types and severities of offending. These additional controls do not dramatically alter the measured relationship between detention and conviction.

In Specification 3, we add controls for defendant build, skin color, and nativity and also include a full set of fixed effects for the ZIP code of residence. One clear drawback of attempting to measure the effects of pretrial detention through regression modeling is that wealth and SES are strong predictors of case outcomes, and seem likely to also be correlated with pretrial detention, but are rarely observed in court data. By including ZIP code controls, we are in essence comparing two individuals who come from the same neighborhood but who differ in pretrial detention status. While wealth and SES can vary within a ZIP code, the high degree of segregation by socioeconomic status that exists in Harris County (as in many urban areas in the United States) suggests that the ZIP codes can be a reasonable proxy for SES and education. Once again, the additional controls do not dramatically alter the results.

In Specification 4, we include indicators for the number of prior misdemeanor and felony charges and convictions as additional controls. Controlling for prior criminal history is important because prior offenses enter directly into the bail schedule, thus having a direct influence on detention. Prior criminal history may also factor into the outcome of the current case, particularly with reference to sentencing. As noted previously, our criminal history data only captures criminal justice contacts within Harris County. After conditioning on factors such as citizenship status, nativity, and residence location, however, it seems less likely that patterns of out-of-county offending would differ systematically between those who are detained and those who are released, suggesting the available controls may be adequate for capturing prior criminal activity. Somewhat surprisingly, controlling for prior criminal activity only modestly reduces the estimated relationship between detention and conviction.

Although we don't directly observe individual wealth, we can further proxy for wealth by whether a particular defendant requested appointed counsel, claiming indigence. Specification 5 adds an indigence indicator to the set of control variables. Controlling for this proxy for wealth appreciably reduces the coefficient estimate on detention, but it remains statistically significant and practically large.

In Specification 6 we add a full set of indicators for the actual bail amount set. In this specification, we are comparing individuals who have the same bail set at their hearing—and who are also equivalent across all variables enumerated in prior specifications—but who differ in their detention status. Since the amount of cash bail is, at least in theory, supposed to adjust to reflect the risk of flight and threat to public safety, conditioning precisely to the bail amount is

akin to comparing individuals only to others whom the court has deemed to be equally risky to one another. On a conceptual level, comparing individuals with similar court-determined risk seems attractive because it means that any subsequent difference in outcomes cannot result from the sorting function of the bail process, because the controls completely account for the instrumentality of sorting, which is the bail amount. In this, our preferred specification, pretrial detention is associated with a14 percentage point, or 25%, increase in the likelihood of conviction.

Table 2: Regression Estimates of the Effect of Pretrial Detention on Conviction

Specification	
1. No controls	0.236**
	(0.001)
2. Add controls for offense and basic demographics	0.266**
	(0.002)
3. Add controls for ZIP code of residence other characteristics	0.255**
	(0.002)
4. Add controls for prior criminal history	0.220**
	(0.002)
5. Add control for a claim of indigence	0.151**
	(0.002)
6. Add control for bail amount	0.140**
	(0.002)

Note: This table reports coefficient estimates from linear probability regressions estimating the relationship between pretrial detention and whether or not a misdemeanor defendant is convicted. The unit of observation is a case, and the sample size is 380,689. The dependent variable is an indicator for whether or not a particular defendant in a case was convicted, and the primary explanatory variable of interest is an indicator for whether the defendant in the case was released pretrial. Each table entry reports a coefficient from a separate regression, coefficients on other control variables are unreported. The mean conviction probability among those not detained was .557. Specification 1 is a simple bivariate regression. Specification 2 adds controls for defendant age (85 categories), gender, race (6 categories), citizenship status (3 categories), charged offense (121 categories), and week of case filing (289 categories). Specification 3 adds controls for the defendant's skin tone (14 categories), build (5 categories), whether they were born in Texas, and ZIP code of residence (223 categories). Specification 4 adds controls for the number of prior misdemeanor and felony charges (10 misdemeanor and 10 felony categories) and convictions (10 misdemeanor and 10 felony categories). Specification 5 adds an indicator for whether a defendant requested appointed counsel due to indigence. Specification 6 adds a full set of initial bail amount fixed effects (315 categories) as additional controls. Because the public defender handles a non-random subset of misdemeanors, all regressions with controls include an indicator for cases handled by the public defender. Robust standard errors are reported in parentheses. * denotes an estimate that is statistically significant at the .05 level in a two-sided test, and ** at the .01 level.

One variable not included in our specifications, and which might be important, is the type of defense representation actually provided (hired private counsel, public defender, appointed private counsel or no counsel (*pro se*)). We have not included it for two reasons. First, we cannot fully control for representation type, because our data do not allow us to distinguish between those who hire a private attorney and those who choose to represent themselves.[55] While we can control for whether or not the defendant receives a court-appointed attorney, this specification is difficult to interpret, as it essentially places those with a hired attorney and those representing themselves in the same category. Second, it might not be optimal to control for counsel type even if the data were available. The type of counsel may itself be an outcome of whether or not the defendant is detained pretrial; to control for it is thus to ignore one important effect of detention.[56] Changes to detention policy would likely also alter the type of representation received by defendants.

Finally, controlling for counsel type might actually introduce a new source of bias. In general, statistical practice cautions against controlling for variables that are not predetermined (*i.e.* variables that are influenced by the main variable of interest). The evidence suggests that judges are more likely to approve a request for counsel if the defendant is detained.[57] This suggests at releasees who receive court-appointed attorneys may be poorer and have more challenging cases than detainees with appointed counsel. Thus controlling for attorney status would tend to bias the results towards zero, since instead of comparing similarly situated individuals we would be comparing relatively wealthy detainees with relatively poor releasees.

Nonetheless, for the sake of completeness we did estimate a specification that controls for whether or not the defendant received a court-appointed attorney. The estimated coefficient was .042 with a p-value <.01—a smaller bail/conviction relationship, but one that remains statistically significant and relevant for policy purposes. This is not our preferred specification, however, due both to the data limitations and to the difficulties of interpreting the results of a regression that controls for one of the outcomes of pretrial detention.

The basic message from the analysis of conviction is that accounting for pre-existing differences in detainees and releasees is important, but even after controlling for a fairly wide range of relevant characteristics, pretrial detention remains a sizeable predictor of outcomes.

In Table 3, we extend the analysis to consider a range of additional case outcomes. The first row of the table replicates the previously reported results for conviction. The columns of the table report results from regressions with no controls, with a limited set of controls (basic offense

[55] In Harris County, judges will as a rule not proceed in misdemeanor cases without eventually assigning counsel, but in rare cases defendants will insist on representing themselves. *Personal correspondence with* Alex Bunin, Harris County Public Defender (June 16, 2016).

[56] There is some evidence that judges see the posting of bail as an indication that a defendant is not indigent enough to merit public defense. *See supra* note 47. In Harris County, 90% of detainee requests for counsel are granted, versus 44% of releasee requests. Detention may also affect attorney type through other channels. Those who have lost their job as a result of detention may be less able to afford a private attorney, for instance.

[57] In Harris County, 90% of detainee requests for counsel are granted, versus 44% of release requests. This could be because the act of paying bail is interpreted as evidence that the defendant has funds, or because detainees are unable to work while detained.

and demographics, similar to much of the past research measuring the effects of detention), and from our preferred specification that controls for a rich set of defendant and case characteristics and the bail amount (equivalent to Specification 6 in Table 2). Although there is a sizable impact of detention on all outcomes, estimated effects become smaller as one controls for a richer set of defendant and case characteristics. Prior research, which controlled for a limited set of variables, may indeed have overestimated the causal effect of detention.

The table demonstrates that nearly all of the difference in convictions can be explained by higher plea rates among those who are detained, with detainees pleading at a 25% higher rate than similarly situated releasees. We also find that those detained are more likely to receive jail sentences instead of probation. In our preferred specification, those detained are 43% (17 percentage points) more likely to receive a jail sentence, and will receive jail sentences that are nine days longer, more than double that of non-detainees. This estimate of the impact of pretrial detention includes in the sample those without a jail sentence, so it incorporates both the extensive effect on jail time (those detainees who, but for detention, would not have received a jail sentence at all) and the intensive effect on jail time (those who would have received a jail sentence regardless, but whose sentence may be longer as a result of detention). Those detained are less likely to receive sentences of probation, and receive fewer days of probation (including, once again, both the extensive and intensive margin).

Do these results shed light on which of the various potential mechanisms linking detention to case outcomes operate in Harris County? Although we cannot answer definitively, the overall patterns in Table 3 are consistent with an environment in which released defendants are able to engage in prophylactic measures—such as maintaining a clean record, engaging in substance abuse or anger management treatment, or providing restitution—that lead to charges being dismissed or encourage more lenient treatment. Detained defendants, in contrast, have essentially accumulated credits towards a final sentence of jail as a result of their detention, and therefore are more likely to accede to and receive sentences of imprisonment.

Are some defendants affected more dramatically by detention than others? For example, if one mechanism through which detention induces guilty pleas is by causing some defendants to "pre-serve" their expected sentences, so that contesting guilt has little ultimate effect on the amount of punishment, we might expect to see larger effects of detention for offenses where the expected punishment is low. To address this question, we constructed estimates of the effects of detention analogous to those presented in Tables 2 and 3, but limiting the sample to various subsets of the defendant population. Comparing the estimated impact of detention across different subgroups offers a means of assessing whether certain types of defendants are more or less disadvantaged by detention.

Table 3: Regression Estimates of the Effect of Pretrial Detention on Other Case Outcomes

		Estimated effect of pre-trail detention		
Outcome	Average for those released	No controls	Limited controls	Preferred specification
Conviction	.557	.236**	.266**	.140**
		(.001)	(.002)	(.002)
Guilty plea	.528	.240**	.264**	.133**
		(.002)	(.002)	(.002)
Received jail sentence	.402	.348**	.317**	.172**
		(.002)	(.002)	(.002)
Jail sentence days	7.38	18.0**	15.85**	8.67**
		(.10)	(.10)	(.12)
Received probation	.229	-.167**	-.125**	-.076**
		(.001)	(.001)	(.001)
Probation days	79.9	-57.5**	-41.2**	-25.3**
		(0.45)	(0.46)	(0.55)

Note: This table reports coefficient estimates from linear regressions estimating the relationship between case outcomes and whether a defendant was detained pretrial. Each entry represents results from a unique regression. The "Limited Controls" column reports regressions with controls as in Specification 2 of Table 2, and the "Preferred Specification" column reports regressions with controls as in Specification 6 of Table 2. See notes for Table 2. The jail and probation days outcomes include defendants assigned no jail or probation.

Table 4 reports the subgroup analysis. We first consider differences by prior criminal history, comparing defendants with no prior charges in Harris County to those with prior charges. We categorize by charges rather than convictions to account for the possibility that some individuals who are charged but later acquitted may have nonetheless accumulated experience with pretrial detention. Several mechanisms suggest that there may be different effects of detention for someone who has never been previously detained. First, those with prior experience in detention may experience less psychological or emotional discomfort because they have a clearer idea of what detention entails, a sort of acclimation effect. Second, these defendants may experience fewer collateral consequences of detention, either because they have already been labeled as offenders due to their prior acts, or because they have accumulated experience in dealing with collateral consequences. A third possibility is that those with a prior record face different types of potential punishments that change their calculus regarding the benefits and drawbacks of a plea. Finally, those with no prior record may be more likely to receive plea offers that involve low sanctions, increasing the incentives to accept the plea even if innocent.

Table 4 reveals that defendants without prior records are disproportionately affected by detention. Detention has more than twice the effect on conviction for first-time offenders, and appreciably increases their likelihood of being given a custodial sentence. Although other explanations are possible, this pattern is consistent with a scenario in which defendants detained for the first time are particularly eager to cut a deal to escape custody as quickly as possible; more experienced defendants, who perhaps have become acclimated to the jail environment or who face more serious consequences of conviction, are less influenced by their detention status. It appears that one consequence of pretrial detention, at least as practiced in Harris County, is that it causes large numbers of first-time alleged misdemeanants to be convicted and sentenced to jail time, rather than receiving intermediate sanctions or avoiding a criminal conviction altogether.

Table 4 demonstrates few differences in outcomes between "Whites" and "non-Whites," or between U.S. citizens and non-citizens.[58] Incentives to post bail may be different for non-citizens with immigration detainers, who would be held in custody for immigration purposes even after posting bail. However, the fact that we obtain similar results for citizens and non-citizens suggests that detainers may not be an important omitted variable here.

We do observe some important heterogeneity in the effects of custody by the primary offense of record. For DWI, for example, detention has little effect on adjudication of guilt—presumably because there is sufficient evidence from alcohol tests in most cases to convict—but there is evidence that those who are not detained are much more readily able to substitute probation for a custodial sentence. The largest effects on conviction accrue for assault and trespassing, two crimes for which physical evidence may be lacking, and the ability to obtain statements from witnesses in court may play an important role.[59]

Consistent with the evidence for defendants of varying criminal history, when we examine subsets of the defendant population based upon assigned bail, the most substantial effects are observed for those with low bail, at least for conviction and type of sentence. Effects on sentence length are largest in absolute terms for those with higher bail amounts, but this is perhaps unsurprising, since these defendants will also face more serious sentences overall. Detention has a greater *relative* effect on sentence length for people with low bail, given the shorter average sentence lengths of that group. One implication of these patterns is that Harris County could potentially achieve much of the benefit of liberalizing access to pretrial release by focusing on those with the lowest bail amounts, which may make a course of reform more politically feasible. This may be true in other jurisdictions with features similar to Harris County as well.

Finally, we analyzed the effects of bail by ZIP code quartile, examining whether those detained from wealthier neighborhoods fare as badly in their case outcomes as those from poorer neighborhoods. Although Table 4 shows that those from the poorest areas of the county are much

[58] As noted above, the race and citizenship designations in our data may not be wholly reliable.

[59] Stevenson observes similar patterns in her Philadelphia data. *See* Stevenson, *supra* note 13, at 19.

more likely to be detained, the effects of detention itself are fairly uniform across the wealth distribution. Thus, those who cannot post bond suffer higher conviction rates and a lowered likelihood of probation versus jail even when they come from more affluent parts of the county.

Table 4: Estimated Effects of Pretrial Detention for Population Subgroups

		Estimated effect of pre-trail detention on:				
Group	Group detention rate	Conviction	Sentenced to jail?	Jail sentence (days)	Sentenced to probation?	Probation sentence (days)
Criminal History						
No prior charges	.384	.195**	.213**	7.07**	-.084**	-23.6**
		(.003)	(.003)	(.126)	(.003)	(.909)
Prior charges	.634	.092**	.128**	9.44**	-.057**	-23.0**
		(.002)	(.002)	(.177)	(.001)	(.677)
Citizenship						
U.S. citizen	.514	.145**	.163**	8.24**	-.064**	-19.9**
		(.002)	(.002)	(.137)	(.002)	(.630)
Non-citizen	.586	.114**	.178**	9.50**	-.099**	-36.4**
		(.004)	(.004)	(.219)	(.003)	(1.12)
Race						
White	.481	.143**	.184**	9.63**	-.085**	-29.6**
		(.002)	(.002)	(.156)	(.002)	(.784)
Non-white	.603	.132**	.148**	7.12**	-.058**	-16.5**
		(.003)	(.003)	(.173)	(.002)	(.728)
Offense						
Drug	.464	.150**	.143**	5.31**	-.033**	-7.34**
		(.004)	(.004)	(.142)	(.003)	(.868)
DWI	.309	.034**	.224**	13.22**	-.190**	-82.8**
		(.004)	(.005)	(.331)	(.005)	(2.35)
Assault	.597	.215**	.210**	15.51**	-.046**	-12.3**
		(.007)	(.007)	(.528)	(.005)	(2.11)
Theft	.592	.151**	.132**	5.26**	-.094**	-23.1**
		(.005)	(.005)	(.245)	(.004)	(1.48)
Trespassing	.809	.196**	.229**	8.04**	-.047**	-12.5**
		(.008)	(.008)	(.409)	(.004)	(1.30)
Bond Amount						
$0-$500	.353	.179**	.198**	5.75**	-.082**	-2.88**
		(.003)	(.003)	(.109)	(.003)	(1.02)
$501-$2,500	.464	.146**	.173**	8.42**	-.075**	-24.2**
		(.003)	(.003)	(.180)	(.002)	(.975)
$2,501+	.704	.085**	.128**	10.92**	-.053**	-25.3**
		(.003)	(.003)	(.265)	(.002)	(.855)

ZIP Code Income Quartile						
1st Quartile (Lowest)	.597	.131**	.175**	9.13**	-.087**	-29.6**
		(.004)	(.004)	(.267)	(.003)	(1.07)
2nd Quartile	.550	.127**	.166**	8.61**	-.084**	-27.8**
		(.004)	(.004)	(.261)	(.003)	(1.14)
3rd Quartile	.495	.148**	.170**	8.25**	-.069**	-21.9**
		(.004)	(.004)	(.230)	(.003)	(1.17)
4th Quartile (Highest)	.423	.158**	.168**	8.32**	-.053**	-16.9**
		(.004)	(.004)	(.238)	(.003)	(1.37)

Note: This table reports coefficient estimates from linear regressions estimating the relationship between case outcomes and whether a defendant was detained pretrial for subgroups of the defendant population. Each entry represents results from a unique regression. Controls are as in Specification 6 of Table 2. See notes for Tables 2 and 3.

B. Natural Experiment

The preceding analysis indicates that even after controlling for a wide range of defendant and case characteristics, including bail amount (which should capture the information observed by the court when making bail decisions), there remains a large gap in case outcomes between those who are detained and observationally similar defendants who make bail. Nevertheless, it remains possible that some of the differences in outcomes revealed thus far reflect unobserved factors other than pretrial detention that were not controlled for in the regression analysis.

From a purely research perspective, the ideal approach to estimating the casual effect of pretrial detention would be to randomly select a subset of defendants and detain them, and then compare their downstream outcomes with those who were not detained. Random assignment to detention status would help to ensure that the two groups were otherwise comparable on other factors that might influence outcomes, including culpability. As a practical matter, however, implementing such an experiment would be ethically dubious.

Absent the ability to run a true experiment, one might seek to identify a naturally occurring "experiment", or some situation that causes pretrial detention to vary across different defendants for reasons unrelated to their underlying characteristics or culpability. Comparing outcomes among those more likely to be detained for such idiosyncratic reasons to those less likely to be detained could offer another way to measure the effects of detention.

Here we propose comparing defendants with bail hearings earlier in the week to those with hearings later in the week as a sort of natural experiment, under the theory that those with bail set later in the week are more likely to actually make bail. We limit attention to bail hearings that occur Tuesday through Thursday so as to focus on a set of days with fairly uniform crime patterns, and avoid comparisons between crime occurring on the weekends—which tends to involve different types of actors and activities—and crime occurring on weekdays.

Table 5 helps to illustrate the logic behind this natural experiment, reporting the amount of time elapsed between the bail hearing and posting of bond for those who successfully make

bail. The first 48 hours following the bail hearing appear to be a fairly critical period for making bail, as 77% of all those who eventually make bail do so during this period. Put differently, at the time of the bail hearing, a representative defendant has a 44% chance of being detained until judgement, but after two days have elapsed without yet making bail, the chances of never making bail have risen to 75%.

Typically, defendants rely on friends or family members to either post cash bail at a predetermined facility[60] or to visit a bail bonding company, which then posts a surety bond. The premise behind the natural experiment is that it is easier get ahold of someone who is willing to show up to post bail on the weekend than during the week. As an example, consider a defendant with a Tuesday bail hearing, who then must get in contact with someone to post bail. Family members or friends may be reluctant to disrupt school or work schedules to come to the bail facility and post bond, and they may be more difficult to contact if they are at work or otherwise away from home. A similarly-situated defendant with a bail hearing on a Thursday, in contrast, may have an easier time getting ahold of someone who is willing to appear to post bail, since the acquaintance could more easily do so on a Saturday.

Table 5: Time Elapsed Between Bail Bond Hearing and Release for Misdemeanor Defendants Posting Bond in Harris County, TX

	Number of defendants	Fraction of defendants
Same day	107,327	50.30%
1 day later	50,191	23.52%
2 days later	7,598	3.56%
3 days later	3,794	1.78%
4 days later	2,867	1.34%
5 days later	2,493	1.17%
6 days later	2,103	0.99%
7 days later	1,930	0.90%
>7 days later	35,088	16.44%

An additional factor that may contribute to the ability to make bail is liquidity. Because bail must be paid in cash or cash equivalents (cashiers' check or money order) in Harris County, to the extent that access to cash varies over the course of the week, this is likely to affect access to pretrial release. Many workers are paid on Friday, and so workers may have more ready access to cash on weekends immediately after being paid than at other times during the week.[61]

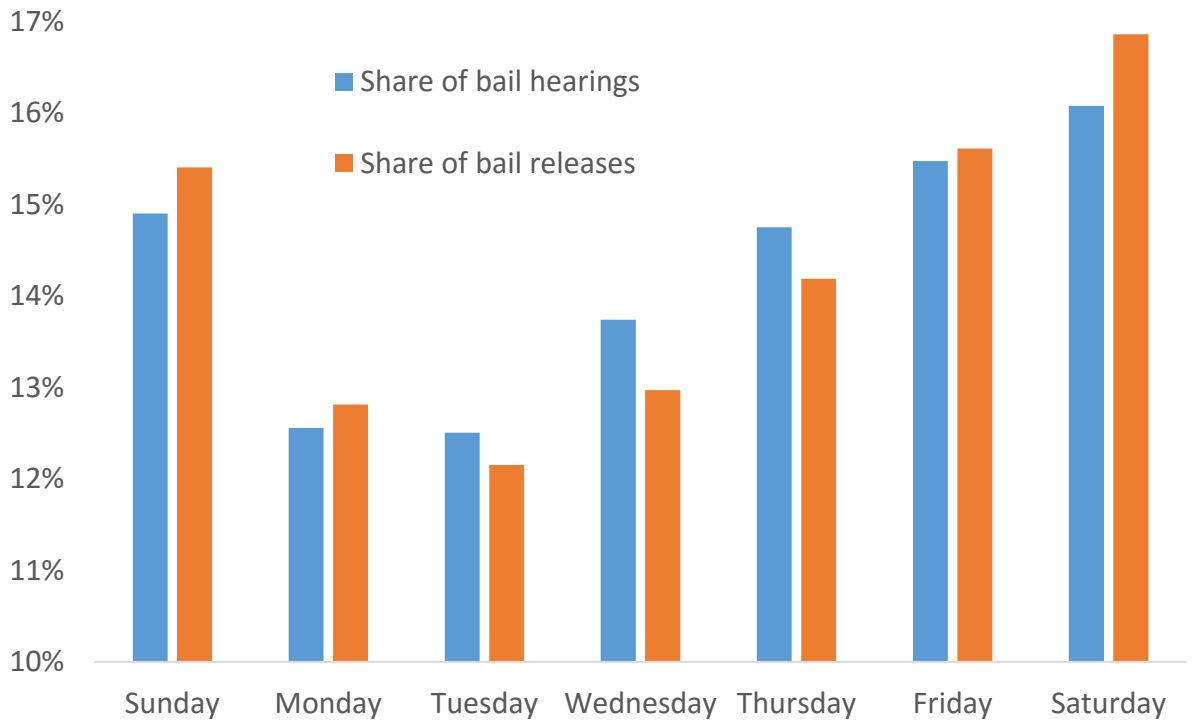
[60] In Harris County, this is the correctional complex located at 49 San Jacinto in Houston.

[61] Appendix Figure A.1 provides direct evidence on this point by plotting Google search volume for the terms "payday", "check cashing", and "payday loans" by day of week. Search volume for "payday" peaks on Friday, and demand for check cashing services is highest on Friday, Saturday, and Sunday. Searches for "payday loans", which are typically provided by

Thus, this liquidity channel might also explain why those with bail hearings closer to the weekend could be more likely to make bail.

Figure 5 provides evidence that weekend availability may indeed be a constraint affecting pretrial release by comparing the distribution of bail hearing dates over the course of the week with the dates on which defendants actually post bond. If it were equally easy to get a friend to post bond on any day of the week, we might expect the distribution of release days to closely mirror the distribution of bail hearings. In actuality, however, the figure reveals that releases are disproportionately more likely on Saturdays and Sundays, and less likely in the middle of the week. While other factors certainly influence the patterns shown in Figure 1, this simple comparison suggests that it may be easier to obtain release if the critical 48-hour period where pretrial releases most often occur overlaps with a weekend.

Figure 5: Comparison of Timing of Bail Hearings Versus Timing of Release by Day of Week



The basic premise underlying the natural experiment is that defendants with bail hearings on Thursdays should be largely similar to those with bail hearings on Tuesday or Wednesday, including in underlying culpability, but Thursday defendants may be more likely make bail

similar outlets to those offering check cashing services, and thus should be affected in similar ways by store hours, etc., but which represent negative rather than positive liquidity, show a reverse pattern, with the lowest search traffic observed on Saturdays and Sundays.

simply because there is an upcoming weekend when someone can more easily appear on their behalf with the necessary cash to post bail. Table 6 explores this possibility by comparing the average characteristics for defendants with bail hearings held on Tuesday, Wednesday, and Thursday, and reports results from tests designed to assess whether there is a statistically significant difference across the three groups of defendants in the listed characteristics. Because there is abundant evidence that the composition of offenses varies by day of the week[62], and differences in the charged offense could legitimately affect pretrial detention, the comparisons in Table 6 control for the underlying offense, which is conceptually equivalent to comparing defendants charged with the same offense who appear at bail hearings on different days.

Table 6: Average Characteristics of Defendants by Day of Bail Hearing

	Tues.	Wed.	Thurs.	P-Value
Amount of bail	$2,297	$2,300	$2,297	0.945
Pretrial release	40.6%	41.8%	44.2%	0.000
Level A misdemeanor	31.1%	31.1%	31.1%	0.916
Male	75.3%	74.9%	75.2%	0.159
Age (years)	30.7	30.7	30.7	0.809
Black	43.1%	44.0%	44.3%	0.000
Citizen	76.2%	76.0%	76.1%	0.822
Height (in.)	67.8	67.8	67.8	0.576
Weight (lbs.)	164.8	164.7	164.9	0.573
Born in TX	46.0%	46.0%	46.3%	0.495
Dark complexion	20.7%	20.8%	21.2%	0.212
Prior misdemeanor charges	1.90	1.91	1.90	0.476
Prior misdemeanor convictions	1.63	1.65	1.63	0.407
Prior felony charges	1.05	1.06	1.04	0.272
Prior felony convictions	0.83	0.84	0.82	0.109
Requested appointed counsel	55.2%	54.6%	53.6%	0.000

Note: Reported p-values are p-values from statistical tests of the null hypothesis that the characteristics listed in each row do not vary on average across all three days of the week.

[62] See for example Gerhard J. Falk, *The Influence of the Seasons on the Crime Rate*, 43 J. CRIM. L. & CRIMINOLOGY 199 (1952); THE CHIEF JUSTICE EARL WARREN INSTITUTE ON LAW AND SOCIAL POLICY, WHEN AND WHERE DOES CRIME OCCUR IN OAKLAND?: A TEMPORAL AND SPATIAL ANALYSIS, JANUARY 2008 – JULY 2013 (March 2014), available at https://www.law.berkeley.edu/files/When_and_Where_Does_Crime_Occur_in_Oakland.pdf; Marcus Felson & Erika Poulsen, *Simple Indicators of Crime by Time of Day*, 19 INT'L J. FORECASTING 595 (2003).

Table 6 suggests a remarkable degree of similarity between defendants with bail hearings on Tuesdays, Wednesday, and Thursdays across a broad range of case and offender characteristics. While for a few characteristics (race, appointed counsel request) there are statistically significant differences due to the large sample, the size of these differences are quite small. Importantly, as demonstrated in the first row of the table, the actual bail amounts set for these different groups are statistically and practically the same on average, and, as shown in Appendix Figure A.2, the entire distribution of bail amounts is in fact virtually unvarying across day of bail hearing. These patterns provide strong evidence that the courts view these three sets of defendants as identical in terms of their worthiness for pretrial release. However, the second row of the table demonstrates that, despite being assessed the same bail amounts, defendants with hearings on Thursday are about 3.6 percentage points (9%) more likely to make bail than those with hearings on Tuesday. This difference seems likely attributable to ease in producing the cash for bail, which may be greater on weekends for the reasons described above. Because the convenience/accessibility of paying bail is likely unrelated to the underlying culpability of a defendant, the weekend effect shown in Table 5 offers a plausible source of variation in pretrial detention that might be used to measure its causal effect.[63]

The main results from the analysis based upon the natural experiment are presented in Table 7. For reference in gauging the magnitude of the impacts, the first column reports the average outcome among defendants released pretrial. The second column reports coefficient estimates from ordinary regressions similar to those presented previously, where the offense, defendant demographics, ZIP code, prior criminal history, indigence status, and bail amount have been controlled. These estimates differ from those presented in Column 3 of Table 3 only because the sample for this analysis is restricted to the subset of defendants with bail hearings on Tuesday, Wednesday, or Thursday. The final column reports effects as measured by the natural experiment, which are estimated using two-stage least squares in an instrumental variables (IV) framework.[64]

Several patterns in the table are notable. The natural experiment/IV estimates are large, almost all statistically significant, and, consonant with the regression results, indicate that pretrial detention greatly influences case outcomes. As a general matter, the IV point estimates indicate larger effects of pretrial detention than the regression estimates, suggesting that the estimates

[63] One might wonder why defendants arrested on Tuesday do not simply wait until the weekend to post bail and get out, and thus have delayed but ultimately equivalent rates of release. There are several possible explanations. It may be that for those who lose jobs or suffer other major life disruptions as the result of pretrial detention, the damage is done within the first few days, such that after a few days, spending money on bail offers diminishing returns (especially if the money will go to a bail bondsmen). Moreover, for a crime with an expected punishment of a few days' imprisonment, after a few days a quick guilty plea may become relatively more attractive than posting bail.

[64] Two-stage least squares is a regression-based approach for measuring the effect of an explanatory variable (here, detention) on an outcome, controlling for other factors, that relies on an "instrument" (here, day of week of bail hearing) that shifts the explanatory variable but is thought to be otherwise unrelated to the outcome. By only exploiting variation in the explanatory variable that arises due to the instrument—which may be less prone to incorporate influences of unobserved, confounding factors—this approach is designed to deliver better causal estimates. See Joshua Angrist & Jörn-Steffen Pischke, *Mostly Harmless Econometrics: An Empiricist's Companion* 113-215 (2009).

presented earlier, to the extent that they imperfectly capture the causal effect of pretrial detention due to inability to control for all relevant factors, may in fact understate its effects. Such understatement could occur if, for example, defendants who have spent their funds on paying bail are less able to afford a high-quality private attorney than a similarly situated (i.e. from the same ZIP code, charged with the same crime, etc.) individual who did not pay bail. For all of the outcomes except jail days, however, the difference between the natural experiment and regression estimates is not statistically significant, suggesting that the regression approach yields reasonable causal estimates when sufficient controls are available.

Table 7: Effects of Pretrial Detention Based Upon the Natural Experiment

		Estimated effect of pre-trail detention	
Outcome	Average for those released	Regression w/controls	Natural experiment
Conviction	.542	.122**	.204**
		(.003)	(.077)
Guilty plea	.510	.116**	.234**
		(.003)	(.078)
Received jail sentence	.410	.142**	.227**
		(.003)	(.078)
Jail sentence days	7.5	7.33**	19.3**
		(0.18)	(5.39)
Received probation	.214	-.067**	-.124*
		(.002)	(.058)
Probation days	71.2	-2.2**	-42.3
		(0.81)	(22.1)

Note: This table reports coefficients from ordinary least squares (column II) and instrumental variables (IV) (column III) regressions measuring the effect of pretrial detention on the listed outcome. In the IV regressions, the instrument is whether the bail hearing occurred on Tuesday, Wednesday, or Thursday; the unreported first-stage effect is in the expected direction and highly significant. Controls are as in Specification 6 of Table 2; see notes for Table 2. Each reported estimated effect is from a unique regression. Sample size is 146,078 and the sample is limited to defendants with bail hearings on Tuesday, Wednesday, and Thursday.

The natural experiment is not without drawbacks. The underlying assumption of the natural experiment—that those with Thursday bail hearings would have had similar case outcomes to those with Tuesday or Wednesday bail hearings were it not for their enhanced access to pretrial release—is not directly testable. Moreover, because the absolute difference in detention rates across the Thursday, Wednesday, and Tuesday groups is relatively modest—about four percentage points—to the extent that there are remaining uncontrolled, unobserved differences across the groups, even small ones, such differences could be the true causal source

of what appear to be detention effects. Additionally, although the natural experiment still does deliver statistically significant estimates, the confidence intervals on these estimates are much larger, meaning that this approach allows us to make less definitive claims about the magnitude of the relationship between detention and outcomes. Thus, the results of this analysis are probably best interpreted as providing evidence that, after including a fairly rich set of controls, regression estimates approximate causal estimates of the effects of detention, and any remaining biases that may exist seem unlikely to fundamentally alter the conclusion that pretrial detention has significant adverse downstream consequences.

C. Future Crime

In addition to the impacts in the immediate case, pretrial detention carries the theoretical potential to affect later criminal activity. Given that a primary policy purpose of pretrial detention is to enhance public safety, such downstream effects, to the extent that they exist, should be an important component of the assessment of any particular bail system.[65] Unfortunately, rigorous estimates of the downstream crime effects of pretrial detention are relatively uncommon in the existing empirical work on bail. This section presents new estimates of the impact of misdemeanor detention in Harris County on future crime.

Downstream crime effects might occur through several mechanisms. Some would reduce future offending. Most directly, pretrial detention generates an incapacitation effect over the period of pretrial custody. Thus, at least in the immediate period following arrest, we expect detainees to commit fewer crimes than similarly situated releasees simply due to fact that they are in custody. Second, the experience of being detained might change offender perceptions of the disutility of confinement. To the extent that offenders discover that confinement is worse than expected, this could enhance the deterrent effect of the criminal law. This mechanism seems more likely to operate for first-time offenders or those with relatively little prior experience with confinement. Lastly, if pretrial detention increases the conviction rate (as our prior analysis suggests), and a prior conviction increases the possible sanctions for additional crime, pretrial detention may augment the expected sanction following a new crime, which would also enhance deterrence.

Other mechanisms would increase future offending (or arrest). If detention teaches offenders that confinement is less unpleasant than anticipated, it could reduce deterrence. Detention may also lead to job loss, disrupted interpersonal relationships, or other collateral consequences that change the relative attractiveness of crime in the future. To take a simple example: If a detained defendant loses her job, acquisitive criminal activities such as larceny or robbery might become a comparatively more attractive as a means of making up for lost income. Pretrial detainees may also make new social ties or learn new skills through their interactions

[65] For a discussion of the constitutional dimensions of this point, see *infra* Part IV.

with other jail inmates that change their propensity for crime.[66] Detention could also paradoxically lower expected sanctions for future crime if detention leads defendants to substitute custodial sentences for probation, because those on probation would face a supervision period where additional crime would trigger punishment for not only the new but also the prior offense. Finally, pretrial detention might alter the probability that future behavior is labeled by the criminal justice system as worthy of sanction. For instance, imagine that Defendant A is detained pretrial and then pleads guilty, while similar Defendant B is released, enrolls in a treatment program, and ultimately has the charge dismissed. Both are arrested in the future on allegations that the prosecutor views as presenting a marginal case. The prosecutor pursues charges against Defendant A because he has a prior conviction, but not against Defendant B, who does not.

Given that these various potential mechanisms cut in opposite directions, it is not apparent on a theoretical level whether pretrial detention should increase or decrease future crime. This is thus an empirical question of considerable import. To measure recidivism, we examined new charges for each defendant that were filed during the 18 months following his or her initial misdemeanor bail hearing. We measured future crime relative to the date that the bail hearing occurred, rather than the date the case ended, because the cases of released defendants take considerably longer to clear than those of detained defendants.[67] The recidivism analysis was conducted using conventional regression modeling and continues to adjust for offense, defendant demographics, prior criminal record, ZIP code of residence, indigence, and time and court of adjudication.[68] We separately consider misdemeanor and felony charges, and measure charges cumulatively.

An important feature of this analysis is that, as before in the preferred specification, it fully controls for the bail amount assessed at the bail hearing, which means that it compares detained defendants to similarly situated released defendants who were assigned the same bail. As a general matter, one might expect higher recidivism among those who are detained relative to those who are released simply as a result of the correct operation of the bail process. In particular, if the government is correctly assessing defendant risk, higher-risk defendants (who will ultimately commit more crime) should be detained more often. Our analysis, however, compares two defendants that the bail process has determined to be of equal risk, because their

[66] *See, e.g.*, Patrick Bayer et al., *Building Criminal Capital Behind Bars: Peer Effects in Juvenile Corrections*, 124 Q.J. ECON. 105 (2009) and Megan Stevenson, *Breaking Bad: Mechanisms of Social Influence and the Path to Criminality in Juvenile Jails* (October 12, 2015), http://ssrn.com/abstract=2627394 (presenting evidence of peer effects in juvenile incarceration).

[67] Unsurprisingly, defendants in detention tend to resolve cases much sooner. For detained defendants, the median time to first judgment is 3 days, and 80% of defendants have their cases resolved within 18 days. For those who make bond, the median time to first judgment is 125 days. Waiting until a case is resolved to start the clock would compare released defendants months or in some cases even years after their initial arrest to detained defendants in the days and weeks after their arrest.

[68] We explored applying the natural experiment to the recidivism outcomes, but the results, while not inconsistent with the results reported in the paper, were sufficiently imprecise so as to not provide useful guidance. For example, the instrumental variables estimates implied that detention increases felonies committed as of 18 months after the bail hearing by 15%, but the 95% confidence interval for this estimate was -59% to 219%.

bail was set identically. Thus, the impacts documented here already net out any effects that might reflect the differential sorting of defendants through the bail system.

Figure 6 plots results from a series of regressions where the outcome is the number of new misdemeanors recorded between the bail hearing and some number of days post-hearing. The actual average number of offenses for the non-detained population is depicted in the figure along with the adjusted rate for the detained population; this adjusted rate is calculated by estimating regressions similar to those in Specification 6 of Table 2, but with new offenses as the outcome, and then adding the resultant estimate for the effect of pretrial detention to the actual offending rate for non-detainees. This, in essence, depicts what the expected misdemeanor offending rate would be for the detainees if they were similar in demographics, case characteristics, prior criminal history, etc. to the released population. Figure 6 includes bars denoting the 95% confidence intervals for the adjusted rates, and shows impacts through the first 30 days post-hearing.

The figure demonstrates a steady rise in the number of new charges for both groups over time; this increase over time is a direct consequence of the choice to define the outcome as the cumulative number of new charges. For the first 19 days post bail hearing, the incidence of misdemeanors for detainees is below that of releasees, which likely reflects the incapacitative effect of being in jail. These differences are statistically significant through day 13. By day 30, however, there is a statistically significantly higher incidence of misdemeanors among the detained population. Thus, despite the initial incapacitation, by one month after the hearing those who were detained have exceeded their similarly situated counterparts who were released. To the extent that the rich set of controls allow us to construe these differences as causal, they suggest that pretrial detention has a greater criminogenic than deterrent effect.

Figure 7 plots similar differences between releasees and detainees in misdemeanor crime, but expands the time window to a full 18 months post-bail hearing. Throughout this later period the disparity between detainees and releasees remains statistically significant and practically large. Appendix Table A1, which reports the numeric estimates underlying the figure, shows that the gap between detainees and those released stabilizes at about one year post-hearing, and represents a roughly 22% increase in misdemeanor crime associated with detention.

Figure 8 depicts similar estimates but this time focusing on felonies and considering the time window from 0 to 100 days post-hearing. For felony offending, the incapacitative effect of detention appears somewhat longer lasting, with detainees overtaking releasees only after several months. By three months post-hearing, however, there is a statistically significant positive effect of detention on felony offending.

Figure 6: New Misdemeanor Charges by Pretrial Release Status During the First 30 Days After the Bail Hearing

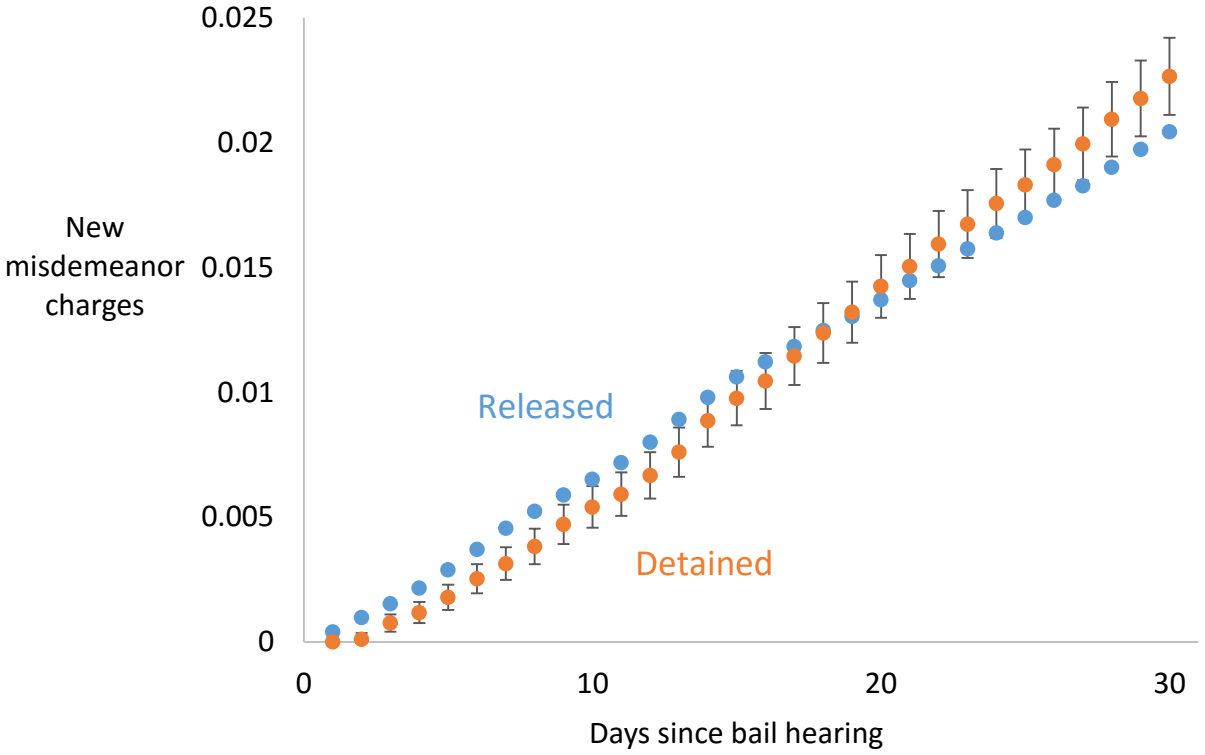


Figure 7: New Misdemeanor Charges by Pretrial Release Status During the First 18 Months After the Bail Hearing

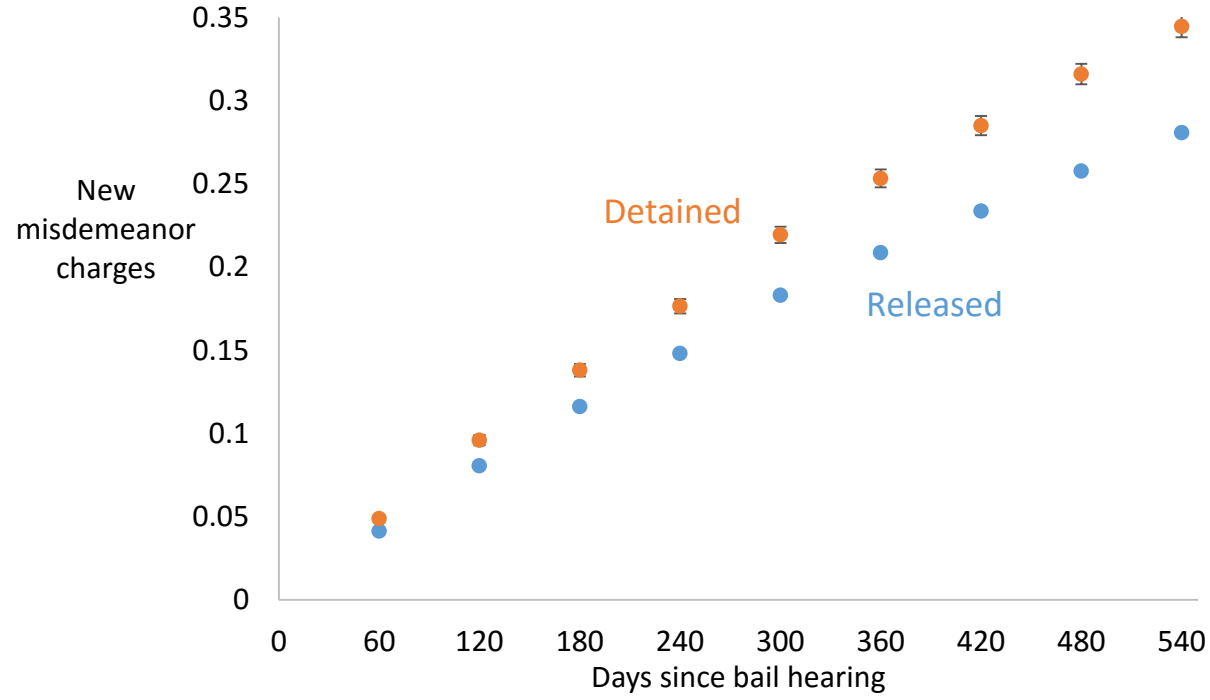


Figure 9, which extends the analysis to a full 18 months after the hearing, demonstrates continued heightened felony offending for those who are detained compared to similarly situated releasees. Appendix Table A2, which reports the estimates used to construct Figures 8 and 9, demonstrates that the offending gap appears to stabilize towards the end of our sample period, with detainees committing nearly a third more felonies. By 18 months after the conviction, a group of 100 detained defendants would be expected to have committed about 4 additional felonies as compared to an observationally similar group of 100 released defendants.

The notion that pretrial detention might actually increase future crime is consistent with recent research that suggests that incarceration might itself be criminogenic. A working paper by Michael Mueller-Smith, also set in Harris County, uses a research design that leverages random assignment to judges to estimate the causal effect of incarceration on future crime.[69] He finds that incarceration for misdemeanor defendants – who are in jail for a median of 10 days following the filing of charges – leads to a 6 percentage point increase in the likelihood of being charged with a new misdemeanor and a 6.7 percentage point increase in the likelihood of being charged with a new felony.[70] These estimates are not dissimilar to ours, although the timing of the effects is somewhat different. Mueller-Smith finds most of the effect within the first three months after charges are filed, while ours find a larger effect somewhat further out.[71]

These differences in recidivism are important from a policy perspective. To the extent that our estimates can be construed as causal, they suggest that a representative group of 10,000 misdemeanor offenders who are released pretrial would accumulate an additional 2,800 misdemeanor charges in Harris County over the next 18 months, and roughly 1,300 new felony charges. If this same group were instead detained they would accumulate 3,400 new misdemeanors and 1,700 felonies, an increase of 600 misdemeanors and 400 felonies. While pretrial detention clearly exerts a protective effect in the short run, for misdemeanor defendants it may ultimately serve to compromise public safety.

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[69] Michael Mueller-Smith, *The Criminal and Labor Market Impacts of Incarceration* (Aug. 18, 2015), http://sites.lsa.umich.edu/mgms/wp-content/uploads/sites/283/2015/09/incar.pdf

[70] Those incarcerated will be 4.6 percentage points more likely to be charged with a new misdemeanor and 6.4 percentage points more likely to be charged with a felony during the first quarter after charges are filed, even though a portion of that quarter will be spent in jail. After the first quarter, those incarcerated will be 1.4 percentage points more likely to be charged with a misdemeanor and 0.3 percentage points more like to be charged with a new felony, although the latter effect is not statistically significant.

[71] Anna Aizer & Joseph J. Doyle, Jr., *Juvenile Incarceration, Human Capital and Future Crime: Evidence from Randomly-Assigned Judges* 130 Q. J. ECON 759 (2015) and Rafael Di Tella & Ernesto Schargrodsky, Criminal Recidivism after Prison and Electronic Monitoring (Nat'l Bureau of Econ. Research, Working Paper No. 15602, 2009), http://www.nber.org/papers/w15602.pdf also find that incarceration has a criminogenic effect. Earlier papers, however, have concluded that incarceration is not in fact criminogenic. *See* Jeffrey R. Kling, *Incarceration Length, Employment, and Earnings*, 96 AM. ECON. REV. 863 (2006) and Charles E. Loeffler, Does Imprisonment Alter the Life Course? Evidence on Crime and Employment from a Natural Experiment, 51 CRIMINOLOGY 137 (2013).

Figure 8: New Felony Charges by Pretrial Release Status During the First 100 Days After the Bail Hearing

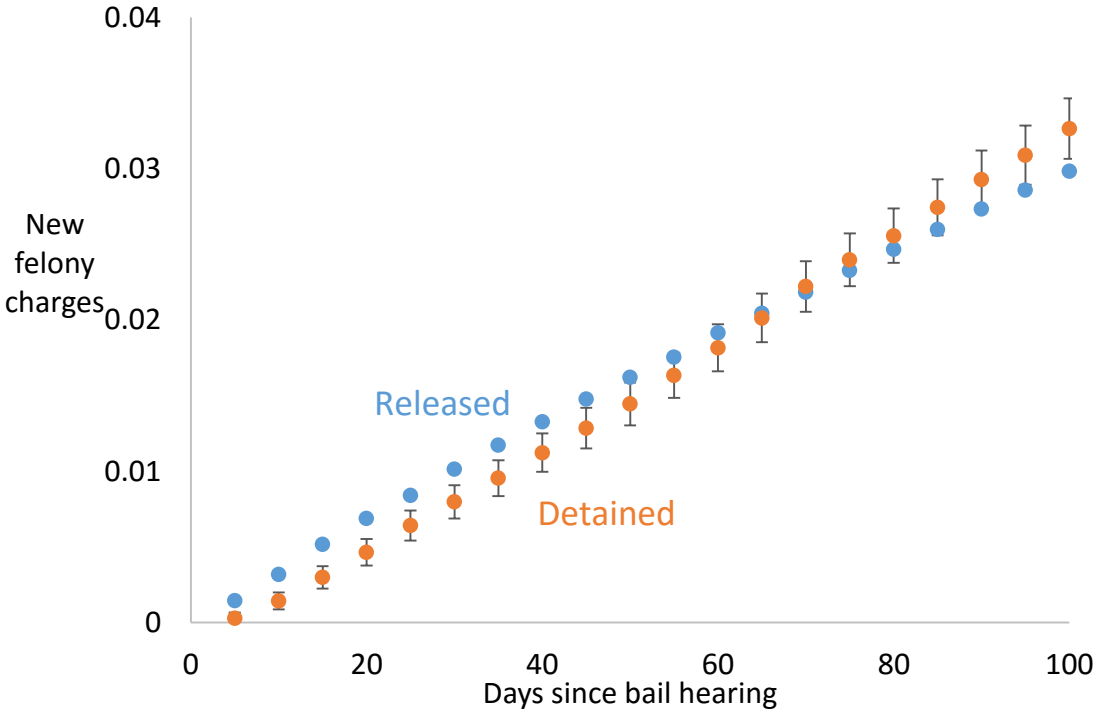
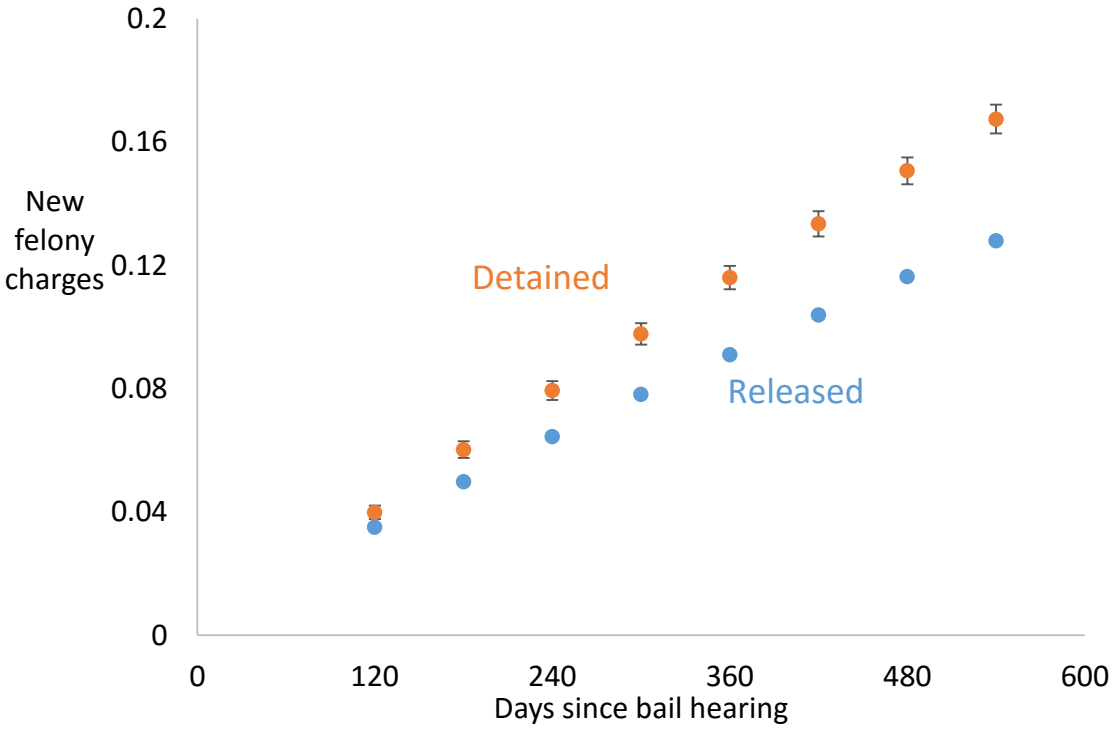


Figure 9: New Felony Charges by Pretrial Release Status During the First 18 Months After the Bail Hearing



IV. CONSTITUTIONAL IMPLICATIONS

The results reported here are relevant to an array of constitutional questions. As the Supreme Court has affirmed, "[i]n our society liberty is the norm, and detention prior to trial or without trial is the carefully limited exception."[72] Whether or not that remains true as a descriptive matter, it remains the aspiration of the law. The constitutional provisions that serve to safeguard pretrial liberty include the Sixth Amendment, the Eighth Amendment, the Due Process Clause and the Equal Protection Clause. The effects of pretrial detention should inform constitutional analysis in each of these arenas.

Our study is limited, of course, to a particular dataset. It does not support generalization about the downstream effects of pretrial detention in all times and places and for all people. But it adds further evidence to the body of literature finding that pretrial detention causally affects conviction and future crime rates. This Part synthesizes the constitutional implications of such effects, in Harris County and wherever else they might exist.

A. Sixth Amendment Right to Counsel: Is Bail-Setting a "Critical Stage"?

The results suggest, first, that bail-setting should be deemed a "critical stage" of criminal proceedings at which accused persons have the right to the effective assistance of counsel.

Despite arguments by scholars and advocates that accused persons should benefit from the assistance of counsel at bail hearings, that has not been the practical or legal reality.[73] Some jurisdictions provide counsel at bail hearings (or "first appearances"), but many do not. Federal statutory law does not include the right to counsel at a bail hearing (although an accused person does have the right to representation in a pretrial detention hearing).[74] A 2008 survey of state practice found that only ten states guaranteed the presence of counsel at an accused's first

[72] United States v. Salerno, 481 U.S. 739, 755 (1987).

[73] *See, e.g.*, THE CONSTITUTION PROJECT'S NATIONAL RIGHT TO COUNSEL COMMITTEE, DON'T I NEED A LAWYER? PRETRIAL JUSTICE AND THE RIGHT TO COUNSEL AT FIRST JUDICIAL BAIL HEARING (2015), http://www.constitutionproject.org/wp-content/uploads/2015/03/RTC-DINAL_3.18.15.pdf; SIXTH AMENDMENT CENTER AND PRETRIAL JUSTICE INSTITUTE, EARLY IMPLEMENTATION OF COUNSEL: THE LAW, IMPLEMENTATION AND BENEFITS (2014), sixthamendment.org/6ac/6ACPJI_earlyappointmentofcounsel_032014.pdf; Alexander Bunin, *The Constitutional Right to Counsel at Bail Hearings*, 31 CRIM. JUST. 23 (ABA 2016); Douglas L. Colbert, *Prosecution without Representation*, 59 BUFF. L. REV. 333, 400 (2011); Douglas L. Colbert, *Coming Soon to A Court Near You—Convicting the Unrepresented at the Bail Stage: An Autopsy of A State High Court's Sua Sponte Rejection of Indigent Defendants' Right to Counsel*, 36 SETON HALL L. REV. 653 (2006); Douglas L. Colbert et al., *Do Attorneys Really Matter? The Empirical and Legal Case for the Right of Counsel at Bail*, 23 CARDOZO L. REV. 1719 (2002); Douglas L. Colbert, *Thirty-Five Years after Gideon: The Illusory Right to Counsel at Bail Proceedings*, 1998 U. ILL. L. REV. 1 (1998); Charlie Gerstein, Note, *Plea Bargaining and the Right to Counsel at Bail Hearings*, 111 MICH. L. REV. 1513 (2013) (arguing that, given the Supreme Court's recent holding that "the Constitution requires effective assistance of counsel to protect plea bargains," it also "requires the presence of counsel at proceedings that have the capacity to prejudice those bargains").

[74] *See* 18 U.S.C. § 3142(f).

appearance.[75] Ten states uniformly denied the right to counsel.[76] The remaining thirty assigned appointed counsel "in select counties only."[77]

It has remained an open question of constitutional law, meanwhile, whether the Sixth Amendment right to counsel extends to bail hearings. The Sixth Amendment provides that "[i]n all criminal prosecutions, the accused shall enjoy the right . . . to have the Assistance of Counsel for his defence."[78] The Supreme Court has held the right to include the "effective" assistance of counsel with respect to any charge that may carry a sentence of incarceration, and the right to an appointed attorney if the accused cannot afford to hire one.[79] As a temporal matter, the right "attaches" at "the first appearance before a judicial officer at which a defendant is told of the formal accusation against him and restrictions are imposed on his liberty" (which is the nature of most bail hearings).[80] After that, "counsel must be appointed within a reasonable time . . . to allow for adequate representation at any critical stage before trial, as well as at trial itself."[81]

The question is whether the first appearance is itself a "critical stage."[82] Unfortunately, the term has no precise definition.[83] The Court most recently described critical stages as those "proceedings between an individual and agents of the State . . . that amount to trial-like confrontations, at which counsel would help the accused in coping with legal problems or . . . meeting his adversary."[84] It has also suggested that "those pretrial procedures that would impair defense on the merits if the accused is required to proceed without counsel" constitute critical stages—among other formulations.[85] The Court has classified arraignments, preliminary hearings, pretrial lineups, deliberate attempts to elicit incriminating information from an accused, efforts to elicit consent to a psychiatric interview, and plea-bargaining as critical stages.[86]

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[75] Colbert, *Prosecution without Representation*, *supra* note 69 at 396.

[76] *Id.*

[77] *Id.* at 345, 400. *But see* Rothgery v. Gillespie Cty., 554 U.S. 191, 203-04 (2008) ("We are advised without contradiction that not only the Federal Government, including the District of Columbia, but 43 States take the first step toward appointing counsel "before, at, or just after initial appearance.").

[78] U.S. Const. Sixth Amendment; *see also* Gideon v. Wainwright, 372 U.S. 335 (1963) (overruling Betts v. Brady, 316 U.S. 455 (1942); holding that right to counsel is "so fundamental and essential to a fair trial, and so, to due process of law, that it is made obligatory upon the states by the Fourteenth Amendment").

[79] McMann v. Richardson, 397 U.S. 759, 771 n.14 (1970) ("It has long been recognized that the right to counsel is the right to the effective assistance of counsel."); Strickland v. Washington, 466 U.S. 668 (1984) (articulating test for ineffective assistance claim); Argersinger v. Hamlin, 407 U.S. 25, 37 (1972) (holding that "absent a knowing and intelligent waiver, no person may be imprisoned for any offense . . . unless he was represented by counsel at his trial"); *Gideon*, 372 U.S. 335 (incorporating right to counsel, including appointed counsel for indigent persons, against the states).

[80] Rothgery v. Gillespie Cnty., 554 U.S. 191, 194 (2008).

[81] *Id.* at 212.

[82] The *Rothgery* majority stopped short of deciding it. *Id.* (emphasizing that it was not deciding this question).

[83] See Van v. Jones, 475 F.3d 292, 312 (6th Cir. 2007) (noting that "[o]ne would welcome a comprehensive and final one-line definition of 'critical stage,'" and providing survey of varying Supreme Court formulations).

[84] *Rothgery*, 554 U.S. at 233 n.16 (internal quotation marks and citations omitted).

[85] Gerstein v. Pugh, 420 U.S. 103, 122 (1975).

[86] *See* Hamilton v. Alabama, 368 U.S. 52 (1961) (arraignment); White v. Maryland, 373 U.S. 59 (1963) (arraignment); Coleman v. Alabama, 399 U.S. 1, 7 (1970) (preliminary hearing); United States v. Wade, 388 U.S. 218 (1967) (pretrial lineup); Massiah v. United States, 377 U.S. 201 (1964) (attempt to elicit information from accused); Estelle v. Smith, 451 U.S. 454 (1981) (consent to psychiatric interview); Lafler v. Cooper, 132 S. Ct. 1376, 1385 (2012) (plea-bargaining).

This case law offers arguments both for and against adding bail hearings to the list. In *Coleman v. Alabama*, the Court concluded that an Alabama preliminary hearing was a critical stage for reasons that apply with almost equal force to bail hearings.[87] On the other hand, in *Gerstein v. Pugh* the Court rejected the claim that a Fourth Amendment probable cause determination is a critical stage.[88] The Court distinguished *Coleman* on the basis that a probable cause determination "is addressed only to pretrial custody."[89] The Court acknowledged that "pretrial custody may affect to some extent the defendant's ability to assist in preparation of his defense," but concluded that "this does not present the high probability of substantial harm identified as controlling in *Wade* and *Coleman*."[90]

Our study demonstrates that pretrial custody *does* present a "high probability of substantial harm," at least for Harris County misdemeanor defendants.[91] It increases the likelihood of conviction by approximately fourteen percentage points, or 25%, for no reason relevant to guilt. While there are several possible explanations for this detention effect, it is likely that for many defendants, detention essentially eliminates the possibility of pursuing a trial altogether, by obligating them the serve out a likely sentence prior to adjudication. If pleading guilty for "time served" or a non-custodial sentence is an option, many a detained person will find that it is the only one; the costs of staying in jail to fight a charge are simply overwhelming. In this sense, the bail hearing is *the* critical stage of criminal proceedings. More broadly, our results suggest that the outcome of a bail hearing can profoundly impair the accused's ability to contest the charges against him.[92] And there is reason to think that representation makes a

[87] The Court reasoned that an effective defense counsel at a preliminary hearing could (1) "expose fatal weaknesses in the State's case that may lead the magistrate to refuse to bind the accused over;" (2) examine witnesses so as to "fashion a vital impeachment tool" for trial "or preserve testimony favorable to the accused"; (3) "discover the case the State has against his client and make possible the preparation of a proper defense;" and (4) make "effective arguments for the accused on such matters as the necessity for an early psychiatric examination or bail." 399 U.S. at 9. Three of these four reasons—all except the opportunity to question witnesses—apply to bail hearings.

[88] 420 U.S. 103.

[89] *Id.* at 122-23. The Court also noted that a probable cause determination does not involve witness testimony, but given that the Court has recognized plea-bargaining as a critical stage this cannot be determinative.

[90] *Id.*

[91] *See* Colbert, *Thirty-Five Years After Gideon*, *supra* note 73 at 37 (noting that "a showing that counsel's absence at the bail hearing prejudiced the accused's fair trial rights" would provide grounds for finding that bail-setting is a critical stage); *cf.* State v. Williams, 210 S.E.2d 298, 300 (S.C. 1974) ("There is no showing in this record, nor does appellant contend, that anything occurred at the bail hearing which in any way affected or prejudiced his subsequent trial or that was likely to do so."). Also note that the Supreme Court's recent recognition of the centrality of plea-bargaining to the contemporary criminal process might support this argument. *See* Missouri v. Frye, 132 S. Ct. 1399, 1407 (2012) ("In today's criminal justice system, therefore, the negotiation of a plea bargain, rather than the unfolding of a trial, is almost always the critical point for a defendant.").

[92] This is true of any of the potential mechanisms discussed above *except* if the detention effect results from the inability of detainees to obstruct justice. It seems unlikely, however, that misdemeanor defendants released pretrial routinely engage in obstructionist tactics.

significant difference in bail and detention outcomes.[93] It is difficult to maintain, in these circumstances, that the bail hearing is not a critical stage.[94]

B. Eighth Amendment: When is Bail or Detention "Excessive"?

Our results also suggest that Harris County bail officers may be regularly setting bail that is unconstitutionally excessive. The Eighth Amendment provides that "[e]xcessive bail shall not be required."[95] This means that if money bail is set in order to ensure the appearance of the accused at trial, it must not be more than "reasonably calculated to fulfill this purpose."[96] The premise of money bail is that the prospect of some financial loss is a sufficient deterrent to prevent pretrial flight; full detention is not necessary. If money bail results in detention because a defendant cannot pay, it is thus arguably excessive *per se*.[97] Federal statutory law explicitly prohibits the setting of money bail in an amount that results in detention, as do the ABA Standards on Pretrial Release.[98] Yet in Harris County, half of misdemeanor defendants with bail set are nonetheless detained pending trial. The average bail amount for these detainees is only $2,225.

Our study also has broader implications for the question of when pretrial detention is "excessive" for purposes of the Eighth Amendment. This will become a particularly topical question as jurisdictions seeking to curtail the use of money bail adopt more explicit preventive detention regimes.[99] In *United States v. Salerno*, the Supreme Court held that the Excessive Bail Clause does not entail an absolute right to bail—that is, it does not prohibit detention without bail in some circumstances.[100] The Court also endorsed public safety as a potential basis for

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[93] *See, e.g.*, SIXTH AMENDMENT CENTER AND PRETRIAL JUSTICE INSTITUTE, EARLY IMPLEMENTATION OF COUNSEL, *supra* note 69; Colbert *et al.*, *Do Attorneys Really Matter?*, *supra* note 69 (reporting "convincing empirical data that the benefits of representation are measurable and that representation is crucial to the outcome of a pretrial release hearing").

[94] *Accord, e.g.*, Hurrell-Harring v. State, 930 N.E.2d 217, 223 (N.Y. Ct. App. 2010) ("There is no question that 'a bail hearing is a critical stage of the State's criminal process'") (quoting and citing Higazy v. Templeton, 505 F.3d 161, 172 (2d Cir. 2007)); *cf.* Gonzalez v. Comm'r of Correction, 68 A.3d 624, 637 (Ct. 2013), *cert. denied*, 134 S. Ct. 639 (2013) (concluding "the petitioner had a sixth amendment right to effective assistance of counsel at the arraignment stage in which proceedings pertaining to the setting of bond and credit for presentence confinement occurred").

[95] U.S. Const. Eighth amend.

[96] Stack v. Boyle, 342 U.S. 1, 4-5 (1951); *see also* United States v. Salerno, 481 U.S. 739, 754 (1987) ("[W]hen the Government has admitted that its only interest is in preventing flight, bail must be set by a court at a sum designed to ensure that goal, and no more.").

[97] The counterargument is that in some cases, an unaffordable bail amount is the only amount sufficient to create an adequate disincentive to flee. But if that is so, it is more accurate to say that *no* bail can reasonably assure appearance, and more honest to explicitly order detention on that basis—if no other non-financial conditions will suffice. The federal Bail Reform Act and many state statutes authorize such determinations. *See* 18 U.S.C. § 3142(e) ("If . . . the judicial officer finds that no condition or combination of conditions will reasonably assure the appearance of the person as required . . . , such judicial officer shall order the detention of the person before trial.").

[98] *See* 18 U.S.C. § 3142(c)(2) ("The judicial officer may not impose a financial condition that results in the pretrial detention of the person."); Standard 10-1.4(e), Standards for Pretrial Release (American Bar Association, 3d ed. 2002) ("The judicial officer should not impose a financial condition of release that results in the pretrial detention of a defendant solely due to the defendant's inability to pay.").

[99] *See* Sandra G. Mayson, *Dangerous Defendants: Bail Reform and Pretrial Prediction* (manuscript on file with authors).

[100] 481 U.S. 739, 754 (1987).

ordering the pretrial detention of some particularly dangerous defendants.[101] But the Court did suggest that the Bail Clause requires that "the Government's proposed conditions of release or detention not be 'excessive' in light of the perceived evil" they are designed to address, and that, to determine whether the intrusion on pretrial liberty is excessive, courts must "compare" it "against the interest the Government seeks to protect by means of that response."[102] The analysis of Eighth Amendment "excessiveness" thus requires a kind of cost-benefit analysis. In the case of detention without bail, the analysis should turn on whether the costs of detention are excessive in relation to its benefit.[103]

The downstream effects of detention must factor into this analysis. In our sample set, it appears that detention distorts criminal adjudication. That is a significant cost, both to the people who would not have been convicted but for their detention and for the legitimacy of the system as a whole. Secondly, our study provides additional evidence that detention increases future criminal offending. To the extent that jurisdictions impose pretrial detention in order to prevent pretrial crime, its benefit—the pretrial crime averted—must be discounted by the increase in future crime it produces. If it is not clear that the pretrial crime averted is worth the increase in future crime, detention might be an excessive response to the public-safety threat. This is especially likely if less restrictive alternatives like GPS monitoring are capable of achieving the same results.[104]

C. Substantive Due Process: Is Pretrial Detention Punishment? Does it Impermissibly Infringe Liberty?

Our results might also support an argument that pretrial detention in some circumstances violates substantive due process by inflicting punishment before trial. "Under the Due Process Clause, a detainee may not be punished prior to an adjudication of guilt in accordance with due process of law."[105] Pretrial detainees, that is, have the right to be "free from punishment."[106] The difficult question is when a restraint on liberty amounts to punishment.

Pursuant to current doctrine, the answer turns on whether the restraint is rationally related to a non-punitive purpose, and not "excessive" for that purpose.[107] Thus far, the Court has declined to classify any pretrial restraint as punishment. In *Bell v. Wolfish,* a challenge to certain

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[101] *Id.*

[102] *Id.*

[103] For a recent effort to engage in this kind of cost-benefit analysis of pretrial detention, *see* Shima Baradaran Baughman, *Costs of Pretrial Detention*, B.U. L. REV (Forthcoming, 2017), http://papers.ssrn.com/sol3/papers.cfm? abstract_id=2757251.

[104] *See* Samuel Wiseman, *The Right to Be Monitored*, 123 YALE L.J. 1344 (2014).

[105] Bell v. Wolfish, 441 U.S. 520, 535 (1979). Note that this right against punishment is distinct from the presumption of innocence. *See id.* at 533 (holding that the presumption of innocence "is a doctrine that allocates the burden of proof in criminal trials," and "has no application to a determination of the rights of a pretrial detainee"). *But see* County of Riverside v. McLaughlin, 500 U.S. 44, 58 (1991) (alluding to the importance of minimizing "the time a presumptively innocent individual spends in jail").

[106] *Id.* at 534.

[107] *Id.* at 538; United States v. Salerno, 481 U.S. 739, 747 (1987).

conditions of pretrial confinement, the Court concluded that the conditions did not amount to punishment because they were rationally related to legitimate needs of prison administration and not excessive for those ends.[108] In *Salerno*, the Court rejected the argument that pretrial detention pursuant to the federal Bail Reform Act constituted punishment *per se*, on the basis that the detention regime was carefully tailored to the "legitimate" goal of preventing pretrial crime, and the "incidents" of detention were not "excessive in relation to the regulatory goal Congress sought to achieve."[109] In both cases, however, the Court left open the possibility that in other circumstances it might reach a different conclusion. This "punishment" analysis should also be responsive to the costs of pretrial detention, since it, like the Bail Clause analysis, is a genre of cost-benefit (or means-end) test. That is, detention that increases the likelihood of conviction and future crime might be an excessive means of preventing pretrial flight and crime, and therefore constitute impermissible pretrial "punishment."

Even if it not, pretrial detention might, in some cases, violate substantive due process as an impermissible regulatory infringement on individual liberty. "Freedom from imprisonment . . . lies at the heart of the liberty that [the Due Process] Clause protects."[110] The state must therefore meet a high burden of justification when it seeks to detain individuals for regulatory (that is, non-punitive) purposes. When challenges to regulatory detention have made their way to the Supreme Court, the Court has generally applied some type of heightened scrutiny.[111] Most relevant here, in *Salerno* the Supreme Court rejected the straight substantive-due-process challenge to the federal preventive detention regime on the ground that the regime was "narrowly focuse[d]" on the "legitimate and compelling" state interest of preventing pretrial crime by an especially dangerous subset of defendants.[112] Pursuant to the same analysis, pretrial detention might violate substantive due process if it is not carefully tailored to its goal, or if its costs vastly outweigh its benefits. Once again, the costs documented here should inform the calculation.[113]

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[108] *Bell*, 441 U.S. at 541-42.

[109] *Salerno*, 481 U.S. at 747-48.

[110] Zadvydas v. Davis, 533 U.S. 678, 690 (2001).

[111] *See, e.g.*, *id.* at 690 (explaining that regulatory detention violates substantive due process except "in certain special and narrow nonpunitive circumstances, where a special justification, such as harm-threatening mental illness, outweighs the individual's constitutionally protected interest in avoiding physical restraint") (internal quotation marks and citations omitted).

[112] 481 U.S. at 750-52 (1987); *id.* at 752 ("Given the legitimate and compelling regulatory purpose of the Act and the procedural protections it offers, we conclude that the Act is not facially invalid under the Due Process Clause of the Fifth Amendment.").

[113] The tests that the Court has articulated for impermissible pretrial "punishment" and impermissible regulatory detention are quite close, and also overlap with the Eighth Amendment prohibition on "excessive" pretrial restraints on liberty. It is unclear how the doctrine will evolve in these related areas. It is also possible to frame a constitutional challenge to pretrial restraints on liberty in Fourth Amendment terms, by alleging that the restraint constitutes an unreasonable search or seizure. *See* Gerstein v. Pugh, 420 U.S. 103, 125 (1975) ("The Fourth Amendment was tailored explicitly for the criminal justice system, and its balance between individual and public interests always has been thought to define the 'process that is due' for seizures of person or property in criminal cases, including the detention of suspects pending trial.").

D. Procedural Due Process: Does Pretrial Detention Produce "Involuntary" Plea Bargains?

To the extent that the causal effect of detention on conviction rates reflects a reality that detained people plead guilty simply to get out of jail, it raises the question of whether such pleas are fully "voluntary," or whether they present procedural due process concerns.

The Due Process Clauses of the Fifth and Fourteenth Amendments require that guilty pleas be "voluntary" and "intelligent", which implies that a defendant must have, and make, a meaningful choice.[114] Plea-bargaining poses a dilemma because it is always coercive. This makes it extremely difficult to draw the due-process line. How much coercion is too much? The Supreme Court has confronted this question in two cases since 1970: *Brady v. United States* and *Bordenkircher v. Hayes.*[115] In *Brady,* the Court held that a plea was not rendered involuntary by the fact that it was motivated by the defendant's fear of receiving the death penalty if convicted at trial.[116] In *Bordenkircher,* the Court held that it did not violate due process for a prosecutor to threaten to re-indict the defendant on more serious charges unless he pled guilty (and then to carry out the threat).[117] The Court reasoned that "the imposition of these difficult choices is an inevitable—and permissible—attribute of any legitimate system which tolerates and encourages the negotiation of pleas."[118]

This precedent is clearly hostile to any argument that pretrial detention might render a guilty plea involuntary, but the Supreme Court did leave the door just slightly ajar. In *Brady,* the Court qualified its expansive endorsement of bargains driven by fear: "Of course, the agents of the State may not produce a plea by actual or threatened physical harm or by mental coercion overbearing the will of the defendant."[119] And in *Bordenkircher,* the Court suggested that its decision was predicated on the assumption that the inducement at issue would not lead an innocent person to plead guilty. The Court reasoned that "[d]efendants advised by competent counsel and protected by other procedural safeguards are . . . unlikely to be driven to false self-condemnation."[120] It also noted that the case did not "involve the constitutional implications" of a prosecutor threatening harm or offering benefit to a third party, "which might pose a greater

[114] Brady v. United States, 397 U.S. 742, 747-48 (1970) (holding that plea must be a "knowing, intelligent act[] done with sufficient awareness of the relevant circumstances and likely consequences"); *see also* Boykin v. Alabama, 395 U.S. 238, 241 (1969) (holding, on procedural-due-process grounds, that guilty plea must be knowing and voluntary).

[115] 397 U.S. 742, 750 (1970); 434 U.S. 357, 363 (1978).

[116] 397 U.S. at 750-52. The Court noted that "[t]he State to some degree encourages pleas of guilty at every important step in the criminal process," and rejected the idea "that a guilty plea is compelled and invalid under the Fifth Amendment whenever motivated by the defendant's desire to accept the certainty or probability of a lesser penalty rather than face a wider range of possibilities" after trial. *Id.*; *see also id.* (""The issue we deal with is inherent in the criminal law and its administration. . . . ").

[117] 434 U.S. at 365.

[118] *Id.* at 364 (internal quotation marks and citation omitted).

[119] 397 U.S. at 750.

[120] *Id.* at 363.

danger of inducing a false guilty plea by skewing the assessment of the risks a defendant must consider."[121]

These offhand caveats are hardly a firm foundation for a new jurisprudence of due-process limits to coercion in plea-bargaining, but they are suggestive. Evidence that pretrial detention leads to wrongful convictions by guilty plea might lead the Court to reconsider its due process conclusions. It is worth noting that the benefit of such a doctrinal shift is dubious. What remedy could the Court order – the chance for the accused to vacate his plea and sit in jail until trial? That problem aside, the question of the constitutional limits to coercive plea-bargaining practices is a pressing one, and our evidence that detention alone produces guilty pleas renders it all the more acute.

E. Equal Protection: Does Pretrial Detention Produce Class-Based Case Outcomes?

Finally, our data and results illustrate the extent to which the Harris County pretrial system produces disparate outcomes for the poor and for the wealthy. The principle of equal protection (as applied to the states by the Fourteenth Amendment, and to the federal government by the Fifth) prohibits invidious or irrational state discrimination.[122] Supreme Court precedent clearly establishes that incarcerating a person solely on the basis of her poverty violates equal protection.[123] Nonetheless, half of the misdemeanor defendants in our dataset were detained pending trial, nearly all of them ostensibly due to inability to post bail. Their detention, alone, significantly increased the chance of conviction. That is to say that not only were these people deprived of their liberty on the basis of wealth; they were also deprived of equal access to justice. In Harris County misdemeanor court, all do not stand equal before the law.[124]

There are reform efforts underway that may mitigate this problem, but they will not eliminate equality concerns. The new bail reform movement seeks to shift pretrial policy from a "resource-based" to a "risk-based" model driven by actuarial assessment of a defendant's risk of

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[121] *Id.* at 371 n.8 (internal citation omitted); *see also id.* at 363 ("[I]n the 'give-and-take' of plea bargaining, there is no such element of punishment or retaliation so long as the accused is *free* to accept or reject the prosecution's offer") (emphasis added).

[122] *See, e.g.*, City of Cleburne v. Cleburne Living Ctr., 473 U.S. 432, 439 (1985) ("The Equal Protection Clause of the Fourteenth Amendment commands that no State shall 'deny to any person within its jurisdiction the equal protection of the laws,' which is essentially a direction that all persons similarly situated should be treated alike.") (citing Plyler v. Doe, 457 U. S. 202, 216 (1982)); Bolling v. Sharpe, 347 U.S. 497, 499 (1954) (noting that the Fifth Amendment includes the same prohibition vis-à-vis the federal government).

[123] *See, e.g.*, U.S. Dep't of Justice, Statement of Interest filed in Varden v. City of Clanton, No. 2:15-cv-34-MHT-WC (M.D. Al., Feb. 13, 2015) ("Incarcerating individuals solely because of their inability to pay for their release . . . violates the Equal Protection Clause of the Fourteenth Amendment.") (citing Tate v. Short, 401 U.S. 395, 398 (1971); Williams v. Illinois, 399 U.S. 235, 240–41 (1970); Smith v. Bennett, 365 U.S. 708, 709 (1961)); see also Bearden v. Georgia, 461 U.S. 660, 671 (1983).

[124] To the extent that Harris County relies on "bail schedules" that are unresponsive to a defendant's ability to pay, that practice violates the Equal Protection Clause. *See* U.S. Dep't of Justice, Statement of Interest, *supra* note 119 ("[A]s courts have long recognized, any bail or bond scheme that mandates payment of pre-fixed amounts for different offenses in order to gain pretrial release, without any regard for indigence, not only violates the Fourteenth Amendment's Equal Protection Clause, but also constitutes bad public policy.").

flight and rearrest.[125] The effort to eliminate wealth disparities in the system is laudable, but actuarial risk assessment is likely to import the effects of race and class bias earlier in the system.[126] Without violating the Equal Protection Clause, risk assessment might still discriminate, subtly, along race and class lines, and result in the disproportionate pretrial detention of poor and minority communities.[127] To the extent that detention also changes case outcomes, this means that a risk-based system of pretrial detention could continue to dispense deeply unequal justice. In view of the cost of detention—both its immediate fiscal and human costs and its downstream effects—policymakers should work to avoid this result.

CONCLUSION

Pretrial detention has a significant impact on downstream criminal justice outcomes—both in the immediate case, and through the future criminal activity of detained defendants. Detention increases the rate of guilty pleas, and leads detained individuals to commit more crime in the future. These findings carry import for not only Harris County, but raise a host of broader empirical and constitutional questions that merit attention.

To appreciate the magnitude of the effects we document here, we offer the following thought experiment: Imagine if, during the period of our sample, Harris County had released those defendants assigned the lowest amount of bail, $500, on personal bond (recognizance) rather than assessing bail. Using these estimates, and drawing from other data carefully documenting the costs of detention and probation supervision in Harris County[128], we predict that the county would have released 40,000 additional defendants pretrial, and these individuals would have avoided approximately 5,900 criminal convictions, many of which would have come through possibly erroneous guilty pleas. Incarceration days in the county jail—severely overcrowded as of April 2016—would have been reduced by at least 400,000[129]. Over the next 18 months post-release, these defendants would have committed 1,600 fewer felonies and 2,400 fewer misdemeanors. On net, after accounting for both reductions in jail time and increases in probation time, the county would have saved an estimated $20 million in supervision costs alone

[125] *See, e.g.*, Pretrial Justice Institute, Presentation, Resource-based to Risk-based Pretrial Justice (Aug. 7, 2015), *available at* https://prezi.com/h6eboff0oyhx/resource-based-to-risk-based-pretrial-justice.

[126] The most universal risk factors for future criminal behavior in current pretrial risk assessment tools are prior contacts with the criminal justice system. *See* Mayson, *supra* note 95; Bernard E. Harcourt, *Risk as a Proxy for Race: The Dangers of Risk Assessment*, 27 FED. SENT. R. 237 (Vera Inst. Just. 2015).

[127] Equal protection only prohibits facial (explicit) and intentional discrimination. Washington v. Davis, 426 U.S. 229, 240-42 (1976). There is an argument that actuarial risk assessment is facially discriminatory if the variables used to predict risk include things like race and income. *See* Sonja B. Starr, *Evidence-Based Sentencing and the Scientific Rationalization of Discrimination*, 66 STAN. L. REV. 803, 811-12, 821-36 (2014).

[128] VERA INSTITUTE OF JUSTICE, THE PRICE OF JAILS: MEASURING THE TAXPAYER COST OF LOCAL INCARCERATION (May 2015), http://www.vera.org/sites/default/files/resources/downloads/price-of-jails.pdf; TEXAS CRIMINAL JUSTICE COALITION, HARRIS COUNTY, TEXAS ADULT CRIMINAL JUSTICE DATA SHEET, http://countyresources.texascjc.org/sites/default/files/adult_county_data_sheets/TCJC's%20Adult%20Harris%20County%20Data%20Sheet.pdf

[129] This is actually a conservative estimate because it is based on the estimate of the change in the jail sentence associated with detention, and thus ignores time spent in pretrial detention that does not end up counting against the final sentence of the accused.

for this population. Thus, with better pretrial detention policy, Harris County could save millions of dollars per year, increase public safety, and likely reduce wrongful convictions.

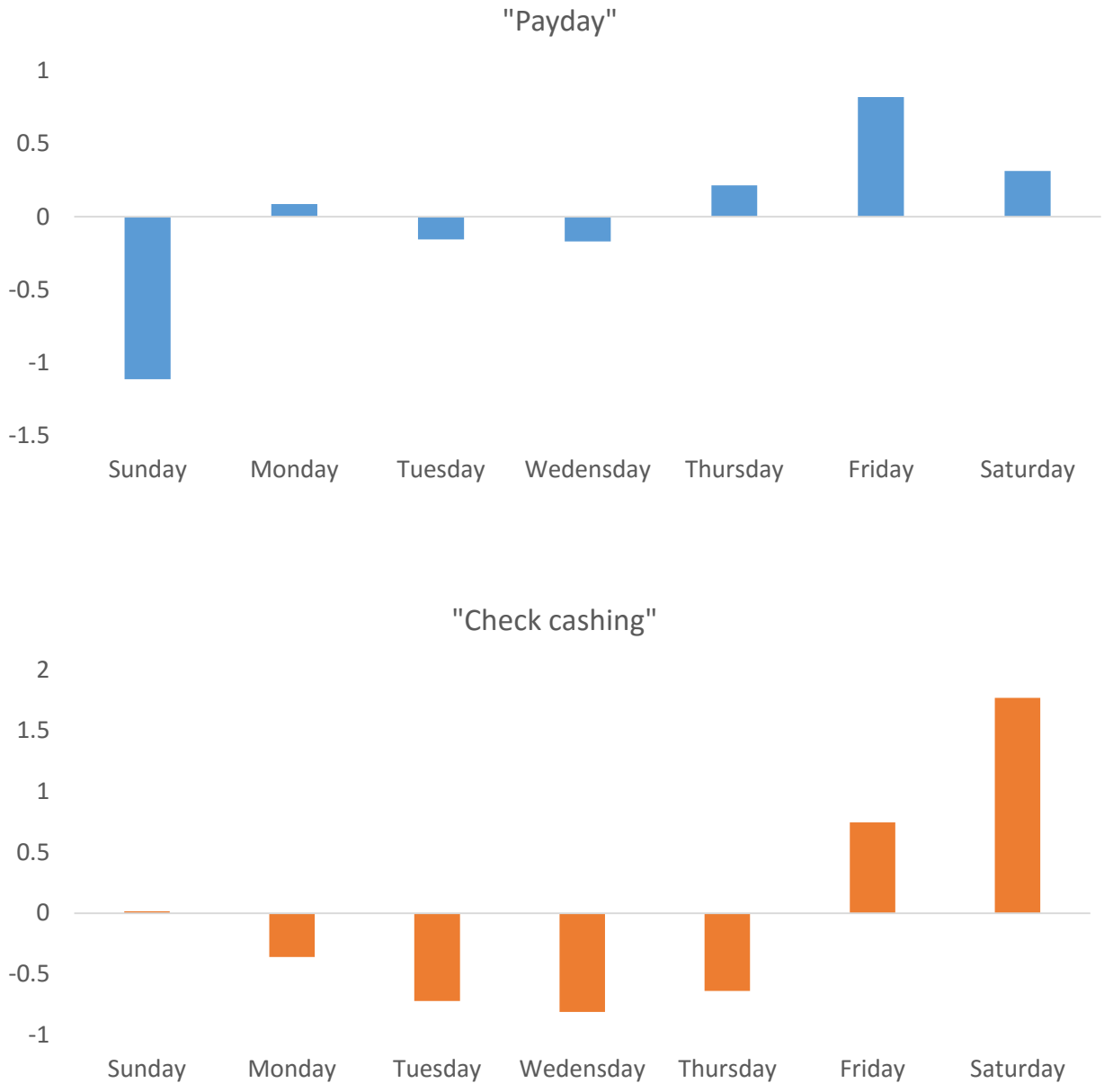
Our findings also carry import beyond the borders of Harris County. Many of the key features of Harris County's system—a heavy reliance on cash bail, assembly-line handling of bail hearings, and nonexistent representation for defendants at these hearings—are characteristic of misdemeanor bail systems across the country. The strong empirical evidence that under such circumstances the bail hearing influences later case outcomes demands further clarification from the courts as to whether the Sixth Amendment guarantees the assistance of counsel at such hearings, and whether such a process sufficiently protects the due process and Eighth Amendment rights of defendants.

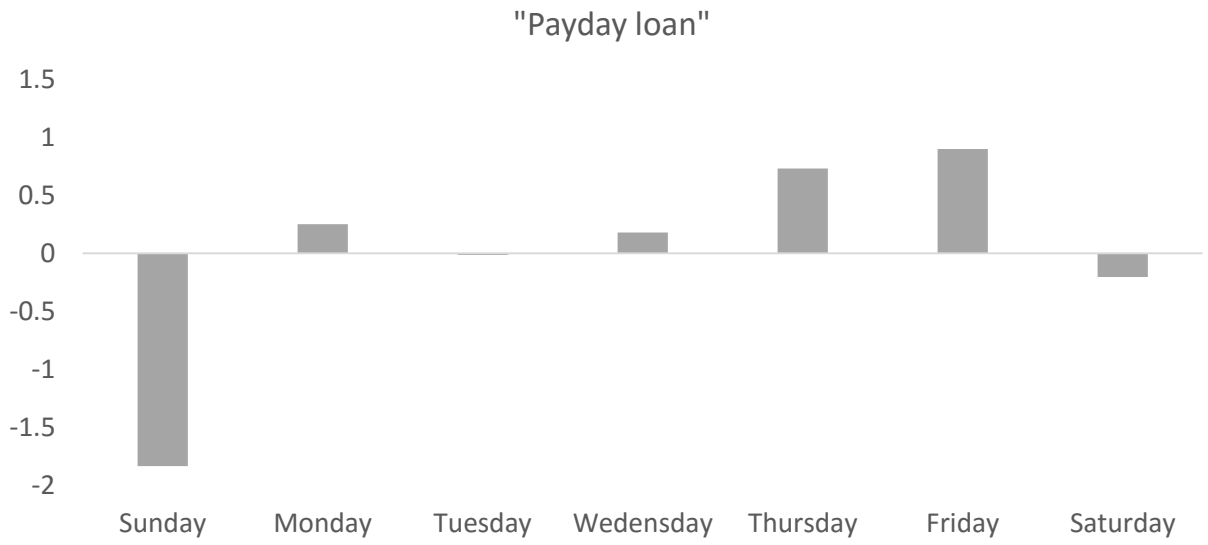
Our results also have important implications for the conduct of future empirical studies assessing the effects of pretrial detention. Our analysis suggests that prior work measuring the association between pretrial detention and case outcomes, which controls for only a limited set of defendant and case characteristics, risks the possibility of overestimating the causal effect of detention. After controlling for a broader set of characteristics, however—including the exact offense and the precise amount of bail set at the initial hearing—we are able to obtain correlational estimates that approach the causal estimates we observe using a natural experiment. In this respect, our results mirror those of Stevenson.[130] Researchers therefore may be able learn much about bail effects across many other jurisdictions operating under different systems without resorting to costly, and in some cases practically infeasible, randomized controlled trials, so long as we are sufficiently careful to account for pre-existing differences between the pools of detained and released defendants. Such future work could help to catalyze a shift towards bail systems that reduce wealth disparities, increase public safety, and minimize the lengthy periods of detention that have such high budgetary and human costs.

[130] *See supra* note 35 and accompanying text.

APPENDIX

Figure A.1: Google Daily Keyword Search Volume by Day of Week, Standardized Score





Note: This figure plots average daily Google search volume by day of week for several search terms that serve as proxies for liquidity. For each term, daily search volume was standardized and then averaged by day of week to construct the bars in the chart. Data were downloaded from Google Trends (https://www.google.com/trends/) and cover the period from 1/31/2016 to 4/23/2016.

Figure A.2: Distribution of Bail Assessments By Day of Week of Hearing

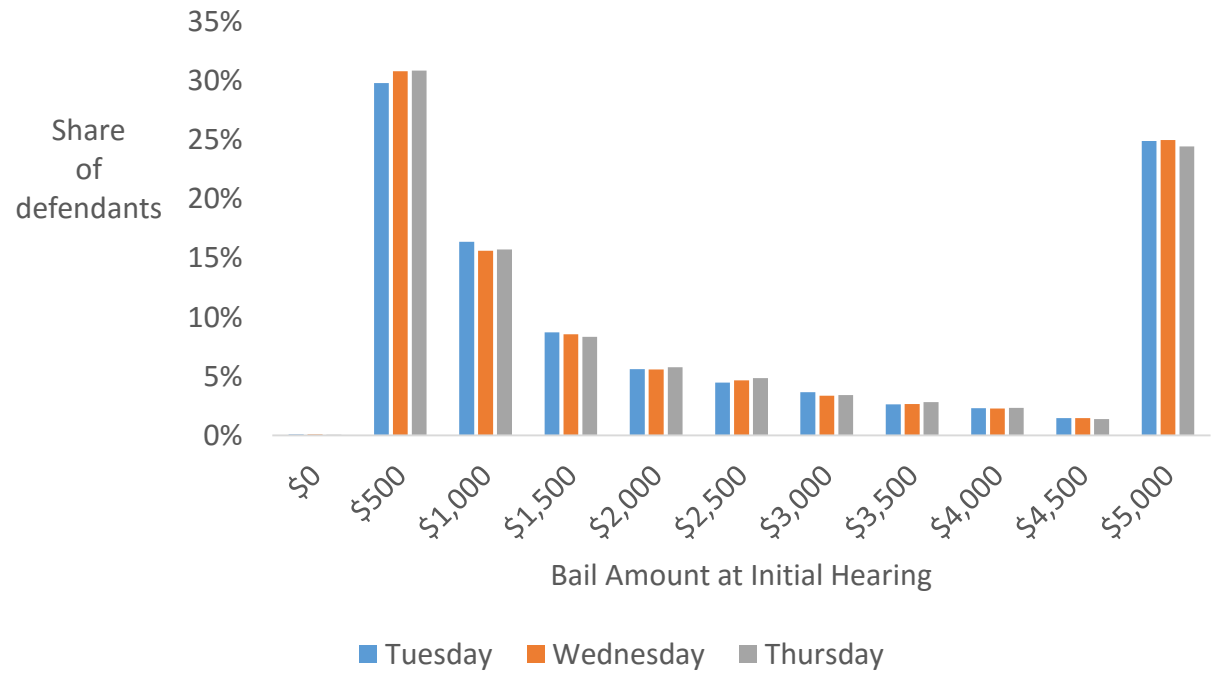


Table A.1: Numeric Results for Misdemeanor Recidivism Analysis

Days since bail hearing	Cumulative new misdemeanors per released defendant	Estimated effect of detention	Standard Error	P-Value	% change in misdemeanors due to detention
1	0.0004	-0.0004	0.00006	4.56E-10	-97.0%
2	0.0010	-0.0009	0.00013	4.55E-11	-89.1%
3	0.0015	-0.0008	0.00018	1.12E-05	-50.6%
4	0.0022	-0.0010	0.00022	5.52E-06	-45.6%
5	0.0029	-0.0011	0.00026	1.74E-05	-38.1%
6	0.0037	-0.0012	0.00030	7.28E-05	-31.8%
7	0.0046	-0.0014	0.00033	2.14E-05	-31.2%
8	0.0052	-0.0014	0.00036	0.000	-26.8%
9	0.0059	-0.0012	0.00040	0.003	-20.0%
10	0.0065	-0.0011	0.00043	0.009	-17.0%
11	0.0072	-0.0013	0.00045	0.005	-17.6%
12	0.0080	-0.0013	0.00048	0.005	-16.6%
13	0.0089	-0.0013	0.00050	0.009	-14.8%
14	0.0098	-0.0009	0.00053	0.079	-9.5%
15	0.0106	-0.0008	0.00056	0.127	-8.0%
16	0.0112	-0.0008	0.00057	0.178	-6.9%
17	0.0118	-0.0004	0.00059	0.520	-3.2%
18	0.0125	-0.0001	0.00061	0.870	-0.8%
19	0.0130	0.0002	0.00062	0.800	1.2%
20	0.0137	0.0005	0.00064	0.406	3.9%
21	0.0145	0.0006	0.00066	0.399	3.9%
22	0.0151	0.0009	0.00068	0.197	5.8%
23	0.0157	0.0010	0.00069	0.149	6.3%
24	0.0164	0.0012	0.00071	0.097	7.1%
25	0.0170	0.0013	0.00072	0.069	7.7%
26	0.0177	0.0014	0.00074	0.054	8.0%
27	0.0183	0.0017	0.00075	0.025	9.2%
28	0.0190	0.0019	0.00076	0.012	10.1%
29	0.0197	0.0020	0.00078	0.009	10.3%
30	0.0204	0.0022	0.00079	0.005	10.9%
60	0.0413	0.0075	0.00113	2.32E-11	18.2%
120	0.0805	0.0154	0.00158	1.58E-22	19.2%
180	0.1160	0.0219	0.00193	4.98E-30	18.9%
240	0.1480	0.0284	0.00223	3.26E-37	19.2%
300	0.1830	0.0364	0.00249	3.58E-48	19.9%
360	0.2086	0.0447	0.00272	1.19E-60	21.4%
420	0.2335	0.0515	0.00294	1.36E-68	22.0%
480	0.2575	0.0584	0.00314	3.07E-77	22.7%
540	0.2808	0.0638	0.00332	5.13E-82	22.7%

Table A.2: Numeric Results for Felony Recidivism Analysis

Days since bail hearing	Cumulative new felonies per released defendant	Estimated effect of detention	Standard Error	P-Value	% change in felonies due to detention
5	0.0015	-0.0012	0.00018	1.48E-10	-79.5%
10	0.0032	-0.0018	0.00028	6.28E-10	-55.1%
15	0.0052	-0.0022	0.00038	1.05E-08	-42.2%
20	0.0069	-0.0022	0.00045	6.67E-07	-32.5%
25	0.0084	-0.0020	0.00051	0.0001	-23.7%
30	0.0101	-0.0022	0.00056	0.0001	-21.3%
35	0.0117	-0.0022	0.00061	0.000	-18.6%
40	0.0133	-0.0020	0.00065	0.002	-15.4%
45	0.0148	-0.0019	0.00068	0.005	-13.0%
50	0.0162	-0.0018	0.00072	0.015	-10.8%
55	0.0176	-0.0012	0.00076	0.111	-6.9%
60	0.0192	-0.0010	0.00079	0.212	-5.2%
65	0.0205	-0.0003	0.00082	0.697	-1.6%
70	0.0218	0.0004	0.00085	0.650	1.8%
75	0.0233	0.0007	0.00089	0.429	3.0%
80	0.0247	0.0009	0.00092	0.328	3.6%
85	0.0260	0.0014	0.00095	0.126	5.6%
90	0.0274	0.0019	0.00097	0.046	7.1%
95	0.0286	0.0023	0.00100	0.021	8.0%
100	0.0298	0.0028	0.00102	0.006	9.4%
120	0.0351	0.0047	0.00111	0.000	13.5%
180	0.0498	0.0104	0.00136	0.000	20.9%
240	0.0644	0.0150	0.00157	0.000	23.3%
300	0.0782	0.0196	0.00177	0.000	25.1%
360	0.0911	0.0250	0.00194	0.000	27.4%
420	0.1039	0.0296	0.00210	0.000	28.5%
480	0.1163	0.0343	0.00224	0.000	29.5%
540	0.1280	0.0395	0.00237	0.000	30.9%