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THE US PRETRIAL SYSTEM:  
BALANCING INDIVIDUAL RIGHTS AND PUBLIC INTERESTS

Will S. Dobbie  
Crystal Yang

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Cambridge, MA 02138  
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The US Pretrial System: Balancing Individual Rights and Public Interests  
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### **ABSTRACT**

In this article, we review a growing empirical literature on the effectiveness and fairness of the US pretrial system and discuss its policy implications. Despite the importance of this stage of the criminal legal process, researchers have only recently begun to explore how the pretrial system balances individual rights and public interests. We describe the empirical challenges that have prevented progress in this area and how recent work has made use of new data sources and quasi-experimental approaches to credibly estimate both the individual harms (such as loss of employment or government assistance) and public benefits (such as preventing non-appearance at court and new crimes) of cash bail and pretrial detention. These new data and approaches show that the current pretrial system imposes substantial short- and long-term economic harms on detained defendants in terms of lost earnings and government assistance, while providing little in the way of decreased criminal activity for the public interest. Non-appearances at court do significantly decrease for detained defendants, but the magnitudes cannot justify the economic harms to individuals observed in the data. A second set of studies shows that these costs of cash bail and pretrial detention are disproportionately borne by Black and Hispanic individuals, giving rise to large and unfair racial differences in cash bail and detention that cannot be explained by underlying differences in pretrial misconduct risk. We then turn to policy implications and describe areas of future work that would enable a deeper understanding of what drives these undesirable outcomes.

Will S. Dobbie  
Harvard Kennedy School  
79 John F. Kennedy St.  
Cambridge, MA 02138  
and NBER  
will\_dobbie@hks.harvard.edu

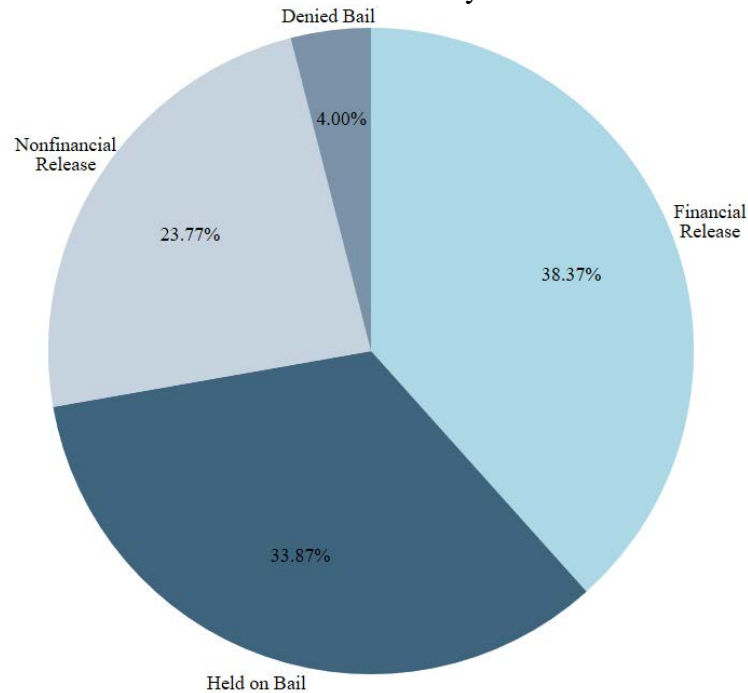
Crystal Yang  
Harvard Law School  
Griswold 301  
Cambridge, MA 02138  
and NBER  
cyang@law.harvard.edu

In most US jurisdictions, individuals accused of a crime appear for their first court appearance one to two days after being arrested by law enforcement. At this first appearance, sometimes referred to as a bail hearing or preliminary hearing, a judge is often tasked with determining a defendant's release or detention pending later adjudication – what is known as the “pretrial decision.” On a yearly basis, decisions made at the pretrial stage affect roughly 11 million individuals who are arrested by law enforcement for an offense in the United States. In many parts of the country, these bail hearings last anywhere from ten seconds to a few minutes. Defendants are often videoconferenced in from the local jail while a judge briefly reviews the case and criminal history of the defendant, sometimes asking the defendant a few questions. If a prosecutor and/or defense attorney are present, they may also present their recommendations to the judge.

The judge in this bail or preliminary hearing has a range of options. For defendants who pose a minimal risk of flight or danger, the judge may simply release the defendant on the promise to return for future court proceedings and without any other conditions of release, sometimes known as “release on recognizance” or “personal recognizance.” In some jurisdictions, judges also have the option of a “conditional release” with different types of non-monetary conditions, which can include regular reporting to a pretrial services officer, drug treatment or testing, orders that the defendant will have no contact with the alleged victim, or even electronic monitoring or home confinement. Another increasingly common option is the use of monetary or cash bail whereby defendants are offered release if they or someone on their behalf posts some amount of money, which is generally forfeited if they do not appear for trial or commit a new offense while out on release. Finally, some defendants, typically those who have been charged with the most serious crimes, are not offered pretrial release at all and are detained outright, sometimes known as “remand without bail.”

Figure 1 documents the prevalence of these various range of options in 2009 among a representative sample of felony defendants from the 75 largest US counties. Among these felony defendants, the overwhelming majority of defendants were assigned monetary bail (or financial conditions), with 34 percent of defendants held on bail because they did not pay the required amount to secure release and another 38 percent released on bail. Among the rest, 24 percent of defendants were released on non-financial conditions such as release on recognizance or conditional release, while another 4 percent were detained outright.

Figure 1  
Pretrial Outcomes for Felony Defendants



Source: State Court Processing Statistics (2009). Data do not include small share of individuals with missing pretrial outcomes or those released via emergency release. Because of rounding, numbers do not sum to 100 percent.

In making this pretrial decision, the judge is meant to balance several sets of concerns set out by law: the rights and liberty interests of the defendant, who after all has not yet been tried or convicted of any crime and thus is presumed to be innocent; having the defendant appear for a future trial and other required court appearances; and protection of society from additional crimes that the defendant might commit if released while awaiting trial. In addition to achieving this balance, the judge should seek to reach decisions that do not discriminate unlawfully on the basis of protected characteristics such as race, ethnicity, or gender.

In the next two sections of the paper, we discuss two important shifts in emphasis in the pretrial system in recent decades. The first is the shift toward having judges place a greater emphasis on public safety concerns or the risk of new crimes in their decision-making. The second is a shift toward increased use of monetary bail and subsequent decreased use of release without financial conditions. Due in part to these trends, the United States today detains roughly half a million individuals before trial at any given time, nearly twice as many as any other countries in the world (Walmsley 2016). In per capita terms, the United States detains between two and thirty-six times as many individuals before trial as other high-income countries (Walmsley 2016). Indeed, today in some parts of the United States, over 75 percent of jail inmates (comprised of individuals awaiting trial or those serving relatively short sentences) are comprised of those detained pretrial.

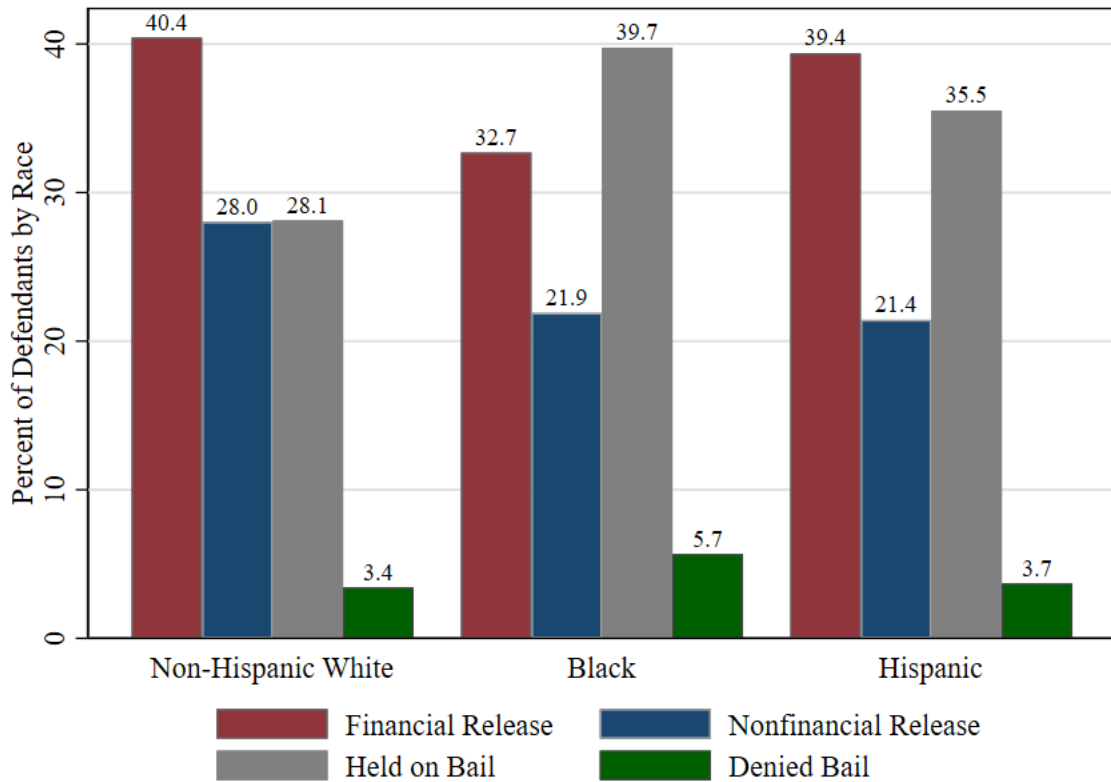
These trends, as well as other existing patterns of the US pretrial system, raise two main concerns, which are the subjects of the following two sections of the paper. The first concern is that the extent of pretrial detention in the US generates costs to detainees that far outweigh the benefits to society. Within the criminal legal system, excessive pretrial detention is in tension with a foundational idea that people should be presumed innocent until proven guilty. Indeed, a sizeable number of detained individuals are

eventually not found guilty of any offense. For example, among felony defendants charged in the 75 largest counties, one in five detained individuals later have their charges dismissed or are acquitted (Cohen and Reaves 2007). Even worse, the threat of pretrial detention increases the risk of wrongful conviction, by pressuring defendants to accept a plea bargain and get out of jail. In addition, pretrial detention may generate collateral consequences outside of the criminal legal system by disrupting defendants’ lives, putting jobs, housing, and child custody at risk, among other harms. As a lawyer working as a public defender explained to the *New York Times* (reported in Pinto 2015):

Our clients work in service-level positions where if you’re gone for a day, you lose your job. People in need of caretaking – the elderly, the young – are left without caretakers. People who live in shelters, where if they miss their curfews, they lose their housing. Folks with immigration concerns are quicker to be put on the immigration radar. So when our clients have bail set, they suffer on the inside, they worry about what’s happening on the outside, and when they get out, they come back to a world that’s more difficult than the already difficult situation that they were in before.

A second concern is the presence of significant disparities in pretrial conditions and pretrial detention in most large US jurisdictions, contributing to the overrepresentation of low-income and minority individuals in the pretrial system. For example, rates of pretrial detention are significantly higher among Black and Hispanic individuals compared to non-Hispanic White individuals. Figure 2 presents pretrial outcomes among felony defendants in the largest 75 US counties, by race/ethnicity.

Figure 2: Pretrial Outcomes for Felony Defendants, by Race/Ethnicity



Source: State Court Processing Statistics, 2009.

Among felony defendants arrested in 2009, 40 percent of Black individuals and 36 percent of Hispanic individuals were held on bail/financial conditions compared 28 percent of non-Hispanic White individuals. In contrast, 22 percent of Black individuals and 21 percent of Hispanic individuals were released without financial conditions compared to 28 percent of non-Hispanic White individuals. Black and Hispanic individuals were also more likely to be denied bail and detained outright compared to non-Hispanic White individuals. These patterns mirror the all-too-common stories of Black and Hispanic individuals who, despite being first-time offenders accused of low-level crimes, spent months in pretrial detention with often devastating consequences.<sup>1</sup>

One plausible reason for these racial disparities is the extensive use of monetary bail. Critics of the current pretrial system argue that many jurisdictions set bail without adequate consideration of the defendant's ability to pay, and, as a result, that pretrial detention is determined by a defendant's wealth (which is correlated with race/ethnicity), not the likelihood of later appearing in court or the risk to the community during the pretrial period. These concerns have been long-standing. For example, at the signing of the federal Bail Reform Act of 1966, which sought to protect the right to pretrial release without the payment of money, President Lyndon Johnson remarked that "[b]ecause of the bail system, the scales of justice have been weighted for almost two centuries not with fact, nor law, nor mercy. They have been weighted with money." These issues led the Department of Justice (2016) to intervene in a recent case and conclude that the pretrial systems in many jurisdictions "are not only unconstitutional, but...also constitute bad public policy."

Given these two major concerns with the pretrial system, researchers have sought to evaluate both the effectiveness and fairness of the system. However, empirical challenges have made it challenging to produce rigorous research on these topics. First, there is no general repository of data on pretrial decisions for the United States, so studies in this area focus on data from certain jurisdictions. Even among these studies, there are often no readily available datasets that include information on both pretrial decisions and long-term outcomes such as employment or the receipt of government assistance for a large number of individuals, making it difficult to assess the consequences of being detained pretrial. Second, an empirical analysis on these topics must confront difficult selection issues. Individuals who are detained before trial are not a random sample and are likely to be different from defendants who are not detained in a variety of ways not well-captured by existing data. These selection issues make it difficult to identify the causal effects of pretrial detention, which are required for evaluating whether the current pretrial system is appropriately balancing individual rights with societal benefits. These data and selection issues also make it challenging to evaluate the fairness of the current system, as defendants in different groups could be treated differently due to discrimination or due to legally relevant differences that are observed by the judge, but unobserved by the researcher.

In recent years, a growing empirical literature has made use of new data sources and quasi-experimental approaches to overcome these challenges and provide credible causal estimates of both the individual costs (such as loss of employment or government assistance) and public benefits (such as preventing non-appearance at court and new crimes) of cash bail and pretrial detention, and to do so in ways that illuminate the extent of racial discrimination in the pretrial system in a few jurisdictions with rich data. This burgeoning literature has produced convincing evidence that we should detain far fewer individuals before trial than we currently do and that the costs of pretrial detention are disproportionately borne by

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<sup>1</sup> As one vivid example, Gonnerman (2015) reports on the tragic death of Kalief Browder, who endured two years of solitary confinement while awaiting a trial that never happened.

minority individuals due to forms of racial discrimination. We describe these studies below, highlighting areas worthy of future inquiry.

The closing sections of the paper discuss some policy implications of this recent work. We provide an overview of the wave of pretrial reform efforts happening across different cities and states, including greater use of non-monetary alternatives to bail. We also discuss the possibilities for judges to make greater use of algorithms or risk-assessments as a way of simultaneously reducing the extent of pretrial detention and pretrial crime, while also reducing racial disparities.

### **A Shift of Emphasis in the Goals of Pretrial Detention**

Since the founding of the country, the principal objective of the US pretrial system has been to assure later appearance at court. Historically, future appearance at court was most often guaranteed through verbal pledges by others who assumed responsibility for having the accused appear for trial (the legal term is “sureties”).

The Eighth Amendment to the US Constitution specifies that “[e]xcessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.” The Eighth Amendment protection meant that judges were supposed to release nearly all defendants before trial (except those charged with offenses subject to the death penalty), unless there was a serious flight risk. Again, the importance of pretrial release is grounded in the presumption of innocence, a fundamental right to protect defendants prior to any finding of guilt. This principle was embodied in the Judiciary Act of 1789, which stated that all non-capital defendants should be entitled to some form of bail. The Supreme Court has also stated that a defendant’s bail cannot be set higher than an amount that is reasonably likely to ensure the defendant’s presence at trial (*Stack v. Boyle*, 342 U.S. 1 [1951]).

In the past several decades, the pretrial system has shifted in its aims. Rather than focus exclusively on ensuring appearance for trial, the pretrial system today has also adopted an explicit aim of protecting the community from harm. Starting in the 1970s, in response to growing concerns about crime and public safety, jurisdictions began to authorize the detention of criminal defendants without bail if they were assessed to be dangerous to society – known as “preventive detention.” For example, the federal Bail Reform Act of 1984 explicitly authorized judges to make bail determinations based on their assessment of each defendant’s risk to the community. The 1984 Act states, among other things, that defendants should be granted bail “unless...such release will not reasonably assure the appearance of the person...or will endanger the safety of any other person or the community.”

As a result, judges now make pretrial decisions based in part on their assessment of each defendant’s risk of danger to the public. At present, the federal judicial system, along with at least 40 states, considers public safety explicitly as part of the release or detention decision. Only a few remaining jurisdictions, such as New York, base release decisions solely on an assessment of a defendant’s risk of flight, although there have been numerous unsuccessful attempts to change New York law to include the criteria of public safety to a judge’s pretrial decision-making. These competing objectives are embodied in the pretrial standards of the American Bar Association (2007), which states that the judicial decision of whether to release or detain a defendant requires judges to “strike an appropriate balance” between the competing societal interests of individual liberty, court appearance, and public safety. Similarly, the National Institute of Corrections states that “[t]he goal of bail setting is to maximize release while simultaneously maximizing court appearance and public safety” (Pilnik 2017). In other words, judges are theoretically required to make a proper tradeoff between a defendant’s

private liberty interests and the societal interests of court appearance and public safety, with neither set of goals being privileged over the other.

In practice, a non-negligible share of defendants does fail to appear in court (although very few abscond indefinitely) and some are rearrested for new offenses while out on release. For example, in 2009, among felony defendants in the 75 largest US counties, 17 percent of released individuals missed a court appearance and 3 percent were not returned to court within a year of release (Reaves 2013). Among these released individuals, 16 percent were rearrested for a new crime within a year of release, split roughly equally between felony and misdemeanor offenses (Reaves 2013).

While the objectives of the pretrial system are defined clearly by law, bail judges are granted substantial discretion in making assessments of flight risk and danger to the public. In many jurisdictions, denial of bail is often mandatory in first- or second-degree murder cases, but can also be imposed for other crimes, such as domestic violence, when the bail judge finds that no set of conditions for release will guarantee appearance or protect the community from the threat of harm posed by the defendant. In many jurisdictions, these bail judges may consider factors such as the nature of the alleged offense, the weight of the evidence against the defendant, any record of prior flight or bail violations, and the financial ability of the defendant to pay bail. As we will discuss later in the paper, some judges use a “risk score” based on these kinds of factors to offer guidance in the pretrial decision.

We hypothesize that the overall effect of considering public safety has likely been to increase rates of pretrial detention relative to a pretrial system that does not consider public safety. For instance, law enforcement often calls on judges to detain individuals who have been charged with violent offenses out of concern for safety (Barrett 2021). Anecdotally, many judges prioritize concerns about public safety, tipping the balance in marginal cases away from release to detention, either via monetary bail or outright detention. In instances where judges have released an individual who is later arrested for murder, for example, there is considerable public outcry and a demand for greater pretrial detention (McKinley 2017).

### **The Shifting Emphasis Toward Monetary Bail**

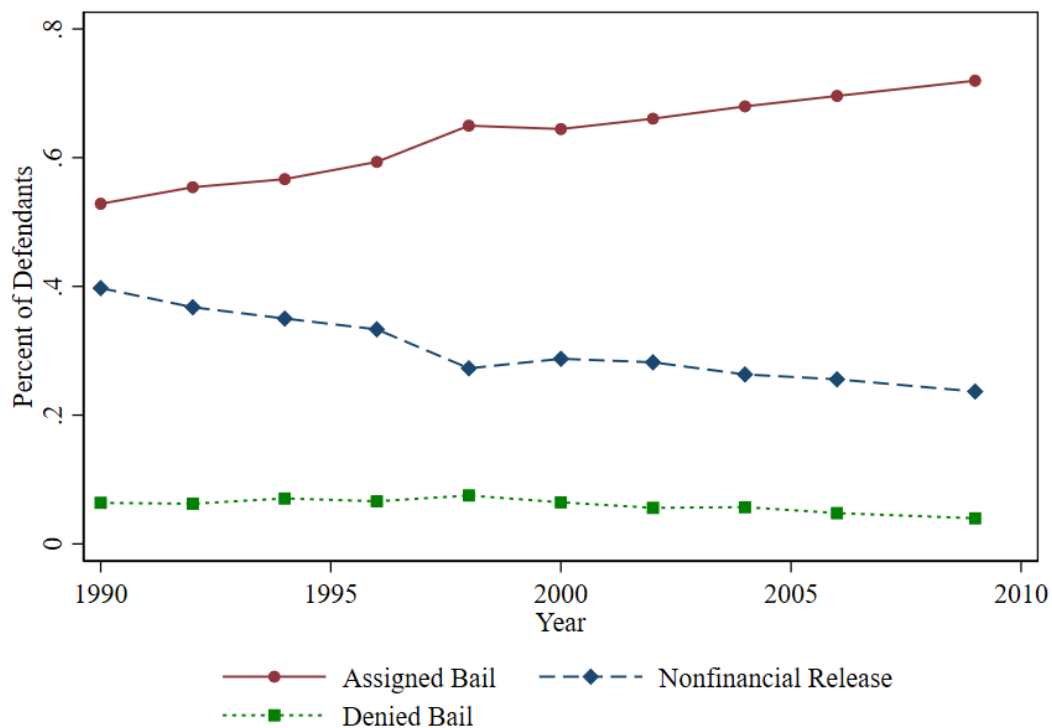
Another large contributor to the high rate of pretrial detention in the United States is the increasing use of monetary bail (also known as cash bail or bond) and the corresponding decreasing use of release on recognizance over the past several decades. Under the federal Bail Reform Act of 1966, the general presumption had been in favor of release without financial conditions out of a view that pretrial release should not be governed by a person’s ability to pay. But in the last few decades of the 20th century, the primary means of ensuring appearance and public safety in the United States has become the use of monetary bail, which in theory is meant to provide a financial incentive for defendants to refrain from engaging in pretrial misconduct.

Figure 3 documents these trends among felony defendants in the most populous 75 counties between 1990 and 2009. This figure shows that over this time period, felony defendants have been increasingly likely to be assigned monetary bail, from less than 60 percent in 1990 to 72 percent by 2009. In contrast, the share of felony defendants released without financial conditions has steadily decreased over this time period, falling from roughly 40 percent in 1990 to 24 percent by 2009.



Figure 3

Trends in Pretrial Outcomes Among Felony Defendants, 1990-2009



Source: State Court Processing Statistics, 1990-2009.

Implementation of monetary bail varies across jurisdictions. In some places, defendants may need to post the full bail amount to secure release. In others, defendants are typically required to pay some fraction of the bail amount, such as 10 percent. Those who do not have the required deposit in cash can borrow from commercial bail bondsmen, who will often accept cars, houses, jewelry, or other forms of collateral, and who generally charge a nonrefundable fee, typically 10 percent of the bail amount, for their services. Another common type of monetary bail is an “unsecured” bond, which involves a promise by defendants to pay a certain amount of money if they do not return to court, but does not require an upfront payment to secure release. If the defendant fails to appear or commits a new crime (broadly known as “pretrial misconduct”), either the defendant or the bail bondsman is theoretically liable for the full value of the bail amount and forfeits any amount already paid. The amount of monetary bail may be determined by the judge or pre-specified in a “bail schedule,” which determines bail amounts for each type or grade of offense, although a judge typically has discretion to change the recommended bail amount: for example, a bail schedule might specify that a Level 1 felony is associated with a \$50,000 bail amount. Bail schedules are regularly used in California, Texas, and other states, although they have been criticized for failing to tailor amounts based on defendants’ ability to pay.

One unique feature of the US bail system is that it is dominated by a \$2 billion commercial bail bondsmen industry. According to the *Professional Bail Agents of the United States*, approximately 14,000 commercial bail agents nationwide secure the release of more than 2 million defendants annually (Cohen and Reaves 2007). As described above, bail bondsmen are permitted to post bail in exchange for nonrefundable payments from the defendants and the promise that they would find the

defendants and return them if they failed to appear. While some argue that the industry is highly effective at ensuring that defendants appear at court, other recent accounts have documented purported anti-competitive practices, with the bail industry accused of “collud[ing] with lawyers, the police, jail officials and even judges to make sure that bail is high and that attractive clients are funneled to them” (Liptak 2008). The commercial bail bondsmen industry is illegal in nearly all other countries and exists today in only the United States and the Philippines.

The growing use of monetary bail in many jurisdictions has resulted directly in high pretrial detention rates, as many defendants are unable or unwilling to pay even relatively small monetary bail amounts. A typical sum of monetary bail imposed by judges is \$10,000 (Reaves 2013), but 40 percent of Americans are unable to pay an “unexpected expense” of \$400 (Federal Reserve 2018). In New York City, an estimated 46 percent of all non-felony defendants and 30 percent of all felony defendants were detained before trial in 2013 because they were unable or unwilling to post bail set at \$500 or less (New York City Criminal Justice Agency 2014). This is not surprising once one considers that the typical defendant is quite poor. For example, among individuals detained in Philadelphia and Miami between 2006 to 2014, only 32.0 percent were formally employed in the year prior to arrest and the average annual formal-sector income is \$4,524 (Dobbie, Goldin, and Yang 2018).

In addition, monetary bail may not serve its intended deterrent function very well. Using a natural experiment in Philadelphia, Ouss and Stevenson (2021) find that a reform which led to a sharp decrease in the use of monetary bail without a change to the overall pretrial release rate did not significantly increase failure to appear or new criminal activity rates among those who were released.

### **Evidence on Tradeoffs of Pretrial Detention**

How can researchers evaluate whether bail judges are properly balancing the private interests of defendants (costs of pretrial detention) versus the societal interests of ensuring court appearance and public safety (benefits of pretrial detention)?

When thinking about how to estimate the magnitude of the cost and benefits of pretrial decisions, a hypothetical social experiment might randomly offer pretrial release to a wide range of offenders and then observe the results. Of course, such an experiment is impractical for many reasons, including the fact that explicitly randomized detention would outrage the principles of justice. Because such randomization is unethical and infeasible, any simple comparisons of the outcomes of released and detained individuals almost certainly suffer from selection bias, given that judges may be less likely to release an individual at higher risk of flight or danger. In addition, empirical research in this area is also complicated by the fact that, until recently, few datasets linked pretrial decisions to defendant and societal outcomes, both in and out of the criminal legal system.

However, recent data and methodological advances have allowed researchers to identify causal estimates of some key costs and benefits of pretrial detention. In particular, researchers have been able to obtain readily available court data (often in jurisdictions with permissive public records access laws) that also contain individual identifiers, which in turn can be linked to administrative data on key outcomes. The results make a strong argument that the costs of pretrial detention (and cash bail) almost certainly far outweigh the social benefits, at least for the “marginal” defendants for whom judges disagree about whether to release or detain.

The key methodological insight behind this recent literature was to observe that in some jurisdictions, defendants are assigned more-or-less randomly to judges for their pretrial hearing and that judges differ

systematically on decisions about bail conditions. Indeed, given the discretion that bail judges have, there is often substantial variability in pretrial decisions, even among judges assigned similar defendants in the same court system (Yang 2017). Why this variability exists is not well known, but judges may differ in how they trade off the private interests of the accused versus societal interests or in how they assess the risks of pretrial misconduct.

Whatever the reason, as a result of this variability across judges, some defendants are more likely to be assigned a relatively low bail amount or release on their own recognizance (resulting in pretrial release) while other defendants with the same characteristics are more likely to be assigned a higher monetary bail amount or no bail at all (resulting in pretrial detention), based only on whether they were randomly assigned to a “lenient” or a “strict” judge. This naturally occurring source of variation approximates the hypothetical ideal experiment. In addition, bail judges are different from the trial and sentencing judges in many jurisdictions, who are assigned through a different process. This institutional feature allows researchers to go one step further, and to identify the causal effect of being assigned to a lenient bail judge as opposed to a lenient trial or sentencing judge.

Building on these features, a new literature has utilized the so-called “judge instrumental-variable” empirical design to recover the causal effect of pretrial detention for individuals at the margin of detention.<sup>2</sup> Some recent papers using this approach include Gupta et al. (2016) using data from courts in Philadelphia and Pittsburgh, Leslie and Pope (2017) using data from New York City, Dobbie et al. (2018) using data from counties that contain Philadelphia and Miami, Stevenson (2018) using data from Philadelphia, and Didwania (2020) using data from federal district courts. Each of these papers also leverages the richness of court-specific data to measure the effects of pretrial detention on case outcomes and when available, pretrial flight and pre- and post-trial crime. In addition, Dobbie et al. (2018) link these court-specific data to administrative tax records at the Internal Revenue Service to examine the effects of pretrial detention on post-trial economic outcomes such as formal-sector employment and the take-up of government benefits.

These papers focus on several primary sets of key outcomes from pretrial detention, including the likelihood of being found guilty, the likelihood of appearing in court, the likelihood of being arrested for a new crime, and later economic outcomes such as formal-sector employment and the take-up of government benefits. We discuss each of these outcomes in turn.

Across all these papers, the authors find that being detained pretrial adversely affects a defendant’s case. In Dobbie et al. (2018), for example, the authors use data on over 400,000 criminal defendants arrested in Miami and Philadelphia from 2007-2014. They find that being detained before trial increases the probability of being found guilty by 14 percentage points—a 24 percent change from the mean for released defendants. The increase in convictions is largely driven by a higher probability of pleading guilty. The authors interpret these results as suggesting that pretrial detention primarily affects case

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<sup>2</sup> Formally, the conditions necessary to interpret these judge instrumental-variable estimates as the causal impact of pretrial detention for individuals at the margin of detention are: 1) there is a first-stage relationship between judge assignment and the probability of pretrial detention; 2) judge assignment only impacts defendant outcomes through the probability of being detained; and 3) any defendant released by a strict judge would also be released by a more lenient judge, and any defendant detained by a lenient judge would also be detained by a more strict judge. We direct the reader to Dobbie et al. (2018) and Frandsen, Lefgren, and Leslie (2019) for a discussion of the extent to which these conditions are likely to hold in the pretrial context.

outcomes by weakening defendants' bargaining positions before trial. Dobbie et al. (2018) also show that pretrial detention has a small and statistically insignificant effect on *post-trial* incarceration, which is consistent with the story that defendants are pleading guilty to "time served" – that is, a defendant who has been held in jail before trial and pleads guilty can go home immediately with no further incarceration. The other studies mentioned above find qualitatively similar effects. Gupta et al. (2016) examine the effects of being assigned monetary bail, rather than being detained directly, finding that monetary bail increases the likelihood of being convicted in a sample of cases from Philadelphia and Pittsburgh.

Substantial anecdotal evidence suggests that even a short stint of pretrial detention can have significant costs for defendants outside the criminal legal system: for example, they may be fired from a job or lose their space in a housing shelter if they are detained for several days. Dobbie et al. (2018) study one set of medium-term effects of pretrial detention by linking defendants to later economic outcomes as measured in administrative tax records in their sample of Miami and Philadelphia cases. In this study, pretrial detention decreases the probability of employment in the formal labor market three to four years after the bail hearing by 9.4 percentage points in their data (a 25 percent decrease from the released defendant mean). Pretrial detention also decreases the probability that the defendant takes up unemployment insurance benefits within three to four years after case disposition and decreases the take-up of Earned Income Tax Credit (EITC) benefits over the same time period. The authors interpret these results as the stigma of a criminal conviction lowering defendants' prospects in the formal labor market (as discussed in Pager 2003; Agan and Starr 2016), which in turn limits their eligibility for employment-related benefits.

Recall that a judge will seek to balance the individual presumption of innocence with the societal benefits of preventing pretrial flight and crime. How well is the current pretrial system doing in terms of achieving these societal benefits?

To evaluate the risk of additional criminal activity, the crime effect of pretrial detention can be split into pre-trial and post-trial crime. A defendant who is detained before case disposition will, because of the "incapacitation" effect, be by definition be unable to commit new crimes in the community or fail to appear in court. However, if post-trial crime rates are increased by pretrial detention, then the net effect of pretrial detention on all future crime (combining pre- and post-trial crime) is ambiguous.

For example, in their study of data from Philadelphia and Miami-Dade, Dobbie et al. (2018) find that pretrial detention decreases the probability of failing to appear in court by 15.6 percentage points. The effect on future crime is driven by offsetting short-run incapacitation and medium-term criminogenic effects – that is, detention causes the likelihood of re-arrest before case disposition to fall by 18.9 percentage points and the likelihood of re-arrest following case disposition to *increase* by 12.1 percentage points.<sup>3</sup> The authors argue that this criminogenic effect of pretrial detention may be due to decreased attachment to the formal labor market described previously -- that is, those who lose their jobs may be more likely to commit new crimes. Leslie and Pope (2017) similarly find partially offsetting effects in New York City felony cases. In contrast, Gupta et al. (2016) find that being assigned monetary bail in Philadelphia and Pittsburgh has only a negligible effect on failure to appear in court, but leads to a 0.7 percentage point yearly increase in the probability of committing a new crime. This evidence suggests that when analyzing the effects of pretrial detention on crime, both pre-trial and post-trial criminal activity should be considered.

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<sup>3</sup> One important qualification of these findings is that it is challenging to identify new criminal activity from new re-arrest, which is an imperfect proxy for criminal activity.

So how can we combine these estimates to evaluate how the pretrial system is doing in trading off a defendant's private interests against societal benefits? Any attempt to weigh the costs and benefits of detentions is necessarily a rough back-of-the-envelope calculation. However, Dobbie et al. (2018) conduct a partial calculation that considers the administrative costs of jail, the costs of apprehending individuals who fail to appear, the costs of future criminality (both pre- and post-trial), and the labor market impacts on defendants. By their estimate, the net social cost of pretrial detention for the typical marginal defendant is between \$55,143 and \$99,124. The costs to defendants with no recent criminal history will be especially high, given the significant collateral consequences of having a criminal conviction on labor market outcomes, the offsetting criminogenic effect of pretrial detention in the medium-run, and the relatively low costs of apprehending defendants who fail to appear in court.

This estimate should be interpreted with caution. On one side, it does not include possible benefits of general deterrence effects: that is, the possibility that detaining individuals before trial reduces crime among those who are not arrested in the first place. On the other side, it does not include potential non-economic costs to defendants who are detained—like inability to provide care to family members and loss of freedom. However, the estimates suggest that the current pretrial system imposes substantial short- and long-term economic harms on detained defendants that are likely not justified by the societal benefits of reducing the risk of new crime and non-appearance at court.

This conclusion is reinforced by recent work showing that low-cost text message reminders can dramatically reduce failure to appear rates, suggesting that a large share of defendants who fail to appear are not intentionally skipping court but are effectively unaware of court dates (Fishbane, Ouss, and Shah 2020). Identifying ways to reduce the risks of new criminal activity or failure to appear without detention is a promising area for future research.

While the recent literature has made progress in documenting some of the main costs and benefits of pretrial detention, more remains to be done. One important caveat to recent work in this area is that all of the estimates from the judge instrumental-variable approach are conceptually based on defendants at the margin of release or defendants for whom judges disagree on whether to release or detain, not the average defendant who might be released. Dobbie et al. (2018) show that only about 13 percent of individuals in their sample are at the margin of release, for example, with these individuals being much more likely to be charged with misdemeanors and nonviolent offenses. Thus, the calculations may under- or overestimate the benefits of much larger changes to the pretrial system, such as completely eliminating cash bail as many jurisdictions are considering or doing, and releasing nearly all defendants before trial (including defendants charged with felonies and violent offenses). A fruitful area for future research is to explore the costs and benefits of pretrial detention for these *inframarginal* defendants. Another important step for future research is to expand the range of outcomes studied to evaluate other costs of pretrial detention like effects on mental and physical health of defendants, and on outcomes for the dependents and families of defendants affected by the pretrial system.

### **Evidence on Racial Discrimination in Pretrial Decisions**

Most large US jurisdictions exhibit significant racial and ethnic disparities in the imposition of pretrial conditions and pretrial detention. Nationally representative data on felony defendants in state courts show that on average, Black and Hispanic defendants are substantially more likely to be detained before trial compared to non-Hispanic white defendants, even after controlling for observable and legally relevant charge and defendant characteristics (Demuth 2003; Baradaran and McIntyre 2013). In addition, Black and Hispanic defendants are generally more likely to be assigned monetary bail and higher monetary bail

amounts, compared to observably similar non-Hispanic white defendants (Demuth 2003; Demuth and Steffensmeier 2004; Schlesinger 2005).<sup>4</sup>

While these past studies reveal significant racial and ethnic disparities in the pretrial system, this conceptual and methodological approach of controlling for an array of observable variables and then looking at the coefficient on an indicator variable for race or ethnicity may not isolate discrimination in pretrial decisions. One concern is that certain legally relevant differences in pretrial misconduct risk maybe observed by judges, but not by the econometrician, and this omitted variables bias can account for some observed racial and ethnic disparities in pretrial detention. For example, suppose that a judge appropriately considers a defendants' employment status or ties to the community when making a pretrial decision and these factors differ by race. If controls for these variables are not included, it could make the coefficient on race look larger than it would otherwise be.

On the other hand, controlling for observable case and defendant characteristics can also hide the way in which discrimination can operate through seemingly race-neutral characteristics. For example, consider a hypothetical example in which white defendants are more likely than Black defendants to be arrested for offenses involving powder versus crack cocaine. Suppose further that judges release a higher proportion of defendants arrested for offenses involving powder cocaine versus crack cocaine but are "race-blind" among individuals charged with the same type of offense. Conditioning on the specific offense, a researcher would find no disparity in release rates. Yet this "race-blind" rule with respect to powdered cocaine versus crack cocaine may well be due to unjustified discrimination. These concerns suggest considerable caution with an approach that conditions on as many observables as possible to "explain away" observed racial disparities. Some scholars call this form of bias "included variable bias" – the idea that controlling for non-racial variables could mask the existence of unwarranted discrimination (Ayes 2010).

To shed light on various forms of discrimination that may exist in the pretrial system, we think that economists should better adapt their methodological approaches to leading sociological, psychological, and/or legal definitions of discrimination. Of particular importance are the two main legal doctrines of discrimination in the United States: disparate treatment doctrine and disparate impact doctrine. The disparate treatment doctrine prohibits policies or practices motivated by a "discriminatory purpose" and thus requires proof of intent.<sup>5</sup> In the pretrial context, there is disparate treatment if, for example, a bail judge intentionally sets higher monetary bail amounts for Black versus white defendants because of explicit bias against Black individuals. Importantly, a court is far less likely to find disparate treatment if racial disparities are unconscious, as could occur if a bail judge sets higher monetary bail amounts for Black versus white defendants because of implicit bias or unconscious stereotypes. For economists, it is difficult to identify a statistical test that conclusively tests for purposeful disparate treatment. One can

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<sup>4</sup> We focus on the fair treatment of individuals of different races or ethnicities, directing the reader to Yang and Dobbie (2020) for a discussion of other forms of unfairness in the pretrial system.

<sup>5</sup> The disparate treatment doctrine comes from the Equal Protection Clause of the US Constitution's Fourteenth Amendment. It was formalized in the landmark case *Washington v. Davis* (426 US 229 [1976]), where the Supreme Court explained that the "basic equal protection principle that the invidious quality of a law claimed to be racially discriminatory must ultimately be traced to a racially discriminatory purpose." Later, in *McCleskey v. Kemp* (481 US 279 [1987]), the Court rejected a challenge to Georgia's capital punishment scheme—despite statistical evidence showing large racial disparities in death penalty rates—because the evidence was "clearly insufficient to support an inference that any of the decisionmakers in [the defendant's] case acted with discriminatory purpose."

compare the treatment of different groups in various ways that point to disparities, such as by controlling for observables or using an audit study. But to meet the legal disparate treatment standard, one would need to augment this statistical comparison with non-statistical evidence showing or strongly suggesting discriminatory intent on the part of judges, which can be difficult to establish.

Existing models of racial discrimination in the economics literature often envision decision-makers who make conscious and intentional decisions based on race. In particular, the two canonical economic models of discrimination are 1) statistical discrimination whereby a person accurately uses race to make a prediction about unobserved potential outcomes, such as pretrial misconduct (for example, Aigner and Cain, 1977) and 2) Becker taste-based discrimination whereby a person intentionally sets different decision thresholds for different racial groups, such as different thresholds for pretrial release (for example, Becker, 1957, 1993). To distinguish between these approaches empirically, Becker (1957, 1993) proposed an “outcome test” that compares the success or failure of decisions across groups at the margin. In the context of pretrial decisions, the idea is that marginal white defendants will have higher rates of pretrial misconduct than marginal Black defendants if bail judges are racially biased against Black defendants. Recent work has clarified that outcomes can vary across groups at the margin due to Becker taste-based discrimination, inaccurate racial stereotypes (such as those modeled by Bordalo et al. 2016), and potentially other form of racial bias (Arnold, Dobbie, and Yang 2018; Hull 2021; Gelbach 2021). The outcome test also captures *de facto* racial bias that might arise through seemingly race-neutral characteristics such as type of crime and neighborhood by allowing non-race characteristics to differ for marginal white and marginal Black defendants.<sup>6</sup>

The outcome test has been difficult to implement in practice because the concept relies on marginal comparisons, while the available data is typically on averages. For example, if white and Black defendants have different risk distributions for pretrial misconduct—the well-known “inframarginality problem (for example, Ayres 2002)—then inferring the required marginal misconduct rates from the average misconduct rates is problematic.

However, the judge instrumental-variable approach (described earlier) actually provides causal estimates for individuals at the margin of release—thus allowing researchers to measure the misconduct rates of white and Black defendants at the margin of release and providing a test of whether judges are setting different decision thresholds for white and Black defendants, whether that be due Becker taste-based discrimination, inaccurate stereotypes, or some other form of racial bias.<sup>7</sup> Arnold et al. (2018) use this approach with data from Miami-Dade and Philadelphia to show that marginally released white defendants are much more likely to be re-arrested compared to marginally detained Black defendants. Their results suggest that judges make substantial errors in predicting in pretrial risk in a way that exaggerates the dangerousness of Black defendants – a form of “racial bias” distinct from Becker taste-based discrimination that originally motivated such outcome tests.

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<sup>6</sup> The outcome test cannot be used to test for more restrictive definitions of racial bias that hold fixed all non-race characteristics of white and Black defendants without additional restrictions: for example, see the discussions in Canay et al. (2020) and Hull (2021).

<sup>7</sup> New work by Grau and Vergara (2020) proposes an alternative implementation of the outcome test that relies on using the predicted status (or propensity scores) of defendants to identify defendants at the margin of release. Using this novel approach, the authors find evidence of racial bias among minority defendants in the pretrial system in Chile.

The results from Arnold et al. (2018), along with related discussion in Hull (2021), also make clear that outcome tests are purposely narrow, isolating racial bias from other important sources of disparities such as illegal statistical discrimination on the basis of race. The fact that outcome tests also combine behavior that is clearly disparate treatment, such as Becker taste-based discrimination, and behavior that a court may not find illegal under this standard, such as unconscious/implicit bias or stereotyping, further complicates the interpretation and use of these tests.

These conceptual problems with the outcome test and the disparate treatment doctrine more generally lead us to the disparate impact doctrine of discrimination. Under this doctrine, a policy or practice is discriminatory if it leads to an adverse impact on a protected class (say, by race or ethnicity) and the decision-maker cannot offer a substantial legitimate justification for the adverse impact.<sup>8</sup> Under existing law, disparate impact only applies in certain contexts, because it stems from statutory rules rather than constitutional law. As for the pretrial context, one potential avenue for bringing a disparate impact claim could be through Title VI of the 1964 Civil Rights Act, which covers all programs and activities receiving federal financial assistance and generally includes the state and local courts considered in our analysis of the pretrial setting.<sup>9</sup> However, we are not aware of such a case to date.

Regardless of whether a disparate impact case would have legal merit in the pretrial context, we view the doctrine as shedding light on pervasive forms of disparity and discrimination that we believe deserve more attention in the economics literature. Other fields such as sociology have long recognized that discrimination “may or may not result from prejudice or animus and may or may not be intentional in nature” (in this journal, Small and Pager 2020). Pretrial decision-making not intentionally premised on an individual’s race can still produce unjustified disparities in society.

Recall that the only legally allowable justification to set more stringent conditions of pretrial release (such as cash bail) or to detain outright individuals before trial is the risk of pretrial misconduct (whether in the form of not appearing at trial or committing a crime). Thus, the disparate impact standard is violated if a judge sets higher monetary bail amounts for Black versus white defendants with the same potential for pretrial misconduct for any reason: “direct discrimination” arising from the consideration of race; unconscious or implicit discrimination; or “indirect discrimination” coming from the consideration of non-race characteristics that nevertheless lead to an adverse impact on a racial group. The disparate impact doctrine similarly prohibits any unjustified differences in treatment based on other protected characteristics like ethnicity or gender.

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<sup>8</sup> The disparate impact doctrine was formalized in the landmark case of *Griggs v. Duke Power Co.* (401 U.S. 424 [1971]). In that case, the US Supreme Court found that the Duke Power Company’s policy of requiring that all employees have a high school diploma to be considered for promotion was illegal disparate impact because the requirement had little to no relationship to job performance (the legitimate justification in this case) and drastically limited the eligibility of Black employees.

<sup>9</sup> In *United States v. Maricopa County* (915 F. Supp. 2d 1073 [D. Ariz. 2012]), for example, the US Department of Justice filed suit under Title VI of the Civil Rights Act of 1964, alleging that the Maricopa County Sheriff’s Office and Maricopa County were in violation of the disparate impact standard due to the failure “to develop and implement policies and practices to ensure LEP [limited English proficient] Latino inmates have equal access to jail services.”



Unfortunately, much of the existing work in economics does not accommodate or consider discrimination under the disparate impact doctrine. The ideal statistical test for disparate impact would compare the treatment of individuals with identical potential outcomes—which is conceptually distinct from comparing the treatment of individual with identical non-race characteristics. In the context of pretrial decisions, we would like to compare the pretrial decisions of white and Black defendants with identical potential for pretrial misconduct, without any additional controls for observable characteristics such as alleged crime type or criminal history.

How might this be done? The key methodological insight in the recent literature is that the omitted variables bias in standard observational comparisons comes from the correlation between defendant race and unobserved risk of misconduct. But when judges are as-good-as-randomly assigned to defendants, this correlation is common to all judges; indeed, it is a simple function of misconduct risk by race. In other words, we can solve the omitted variable bias problem in observational comparisons and credibly measure disparate impact discrimination using estimates of misconduct risk by race. Arnold, Dobbie, and Hull (2020) formalize this insight and show how an extension of the judge instrumental-variables approach described above can be used to estimate the required race-specific misconduct rates. Using data from New York City, the authors find that approximately two-thirds of the pretrial release rate disparity between white and Black defendants is due to the disparate impact of judicial release decisions. The results make a strong argument that the racial disparities in cash bail and pretrial detention are due to the disparate impact of judicial decisions, not underlying differences in pretrial misconduct risk across racial groups.

The authors also find that there is economically meaningful discrimination in most defendant subgroups and that the vast majority of bail judges discriminate against Black defendants. The evidence that a large number of bail judges in New York City engage in racial discrimination also suggests that racial disparities in the pretrial system are not due to just a few individual “bad apples.” Rather, there are likely institutional and structural features of the pretrial system that generate racial disparities, which should lead to a rethinking of how the pretrial system ought to operate.

Ultimately, we believe that the economics literature in this area should move forward in three main ways. First, economists need to consider richer and more realistic forms of discrimination that move beyond the conscious, intentional forms of discrimination that were the focus of the earlier literature. The legal doctrines of disparate treatment and disparate impact are useful guideposts here, but economists can also learn a great deal from related fields such as sociology in how to model different forms of discrimination. Second, economists must continue to develop new econometric methods to identify and distinguish between different forms of discrimination in the pretrial context and other real-world settings. Finally, economists must develop and test potential policies to reduce discrimination in these settings.

### **Algorithms and Judges: Less Detention, Less Pretrial Misconduct, and Reduced Racial Disparities?**

The current pretrial system seems to be performing poorly both in terms of balancing tradeoffs and treating individuals fairly by race. Is it possible to develop a set of guidelines or decision aids for bail judges that could improve on the current pretrial system in all dimensions: that is, simultaneously reduce pretrial detention, reduce crime committed by those who are released, and have an improved likelihood of defendants appearing at trial—all while reducing racial disparities?

The possibility of such an outcome is greatest if there are pervasive errors in pretrial decision, in the sense that judges are detaining excessive numbers of low-risk defendants and releasing excessive numbers of high-risk individuals, in a way that might be corrected by the use of guidelines or other decision-making aids.

Several studies have found evidence of such pervasive errors, including Arnold et al. (2018), Kleinberg et al. (2018), and Arnold et al. (2020). For example, Kleinberg et al. (2018) find evidence of pervasive errors in pretrial decisions for bail judges in New York City. They find that pretrial decisions of these judges are characterized by internal inconsistency and that judges struggle the most with high-risk cases. Not only do judges differ considerably from each other in their pretrial decisions, but even within the *same* judge, decisions for similar defendants vary quite a bit. The authors construct an algorithm to predict pretrial misconduct risk and find that if pretrial decisions were made using the algorithm (which does not include race as an input in prediction), the algorithm could be used to detain the same number of people with less pretrial crime, or detain fewer people with the same pretrial crime, or choose some mixture of reducing both pretrial crime and pretrial detention rates—all while simultaneously reducing racial disparities. In particular, the gains on racial equity are seen throughout the distribution of judges.

Such algorithms or “risk assessment” tools are already used quite widely in the pretrial system. Perhaps the best-known of the pretrial risk assessment tools is the Arnold Ventures Public Safety Assessment (PSA), which is now in use in over 39 jurisdictions around the country. The PSA uses nine factors to assess the likelihood of pretrial success: 1) age at current arrest; 2) current violent offense (in some cases whether the violent offense occurred when the defendant was 20 years old or younger); 3) pending charge at the time of the arrest; 4) prior misdemeanor conviction; 5) prior felony conviction (or in some cases any prior conviction, misdemeanor or felony); 6) prior violent conviction; 7) prior failure to appear in the past two years; 8) prior failure to appear older than two years; and 9) prior sentence to incarceration. These factors are weighted, and then used to predict three outcomes: failure to appear pretrial, new criminal activity while on pretrial release, and new violent criminal activity while on pretrial release. The PSA scores are usually accompanied by a Decision Making Framework that includes a matrix matching each combination of PSA scores and charges to a recommended pretrial decision for judges.

Studying the impact of such risk assessment tools on pretrial decision-making (both in terms of balancing tradeoffs and fairness) is an important area for future work. After all, as a practical matter, pretrial decisions are unlikely to be made solely on the basis of algorithmic predictions. Indeed, to the extent that judges often override the recommendations of algorithms, as has been shown in the sentencing context (Doleac and Stevenson 2020), it may be much more difficult to achieve improvements. Greiner et al. (2020) provide a detailed interim case study of how the Arnold Ventures PSA was implemented in Dane County, Wisconsin, and evaluate the impact of the PSA using a randomized control trial. The early-stage results found that providing judges with these recommendations somewhat changed pretrial decisions but had no statistically significant effect on days of pretrial incarceration, failure to appear rates, or new criminal activity rates.

Of course, algorithms are not a panacea for the pretrial system. Indeed, a robust literature has documented a variety of issues that algorithms can introduce ranging from bias being “baked in” to the algorithm, to lack of transparency and accountability. But this is an area where economists have much to contribute in thinking about how to design risk assessment tools that are efficient and equitable.

## Conclusion

The US pretrial system seeks to balance the individual rights of defendants against the societal goals of ensuring court appearances and public safety--and to achieve these tradeoffs as equitably as possible. However, the research literature in this area raises doubts about the performance of the system. Pretrial detention imposes large economic and personal costs, due to the significant collateral consequences of having a criminal conviction on labor market outcomes and large social costs stemming from the criminogenic effects of pretrial detention. In addition, there are relatively small benefits of pretrial detention, due to the low costs of apprehending defendants who fail to appear in court and the relatively low-level crimes that occur when individuals are released before trial. Taking a range of costs and benefits into account, the existing evidence suggests that we should detain far fewer individuals before trial than we currently do. Moreover, the costs of cash bail and pretrial detention are disproportionately borne by Black and Hispanic individuals, giving rise to large racial differences in pretrial detention that cannot be explained by differences in pretrial misconduct risk.

Looking ahead, we highlight three sets of developments that bear particular attention in the near- and medium-term, and which we believe should guide the direction of future economics research in this area.

First, a wave of support seems to be gathering for reform of pretrial systems in many jurisdictions. In a national survey of registered voters in 2018, 72 percent supported limiting the length of pretrial detention, and over 70 percent were in favor of providing pretrial support services for those with addiction or mental health issues (Pretrial Justice Institute 2018). Some jurisdictions, like New Mexico, New Jersey, and California, have effectively eliminated cash bail, with the hope of significantly decreasing pretrial detention rates among low-risk defendants. In addition, a wave of community-based efforts to change the current pretrial system has also been spreading, with charitable organizations like the Bronx Freedom Fund and the Brooklyn Community Bail posting bail for individuals held on misdemeanor charges when bail is set at \$2,000 or less. Future research should study these changes to the pretrial system. In doing so, researchers should also expand the list of potentially relevant outcomes to study to include health and family outcomes for individuals interacting with the pretrial system.

Second, there remains much need for further conceptual and empirical work that tests for discrimination in the pretrial system, given the large and pervasive racial disparities in detention rates. As other disciplines have long recognized, discrimination can result even when a decision-maker is not acting consciously and intentionally on the basis of race. We urge economists to think more broadly about the ways in which discrimination can manifest in the pretrial system and we view the legal doctrines of disparate treatment and disparate impact as important guideposts.

Finally, many jurisdictions are providing judges with new information and tools with the hope of improving the efficiency and fairness of pretrial decisions. The most prominent example, the Arnold Ventures Public Safety Assessment, was mentioned earlier. Other jurisdictions are piloting programs with other kinds of individualized feedback and behavioral interventions available to judges. These field experiments will enable researchers to better understand how judges make their decisions, why their current decisions may be erratic and discriminatory, and how pretrial decisions change with the introduction of new tools. A richer understanding of decision-making can allow policymakers to better identify reforms that can aid judges and improve the pretrial system more broadly.

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