

# Tripping through Hoops: The Effect of Violating Compulsory Government Procedures

Natalia Emanuel and Helen Ho\*

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## Abstract

Millions of Americans must navigate complex government procedures under the threat of punishment. Violating these requirements can lead to poverty traps or deepening legal system involvement. We use a field experiment to estimate the effect of failing to appear for court on subsequent legal contact. The treatments reduce failure to appear by 39 percent. Using treatment assignment to identify the causal impact of minor procedural violations, we find no effect on arrests. However, for lower-level cases, violations increase fines and fees paid by 60 percent or \$80, equivalent to a high-interest loan, showing that minor procedural violations can be costly.

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\*Contact: nemanuel@princeton.edu, Princeton Industrial Relations Section; helenho@hks.harvard.edu, Harvard Kennedy School. We are tremendously grateful for the comments, advice, and support of Will Dobbie, Edward Glaeser, Jim Greiner, Rema Hanna, Nathan Hendren, Lawrence Katz, and Mandy Pallais. We also thank Devah Pager, Steven Raphael, Amy Finkelstein and 3 anonymous reviewers for thoughtful comments. Funding has generously been provided by the Access to Justice Lab and J-PAL North America. We gratefully acknowledge the support of NSF grants DGE-1144152 [Emanuel] and DGE-1745303 [Ho]. This research would have been impossible without the passion and dedication of the public servants in the study site, particularly the Court Administrator and Information Technology Director. This study received IRB approval from Harvard University (17-0960) and can be found in the AEA RCT registry (AEARCTR-0003098).

Each year, millions of Americans are obligated to navigate compulsory government processes under threat of punishment, usually because they were accused of wrongdoing. For example, more than 42 million traffic cases come to courts each year (National Center for State Courts, 2018); 4.5 million adults in the US must comply with probation or parole procedures (Oudekerk and Kaebler, 2021); and parents of 37 percent of children must navigate investigations by child protective services (Kim et al., 2017). In such cases, individuals must comply with often complex and burdensome requirements—in effect, jump through a series of hoops.

Violations of these compulsory government procedures can lead to monetary sanctions, loss of freedom, or other serious consequences, even if these violations are minor. For example, failing to pay for a traffic ticket can result in a bench warrant, which may increase the likelihood of future stops and arrests (Needham, Mackall and Pettit, 2020). Sanctions for procedural violations can stack on top of the original offense, creating a cascading effect that leads to deeper and entrenched entanglements in the court system (e.g., Goffman, 2009, 2014; Kohler-Hausmann, 2018; Needham, Mackall and Pettit, 2020).

Although there is much evidence on the effects of government policies (e.g., Dobbie, Goldin and Yang (2018) estimate the effect of pretrial detention), there is little evidence on the effect of an individual violating compulsory government procedures (e.g., little evidence quantifies the impact of bail jumping). It is difficult to estimate the effect of violation behavior itself because whether an individual commits a violation is often confounded by other factors. For example, estimating the impact of bail jumping is likely confounded by an unobserved propensity for violations.<sup>1</sup>

We examine the long-term consequences of violating compulsory government procedures in the context of failure to appear (FTA) for traffic, municipal, and criminal misdemeanor court hearings. This is a particularly instructive setting because failing to appear is common and potentially costly. Across the country, about 23 percent of felony cases where the defendant was released pre-trial resulted in a failure to appear (Cohen and Reaves, 2007).<sup>2</sup> For lower-level cases, such as traffic court, municipal violations or misdemeanors, the rates can be much higher. For low-level criminal, quality-of-life offenses in New York City, as many as 47 percent of defendants fail to appear for their hearings

<sup>1</sup>Even with plausibly exogenous variation, researchers may not observe all potential and actual violations. For example, when examining the impact of receiving traffic tickets, Mello's (2021) estimates cannot be generalized to the impact of violating traffic laws because the sample does not include the universe of traffic rule violators, just those who received tickets.

<sup>2</sup>Although our study focuses on less serious cases, there is a lack of national data on failure to appear for misdemeanor and non-criminal offenses.

(Fishbane, Ouss and Shah, 2020). Failing to appear for a hearing carries harsh statutory consequences. These may include a warrant, a driver’s license suspension, and additional fines and fees. Thus, a relatively minor violation like failure to appear could draw individuals into greater contact with the criminal justice system through arrests and new offenses (Crozier and Garrett, 2020; Needham, Mackall and Pettit, 2020; Huebner and Giuffre, 2022; Duda-Banwar and Burt, 2022). Additionally, fines and fees can cause financial distress, especially for people with low-incomes (Harris, Evans and Beckett, 2010; Mello, 2021; Kessler, 2020). On the other hand, receiving warrants or additional fine and fee assessments may not lead to adverse court contact if, for example, defendants can avoid police officers or refuse to pay their fines.

To estimate the causal impact of a violation, we run an randomized controlled trial that reduces violations and use treatment assignment as an instrument for violations. The anonymous court system sees cases from both a county and city in a mid-sized metropolitan area. The field experiment, conducted in 2018 and 2019, uses text-message-based reminders and text-message-based assistance from court staff with 30,759 defendants. The treatments provide relevant information about the case, the hearing time, and court accommodations such as the ability to reschedule the hearing or use a payment plan. The treatments reduce FTA rates by 39 percent from a base rate of 21 percent, consistent with other studies on court date reminders (Fishbane, Ouss and Shah, 2020; Bornstein et al., 2013).

Our analysis considers two types of cases separately, based on the statutory consequence of an FTA. For the first set of cases an FTA prompts an automatic conviction. These are almost entirely low-level traffic cases. When convicted, the (absent) defendant is sentenced to fines and/or fees, and often has additional fines and fees because of the FTA. Consequently, one worry is that an FTA may lead to financial distress. We find that an FTA causes a 60 percent (\$80) increase in fines and fees paid—equivalent to a high-interest loan from the court. The increase in payments leaves low-income and liquidity-constrained individuals more vulnerable to financial shocks (Mello, 2021).

In the second set of cases, which include more serious traffic tickets, municipal violations, and misdemeanor cases, an FTA triggers a warrant for the individual’s arrest. If these warrants cause more subsequent criminal justice involvement, such as loss of freedom, then the consequences are potentially very costly. We find that FTAs do not cause more involvement in the criminal justice system, as measured by new cases and jail bookings. Instead, we find that an FTA causes people to use an administrative procedure to clear their warrants that allows them to address the warrant at a time of their choosing.

Take-up of this procedure may reflect defendants' need for flexibility. The desire for flexibility is also reflected in the fact that the interventions, which give information about how to reschedule a hearing, do in fact prompt an increase in rescheduling.

Our findings underscore the importance of measuring the realized consequences of violations rather than the stated, statutory consequences. For lower-level cases, we find that the increase in fines and fees paid *exceeds* the amount implied by the statutory consequences of FTA. However, for more serious cases FTA does not lead to deepening criminal justice contact as suggested by other work. Failing to accurately measure the realized consequences of violating government procedures leads policymakers to emphasize the wrong consequences when seeking to reform court processes. In this setting, much policy-making attention has focused on failures to appear potentially causing more arrests, but less on the direct financial consequences, which we find to be more significant (e.g., Donnelly, 2017; Burness, 2019; Evans, 2019).

Furthermore, our estimates provide evidence on a missing link in the theory of deterrence and violation behavior. The probability of punishment and the expected utility of violations are major parameters in deterrence models (see Becker, 1968; Nagin, 2013; Chalfin and McCrary, 2017), but they are difficult to estimate. Even studies that assess the accuracy of perceptions of sanctions benchmark those perceptions with biased measures of statutory risk rather than experienced sanctions (e.g., Apel, 2013). We can use estimates of experienced sanctions to assess models of violation behavior. Interpreted in a rational actor model, our estimates for low-level cases suggest that defendants were willing to pay \$80 to violate their ticket requirements. However, the cost of complying is likely less than \$80, especially for defendants with better access to credit. This supports the hypothesis that many violations are unintentional rather than deliberate (Fishbane, Ouss and Shah, 2020). The results for more serious cases are consistent with both rational actor and behavioral models of compliance. We find that an FTA does not increase effective arrest risk. Nevertheless, rational defendants may be deterred by the cost of clearing a warrant and/or costly behaviors to avoid arrest (Flannery and Kretschmar, 2012; Duda-Banwar and Burt, 2022). On the other hand, that 79 percent of defendants comply at baseline suggest that there could be behavioral defendants who overestimate the risk of arrest from an FTA.

Our study complements the large body of research that explores how administrative burdens create barriers to accessing government benefits (Currie, 2006; Sunstein, 2018; Herd and Moynihan, 2019; Martin, Delaney and Doyle, 2022). Relatively few quantitative studies have explored the impacts of administrative burdens in the context of compulsory

government processes.<sup>3</sup> Crucially, the existing literature focuses on areas where individuals are entitled to benefits, but are not required by law to navigate the administrative burdens. In our context of compulsory government procedures, on the other hand, individuals are required to navigate barriers under the threat of punishment. Furthermore, administrative burdens in the benefits context can theoretically be valuable for targeting benefits (Nichols and Zeckhauser, 1982). However, the burden of complying with administrative processes in compulsory settings do not advance efficiency or social welfare goals. Thus this work expands the scope of the administrative burdens literature in economics.

Our interventions highlight the administrative burdens imposed on defendants in complying with their court dates. Though the court we study attempted to make complying easier for defendants in numerous ways, the administrative difficulty of finding and utilizing these resources was substantial. The court allowed rescheduling, payment plans, and free child care during the hearing. Yet, without the interventions, very few people made use of either payment plans or rescheduling. That the information and assistance treatments increased usage suggests that these court-provided accommodations were previously too hard to access.

Moreover, our findings suggest that a long view of procedural requirements might be necessary. The majority of the defendants who initially violate the requirement to show up to court do end up complying by clearing their warrants or paying their fines and fees. That is, they end up jumping through the required hoops, even if they tripped on the first pass. And because of the stumble, they pay additional costs, either in time or money.

The rest of the paper is organized as follows. Section 1 introduces the study site, interventions and experimental design. Section 2 describes the study sample and take up. Section 3 shows the first stage, underscoring that the treatments reduce failure to appear rates. Section 4 estimates the causal effects of failing to appear on defendants. Section 5 concludes.

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<sup>3</sup>Administrative burden in punitive and compulsory contexts have been documented in sociology (e.g., Kohler-Hausmann, 2018).

# 1. STUDY DESIGN

## 1.1. STUDY SITE AND CONTEXT

Our study takes place in a county court's traffic, municipal and criminal misdemeanor cases. The county has over 700,000 residents.<sup>4</sup> Eighty percent of cases heard are traffic cases, which include speeding and driving with an expired license.<sup>5</sup> Municipal violations (6 percent of all cases) include offenses such as trespassing, loitering, and marijuana possession. Criminal misdemeanor cases (14 percent of all cases) include intentional property damage, driving under the influence, and low-level assault.

Defendants have been issued a ticket and instructed to return to court for a hearing. Defendants cannot choose the hearing date and time when they first receive the ticket. For some lower-level cases (e.g., speeding), a defendant can plead guilty and pay online or by mail, thereby obviating the need to show up at the first hearing. This is not an option for more serious cases (e.g., driving without insurance). Figure 1 shows the case resolution options for defendants in our sample. About 34 percent of traffic cases in our sample and 5 percent of municipal and criminal cases allow defendants to prepay.<sup>6</sup>

Hearings can have several outcomes. The judge can dismiss or amend any of the case's charges or the consequences.<sup>7</sup> If the case is not dismissed, a defendant may plead guilty or not guilty. If they plead not guilty, a new court date is set for the case to be heard. If a defendant pleads guilty, their fines and fees are due immediately. If fines and fees surpass \$99—which is true for 93 percent of defendants who were found guilty of at least one charge—defendants can apply for a payment plan, which costs \$25.

A defendant has failed to appear if they do not (a) show up at the hearing, (b) reschedule<sup>8</sup> the hearing beforehand, or (c) plead guilty ahead of time and pay fines/fees in ad-

<sup>4</sup>The population of defendants is not representative of the county as a whole. In the court at large, 37 percent of defendants during our time period are female. Relative to the proportion of the county as a whole, Black individuals are 79 percent overrepresented in our sample, Hispanic individuals are underrepresented by 74 percent. The median age of our sample is 31 years old, a few years younger than the median age in the county (US Census Bureau, 2017). The average income in defendants' zipcodes is 10 percent higher than the median income in the county.

<sup>5</sup>These statistics include all cases that occurred during our sample period, regardless of whether they were eligible for our study. As such, the numbers do not match the descriptive statistics of our sample in Table 1.

<sup>6</sup>A handful of cases that can be paid ahead by statute were, during our study period, accidentally designated as unable to prepay due to a glitch in the court's computer system. To pay online for these cases, defendants must contact the court to override the glitch.

<sup>7</sup>For example, defendants charged with driving without insurance may bring proof of newly purchased insurance, prompting the judge to reduce the fine.

<sup>8</sup>Defendants can FTA on the rescheduled hearing, which leads to the same outcomes as failing to appear

vance of their court date.

The statutory consequences of an FTA vary by case type (see Figure 1). For about 35% of cases in our sample, an FTA results in an automatic conviction, also known as a default judgment. With an automatic conviction, the defendant is found guilty and sentenced in their absence. Cases where an FTA leads to an automatic conviction are generally less serious traffic violations. An FTA for these cases will also trigger a driver's license suspension. About two-thirds of these cases can be resolved by pleading guilty and paying the fine before the court date. For 65% of our sample, an FTA leads to a bench warrant for the defendant's arrest. A bench warrant is generally not actively pursued, but will show up on the individual's record.<sup>9</sup> A little over half of the cases where an FTA leads to a bench warrant are more serious traffic offenses and the remaining are misdemeanor or municipal violations. In the vast majority of these cases (97 percent), the case will not reach a conclusion until the defendant attends court.

FTAs can also result in additional fines and fees: in this jurisdiction there is a \$30 FTA fine, a \$25-50 warrant-issuing fee, and a \$100 warrant cancellation fee, on top of any fines/fees the original infraction incurs. Showing up to court incurs a fee of \$26, even when attendance is mandatory.

The court provides several accommodations that attempt to make the process easier for defendants, but these accommodations are unlikely to be known to defendants. A case's first hearing can be rescheduled once to another date within two weeks of the first assigned date. Defendants may not know that they can use a payment plan to relieve liquidity constraints. Finally, defendants may be unaware that the court provides free childcare during the period of one's hearing from 7:30 am to 5 pm, Mondays through Fridays.

## 1.2. INTERVENTIONS

Under normal circumstances, a defendant receives no reminder about their hearing. We introduce an informational nudge treatment and a treatment that provides both an informational nudge and an opportunity to text back and forth with court staff. In both treatment arms, the defendant receives text message reminders 14, 7 and 1 day in advance of their court date with information about the case itself (including the case number, the time and location of the court date, and whether it can be paid online), information about

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on the original hearing.

<sup>9</sup>For example, if a driver with a bench warrant is stopped for speeding, the police officer will see the warrant when querying the driver's information in the police database.

the consequences of not showing up (a warrant, a driver’s license suspension, or a fine, as applicable), and court services they can access (such as payment plans, court date rescheduling, or free childcare). Table A.1 displays a set of example texts.

Texts on each day are divided into two messages to accommodate character limits. Per federal regulations, defendants had the option of opting out of text message reminders at any point. Thus, defendants receive up to 3 doses with two messages each, for a total of up to 6 text messages per case.

In one treatment arm defendants also receive an invitation to text back with questions to a court staff-person. We call this treatment the “personalized assistance” arm. Court staff monitor the messaging software for incoming messages and respond to defendant texts similarly to how they respond to defendants’ phone and in-person queries, both answering questions and directly handling paperwork to, for example, reschedule hearings.<sup>10</sup>

Notably, one of our treatments uses scalable, government-administered assistance in navigating administrative processes. Many nudge-to-navigation assistance programs that increase the engagement with government processes do so by channeling individuals toward non-profits or other services for assistance. For example, low-income individuals are encouraged to have volunteers, non-profit staff, or for-profit staff help fill in their taxes (e.g., Linos et al., 2020; Goldin et al., 2022), assist in benefits applications (Finkelstein and Notowidigdo, 2019), and complete FAFSA information (Bettinger et al., 2012). In contrast, the navigation assistance used in this study relies only on existing government staff, is low-cost, and is easy to scale-up. In particular, by allowing defendants to reschedule without having to submit a confusing legal form, the assistance eased defendants’ access to the court’s flexibility.

### 1.3. EXPERIMENTAL DESIGN AND METHODOLOGY

Between March 7, 2018 and July 15, 2019, the court randomized 31,372 eligible individuals into a control group or one of two treatment groups: an informational intervention or an intervention composed of the same information with an offer to text back and forth with a court clerk.

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<sup>10</sup>The personalized assistance intervention is in line with emerging court practices. As part of the broader attempt to make courts more accessible, criminal justice practitioners have explored the provision of personalized assistance through texting to encourage defendants to show up. Indeed, several services have emerged to help courts administer these two-way texting programs, such as eCourtDate, Uptrust, and Stanford’s Court Messaging Project.



The randomization algorithm ran each morning, to check for cases that met the following criteria:

- The hearing is in 14, 7, or 1 day.
- The hearing has not already been resolved by paying online, pleading guilty by mail, rescheduling, or other pre-hearing action.
- The person has not already received a treatment assignment. Previously randomized individuals (as identified by name and date of birth match) receive the same treatment assignment.
- The person's address is not listed as "transient" or "homeless."<sup>11</sup>
- The person has a phone number in the database.<sup>12</sup>

This list of eligible cases was then sorted by random number and treatment was assigned in a rotating manner, resulting in a 50-25-25 proportion split between the control, information and personalized assistance treatments. The treatment assignment was stratified at the courthouse-day level. Criminal and municipal cases, which are seen in the same courthouse, were randomized together while traffic cases were randomized separately.

If a given defendant had multiple cases during the study period, they received the same treatment assignment in subsequent cases, but only the first case was included in our analysis sample. Only 3,551 cases in our time period—10 percent of cases—were subsequent cases for defendants.

## 1.4. DATA AND METHODS

Court data include defendant characteristics, case characteristics, treatment assignment, case dispositions, case events (e.g., hearings, bond setting, etc.), fines and fees assessed, and fines and fees paid. It also includes a defendant's subsequent traffic, municipal, and criminal misdemeanor cases, but does not include felony cases. The case event data include events with their corresponding dates, allowing us to follow cases over time. The fine and fee assessment and payment data come from a snapshot on August 6, 2019. The fine and fee analyses pool cases with different follow-up periods ranging from 3 to 74

<sup>11</sup>A pre-study sample of all cases heard during a two-month interval suggests that no more than 6 percent of cases had homeless or transient defendants.

<sup>12</sup>Defendants are not legally obligated to share their phone numbers with police officers or court personnel. About 40 percent of cases that were not resolved two weeks prior to the hearing had phone numbers on file. In New York City, only 13 percent of defendants have available phone numbers on file (Fishbane, Ouss and Shah, 2020). Defendants without phones but with address information were randomly assigned to a postcard reminder or control condition. Postcards reduce FTA by 5 percentage points off a baseline 24 percent FTA rate, an effect that is statistically significant at the 1 percent level.

weeks post-hearing and an average follow-up period of 40 weeks. We used jail booking data from the Sheriff’s Office, which included data on date of booking and bookings for felony cases.

A major credit bureau provided credit report data for February, June, and October 2018. We provided name, date of birth, and home address information for individuals in our study sample to the credit bureau to match to each of their monthly data files. The linking process resulted in a 64 percent of the sample having credit bureau data at baseline. There was a higher match rate for the automatic conviction sample (72 percent versus 59 percent). We used the month of the citation or the most recent month before the citation with available data for the individual’s baseline data. We use data on the individual’s credit score (VantageScore<sup>®</sup> 4.0) as a proxy for access to credit.

We start by estimating the first stage, namely how the treatments affect failure to appear rates. We estimate the following regressions:

$$F_i = \alpha + \beta T_i + \Gamma X_i + \delta S_i + \epsilon_i \quad (1)$$

where  $F_i$  is the outcome of interest, such as failing to appear on the first hearing;  $T_i$  is the treatment assignment;  $X_i$  represents a vector of baseline individual characteristics including age as a quartic, race, sex, average income in their zipcode of residence, case characteristics, such as the court division, whether the case can be paid before the court date, whether an FTA triggers a warrant or an automatic conviction, the number of charges faced and the time of day of the hearing, and finally a vector of criminal history binary variables such as a prior conviction, prior incarceration and prior FTA; and  $S_i$  is a vector of indicators for courthouse-day strata. We include  $X_i$  to improve precision. Our analysis excludes 502 individuals missing zipcode information and therefore missing income data.<sup>13</sup> Standard errors are robust to heteroskedasticity.

To estimate the causal effect of an FTA on fines and fees as well as subsequent criminal justice involvement, we use a two-stage-least squares framework.<sup>14</sup> We use treatment assignment as an instrument for FTA. The first stage is given by Equation 1 where  $F_i$  is a binary indicator for FTA on the randomized hearing.

The second stage analyzes the effects of an FTA on  $Y_i$  outcomes including fines and

<sup>13</sup>Our results are robust to including people missing zip code data and excluding covariate controls. We present these results in Appendix C.

<sup>14</sup>The two-stage least squares analysis was not initially included in our preanalysis plan, though it was included in a grant application from the preceding year.

fees paid as well as subsequent criminal justice involvement:

$$Y_i = \alpha + \beta \hat{F}_i + \Gamma \mathbf{X}_i + \delta \mathbf{S}_i + \epsilon_i \quad (2)$$

where  $X_i$  again captures a vector of baseline individual characteristics as in Equation 1 and  $S_i$  is a vector of indicators for courthouse-day strata.

## 2. DESCRIPTIVE STATISTICS & TAKE UP

Individuals with cases in our sample tend to be male (63 percent), White (71 percent) or Black (17 percent), fairly young (on average, 35 years old), and living in zipcodes with an average income of over \$66,000 per year (see Table 1). Traffic court sees 68 percent of cases, with the remainder split between municipal and criminal courts (9 and 22 percent, respectively). Only 25 percent of cases may be paid ahead of time. On average, each case has 2.28 charges on it. Almost half of the individuals with cases in our sample had a prior case and 21 percent have previously failed to appear. Comparing the automatic conviction sample to the warrant sample, defendants in automatic conviction cases are less likely to be male, more likely to be White, less likely to be Black, are slightly older, live in richer zip codes, and have prior adverse contact with the court system less frequently. Appendix Table B.1 shows descriptive statistics by intervention.

Though some criminal history and case characteristic variables are out of balance within our samples of interest, they are not jointly significant, suggesting that there was not systematic bias in the randomization process.

The SMS software suggests that the delivery rate of the treatments was high. Of treated cases, only 3.27 percent had an undeliverable message or number. An additional 0.92 percent of treated cases had a person reply saying it was the wrong number. Only 2.3 percent of treated defendants opted out of receiving additional reminders.

## 3. INTERVENTION RESULTS

### 3.1. FIRST STAGE: POOLED ANALYSIS OF INTERVENTION EFFECTS

The treatments were highly effective in reducing failure to appear in both samples (see Figure 2). In the sample where an FTA results in an automatic conviction sample, the treatments reduced failure to appear by 8.8 percentage points, a 42 percent decrease from a 20.9 percent mean. The increase in legal compliance came from several sources: an 1.9 percentage point (11 percent) increase in appearing in person, an 4.3 percentage point

(8 percent) increase in defendants paying in advance (and in so doing, pleading guilty), and a 2.1 percentage point (72 percent) increase in rescheduling hearings. There are also smaller, but statistically significant increases in defendants' use of payment plans and in getting their cases dismissed.

Among defendants with cases in which an FTA result in a warrant, treatments reduce FTA rates by 6.2 percentage points, a 29 percent decrease from a 21.2 percent mean. Since virtually none of these cases can be resolved by paying in advance, the increase in legal compliance only stems from two methods: a 3.5 percentage point (5 percent) increase in appearing in person and a 3.6 percentage point (88 percent) increase in rescheduling hearings.

These interventions are relatively inexpensive and easily scalable. The informational nudge messages cost \$0.10 per defendant in software and messaging costs compared to \$0.78 per defendant for the personalized assistance nudge, which incurred additional messaging and staff costs.<sup>15</sup> In comparison, a summons redesign would have negligible marginal costs (Fishbane, Ouss and Shah, 2020) and postcard-based reminders (e.g., Bornstein et al., 2013) would cost around \$0.46 per defendant for postage and printing. Since it takes about 12.5 treated defendants to eliminate one FTA using the text message interventions, the cost of a single reduction is \$1.25 for informational nudges (\$9.75 for personalized assistance). Thus these treatments are cost-effective, scalable interventions that can improve defendants' welfare without changing legislative policy.

### 3.2. DIFFERENCES BETWEEN THE TWO TREATMENTS

Offering text conversations with court clerks does not meaningfully boost the informational nudge's effect on FTAs. Each treatment arm reduced FTA rates by 8.3 to 8.6 percentage points, around a 40 percent reduction from the control mean of 21.2 percent. Appendix Figure B.1 shows case outcomes by treatment status.

The informational nudge is slightly more effective at increasing appearances at the hearing, causing a 4.5 percentage point increase over a control mean of 47 percent compared to a 1.9 percentage point effect from the personalized assistance arm. In contrast, the personalized assistance treatment arm prompts slightly greater take-up of court accommodations such as rescheduling one's hearing and setting up a payment plan. Personalized assistance increases the probability of rescheduling by 4.1 percentage points over a control mean of 3.7 percent, while the informational nudge boosts rescheduling by

<sup>15</sup>Cost estimates for Fishbane, Ouss and Shah (2020)'s text reminder program are even lower due to fewer messages per dose and do not include software costs.

1.8 percentage points. Personalized assistance also increases payment plan usage by 0.9 percentage points off a control mean of 6.9 percent. That defendants increase their use of rescheduling and payment plan opportunities is consistent with defendants needing more flexibility than the court initially allowed.

The ability to text with clerks increased the take-up of some court features, but did not have a differential impact on FTA. Interactions with experts can help people fill out forms, similar to the benefits context (Goldin et al., 2022; Finkelstein and Notowidigdo, 2019; Bettinger et al., 2012). However, resolving one’s arraignment often requires showing up in person or paying substantial fines and fees, which means that even assistance with accessing the accommodations offered by the court does not alleviate much of the burden associated with compliance. Indeed, court clerks estimated that awaiting one’s hearing and the hearing itself may take four hours plus transit time. Personalized assistance does not change the reality that showing up to court may be costly for people who would get fired for missing work or for whom paying a \$200 fine would lead to financial distress.

### 3.3. FOR WHOM DOES TREATMENT MATTER?

We examine the characteristics of defendants for whom treatment prevents FTA (“compliers”) to understand the scope of our treatments and the generalizability of our estimates of the effects of FTA. Table 2 compares covariate means for compliers to the means for people who FTA in the control group.<sup>16</sup>

Among the automatic conviction sample, compliers are more likely to be female, White and may come from a higher income zipcode. In the sample of cases where an FTA results in a warrant, compliers are substantially less likely to have a prior case or a prior FTA. As such, when compliers with these cases avoid an FTA, they are more likely to be preserving clear records.

We further analyze who took up the offer of a text conversation with court clerks. The defendants who initiated a conversation were more likely to be Black, older, initially ineligible to pay their fine ahead of time, and were more likely to have a prior FTA. Appendix Table B.2 compares the characteristics of defendants in the personalized assistance treatment arm who initiated a conversation with court staff to those who did not.

<sup>16</sup>We calculate complier means using the method developed in Marbach and Hangartner (2020).

## 4. CAUSAL EFFECTS OF FAILURE TO APPEAR

We estimate the causal effects of an FTA on adverse court contact to understand the *de facto*, experienced consequences rather than the *de jure*, statutory consequences of a common legal violation. These estimates quantify the costs a rational actor might consider when weighing whether to comply or FTA.

Since FTAs and the consequences of an FTA can be related to unobserved variables, such as a defendant's underlying propensity to be arrested, estimating an unbiased effect of an FTA is difficult. We use random assignment to treatment as an instrument for FTA in a two-stage least-squares (2SLS) analysis to address omitted variable bias. The 2SLS estimates scale the effects of the treatment on subsequent criminal justice system contact by the effect of the treatment on FTA. If the intervention only impacts outcomes through reductions in FTA, then our analysis represents the causal impact of FTA on fines and fees paid or criminal justice outcomes for those who are influenced to comply by the treatments.

We divide the analysis into two samples that have different statutory consequences of failing to appear (see the FTA Consequence row in Figure 1). First, we focus on cases where an FTA results in an automatic conviction.<sup>17</sup> In these cases, which are usually lower level traffic cases, the case receives a disposition in the absence of the defendant. As such, the main outcome of interest for this analysis is an increase in fines and fees.

In the second analysis, we focus on cases where defendants must attend court to resolve their case. In these cases, which are usually criminal cases and more serious civil cases, an FTA triggers a bench warrant. Although not actively pursued, bench warrants can lead to arrest and jail detention if the person encounters police officers. The main consequences of interest for an FTA for these cases are criminal justice involvement such as jail bookings or new cases.

### 4.1. AUTOMATIC CONVICTION SAMPLE

For cases that result in an automatic conviction, an FTA increases the fines and fees paid by 60 percent — \$79.95 from an average payment of \$133.78 (see Figure 3). The increase in payments is accompanied by a similar increase in the amount that individuals are charged.<sup>18</sup> We note that since we cannot measure the effect of FTA on driver's li-

<sup>17</sup>As noted in Section 1, whether a ticket can be paid online and whether an FTA leads to a warrant depends on the charge.

<sup>18</sup>Appendix Table A.3 displays the results of this analysis in a table format.

cense suspensions, and a person must pay \$95 to reinstate a suspended license, we likely understate the financial costs of an FTA.

Those who fail to appear for automatic conviction cases end up paying more than their initially-charged fines and fees. Since defendants pay the augmented amount more over a longer time horizon, the result is very similar to taking a high-interest loan from the court. We analyze time to payment to directly compare the increase in fines and fees paid to loan interest rates. Appendix Figure A.1 plots the average percent of fines and fees paid among control cases where the defendant failed to appear by the age of the case (in weeks) as a proxy for payments over time. Most payments occur by 16 weeks after the court date. Using this figure to calculate a lower bound, an FTA represents an average APR of 196 percent. This is much higher than the interest rate of a payday loan, which is capped below 50 APR in the study site's region,<sup>19</sup> and a credit card, with average interest rates around 14 APR during the study period (Board of Governors of the Federal Reserve System, US). The high effective interest rate compared to other forms of credit suggests that many FTAs are mistake rather than a result of an intentional decision.

We use credit bureau data to understand how financial consequences of failure to appear affect people with different access to credit. We divide our sample into those who have high credit scores (a VantageScore rated as "fair" or higher), low credit scores (a VantageScore rated as "poor" or lower), and those who did not match to the credit bureau data. Those who are unmatched to the credit data are either unmatched because of false negative data linkages or lack a credit history.

Failure to appear increases fines and fees paid for all three samples. The second and third sets of bars in Panel B of Figure 3 show the results for those with high and low scores, respectively. Among those with comparatively good credit, the increase in fines and fees paid is \$84.48 (57 percent). For those with worse credit, the increase is smaller \$51.84 (39 percent).<sup>20</sup> The difference likely reflects lower ability to pay for those with worse credit. To contextualize this result, a payment plan with the court costs \$25, less than half of the \$52 increase in payment experienced by people with low access to credit. Finally, among those who are unmatched in the credit data, fines and fees increase by \$75.94 (67 percent). Thus when they FTA, even those with liquidity constraints or an inability to pay out of pocket experience an interest rate much higher than that of a local payday loan.

<sup>19</sup>This locality is rare in having a low cap on the APR associated with a payday loan. Payday loans elsewhere can have APRs as high as 400 percent.

<sup>20</sup>The increase in fines and fees paid for those with low credit scores represents an APR of 109.

## 4.2. WARRANT SAMPLE

For cases where an FTA triggers a warrant, there is not an experienced increase in involuntary court contact, though there is costly voluntary engagement with the court. Mechanically, an FTA increases the warrant rate by 66 percentage points (186 percent). However, an FTA does not increase jail bookings (see Figure 4).<sup>21</sup> Rather, we find an increase in “bonding out,” which typically means a person was in custody and was released on bond. We interpret a release rate that exceeds the jail booking rate in accordance with our conversations with the court administrators as meaning that the defendant cleared their warrant using a process called a walkthrough bond. To receive a walkthrough bond, defendants voluntarily go to the jail facility to fulfill the FTA warrant and set a new court date without being taken into custody. It may still be the case that the increased arrest risk from an outstanding warrant is sizeable, leading defendants to travel to jail to cancel their warrant. However, this voluntary interaction can be completed at the defendant’s convenience, whereas defendants do not have a choice of date and time for initial arraignments. Given the use of walkthrough bonds and pre-FTA rescheduling, defendants may place a premium on flexibility.

Importantly, we do not see an increase in the number of new cases that defendants have within the following year. These results suggest that even though warrants are issued, FTAs do not trap defendants into subsequent criminal justice contact.

Our estimates measure local average treatment effects. Given the large effect sizes of our interventions, the causal estimates reflect a large share of people who were failing to appear. However, as shown in Table 2, the instrument compliers are less likely to be Black. In the automatic conviction sample, compliers are less likely to be Hispanic. In the warrant sample, compliers tend to have less prior adverse court contact.

## 5. DISCUSSION

This paper estimates the causal effect of violating compulsory government procedures—in effect, failing to jump through mandatory hoops. Using a randomized controlled trial, we estimate whether failure to appear for court impacts subsequent legal contact and financial payments.

For cases in which an FTA prompts an automatic conviction, the causal effect of an FTA is equivalent to taking out a high-interest loan from the court. An FTA causes a 60 percent (\$80) increase in fines and fees paid, much of it coinciding with an increase in the

<sup>21</sup>Appendix Table A.4 displays the results in table format.



finest and fees levied on defendants. One may have expected defendants who failed to appear to continue to skirt requirements by declining to pay their charged fines and fees. Instead, we find that defendants end up paying more, but later. As a lower bound, the effective APR is 196, compared to the roughly 40 percent APR cap on payday loans in this locality. Given the difficulty low-income people have with paying traffic citations (Mello, 2021), the court may be effectively charging people a high fee for additional time to pay.

For cases where an FTA prompts a warrant, we find no increase in subsequent cases or jail bookings. But we do find defendants travel to jail to clear their warrants. In these cases, it may be easier to answer to a warrant on their own time rather than appear in court for many hours on a specified date. Indeed, our interventions substantially increase the use of rescheduling for these cases, emphasizing the importance of flexibility to defendants.

Overall, we find that the causal effects of an FTA are both larger and smaller than might be expected. Failing to appear for a low-level violation hearing causes a substantial increase in fines and fees paid, larger than the statutory FTA fine. On the other hand, failure to appear for more serious offense hearings does not increase involuntary court contact, despite an increase in warrants. While we do not see cascading criminal justice involvement in a jurisdiction that volunteered to implement customer service-minded interventions, it is possible that outcomes would be worse in jurisdictions that more actively pursue arrests for FTA or charge interest explicitly (U.S. Department of Justice, 2015; Harris, 2016). Even so, failure to appear comes with a large penalty for low-income people. Our estimates of fines and fees paid may even be an underestimate, since we do not observe driver's license reinstatement fees, which can only be paid after clearing one's outstanding tickets.

Under the standard deterrence model, increasing the probability or the magnitude of the consequence for violations should increase compliance. However, our causal estimates suggest that in cases where an FTA causes an automatic conviction, the expected cost of violating is already high compared to reasonable alternatives. The fact that even people with good credit violated and consequently paid higher fines and fees—several times the interest rate of a payday loan—suggests that a large portion of violation behavior is due to mistakes, consistent with the hypothesis put forward by Fishbane, Ouss and Shah (2020).

In cases where an FTA causes a warrant, the threatened cost of a violation—namely an arrest—is not realized. These results are less conclusive about competing models of

violation behavior. The fact that 79 percent of the population nevertheless complies with the procedure suggests they overestimate the probability of arrest (in a biased beliefs model of the world), have an extremely high cost of arrest (in a rational actor model), or are deterred by the time required to clear a warrant or remain “on the run” (again in a rational actor model).

Finally, contrary to mainstream beliefs, we find that many of the defendants who initially FTA ultimately fulfill the government’s procedural requirements, though sanctions make complying on the second try more costly. In effect, defendants trip rather than jump through government hoops. In both types of cases we study, it would be more efficient to ease compliance costs rather than increase sanctions. Simplifying or adding flexibility to compulsory government processes would facilitate compliance. The interventions in our experiment demonstrate highly effective ways of encouraging compliance with government procedures without increasing the probability or magnitude of sanctions.

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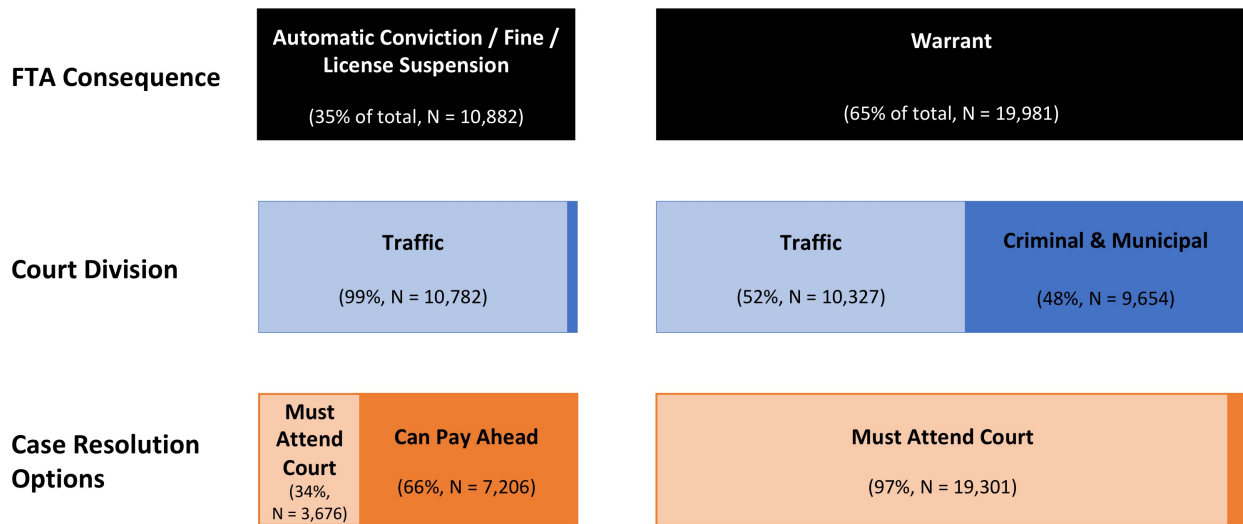


Figure 1: **Court Division, FTA Consequences and Case Resolution Options of Cases**

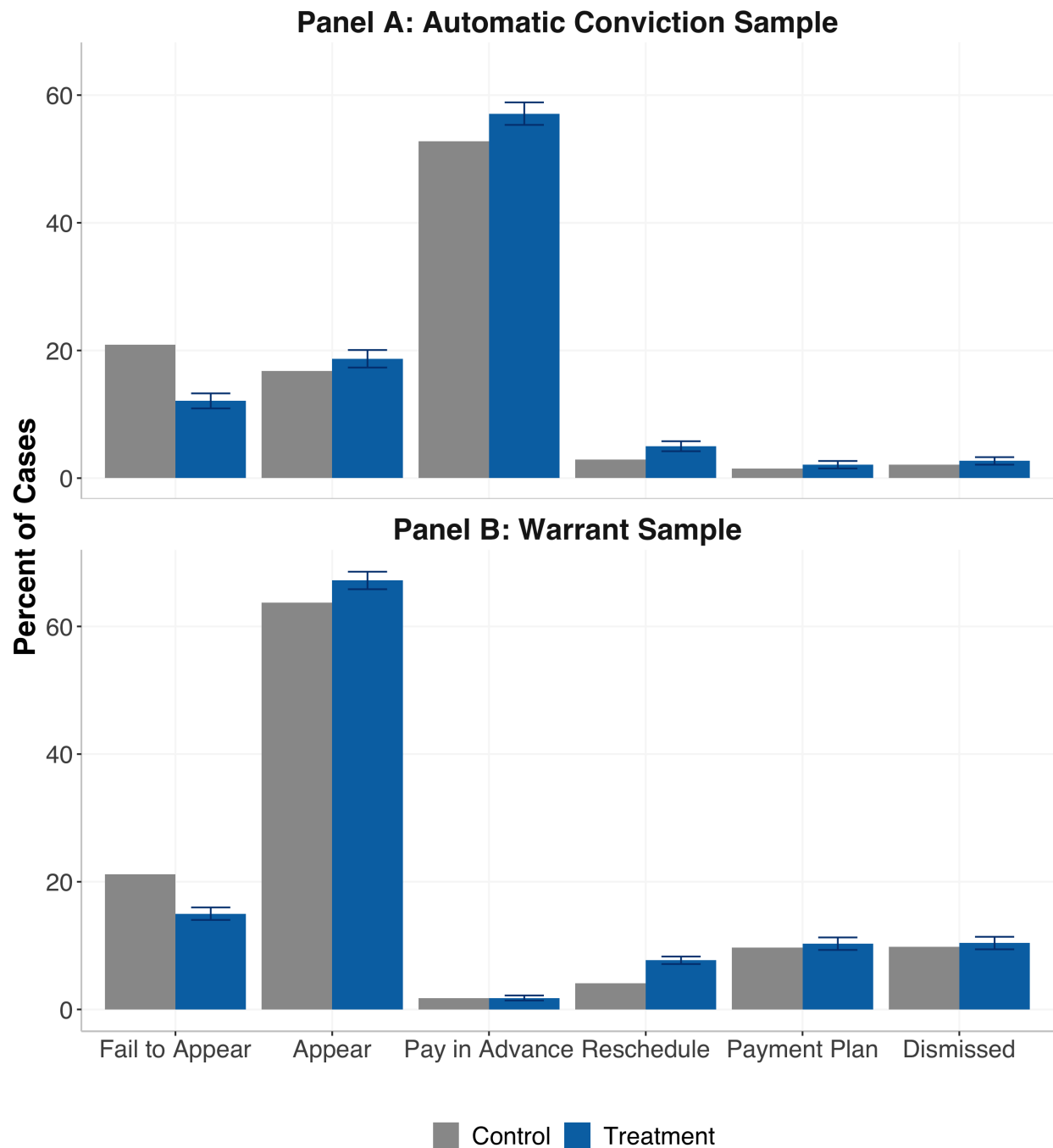
Notes: This figure depicts the 30,870 traffic, municipal, and misdemeanor cases in our study. We depict the consequences of failing to appear for a hearing (black bars), the court division that the case is in (blue bars), and whether or not a defendant must show up in order to resolve their case (orange bars). The exact charges on the case determine both whether a case results in an automatic conviction or a warrant, and also if the case can be paid ahead of time or the defendant must attend court in order to handle the case. Percentages in the black bars are of the total sample of cases. Percentages in the blue and orange bars show the percent of the cases shown in the black bar.

Table 1: Descriptive Statistics and Covariate Balance by Type of Failure to Appear Consequence

	Automatic Conviction		Failure to Appear Warrant	
	Control (1)	Treatment (2)	Control (3)	Treatment (4)
(A) Demographics and Income				
Female	0.395 (0.489)	0.401 [0.636]	0.344 (0.475)	0.352 [0.561]
White	0.730 (0.444)	0.742 [0.211]	0.687 (0.464)	0.693 [0.948]
Black	0.150 (0.358)	0.141 [0.157]	0.195 (0.396)	0.186 [0.425]
Hispanic	0.077 (0.267)	0.069 [0.136]	0.080 (0.272)	0.082 [0.420]
Other Race	0.032 (0.175)	0.036 [0.301]	0.033 (0.179)	0.035 [0.324]
Age	35.632 (13.909)	35.732 [0.867]	34.465 (13.638)	34.915 [0.092]
Avg Inc. of Zip Code	70.287 (36.841)	71.594 [0.382]	63.664 (33.334)	63.786 [0.899]
(B) Case Characteristics				
Municipal	0.007 (0.086)	0.011 [0.487]	0.137 (0.343)	0.145 [0.351]
Traffic	0.993 (0.086)	0.989 [0.419]	0.520 (0.500)	0.514 [0.310]
Criminal	0.000 (0.000)	0.000 [0.319]	0.343 (0.475)	0.341 [0.351]
Can Pay Ahead	0.661 (0.473)	0.663 [0.681]	0.032 (0.176)	0.032 [0.115]
Num Charges on Case	1.707 (0.494)	1.797 [0.000]	2.586 (1.485)	2.542 [0.503]
(C) Prior Court Contact				
Prior Case	0.404 (0.491)	0.426 [0.007]	0.548 (0.498)	0.536 [0.544]
Prior FTA	0.102 (0.303)	0.108 [0.329]	0.273 (0.446)	0.258 [0.198]
Observations	5092	5797	9517	10464

Notes: This table displays the average characteristics of individuals assigned to the control group and any text intervention group by the type of failure to appear consequence for the case. Standard deviations are shown in parentheses. P-values of the difference between treatment and control arms are shown in square brackets. The differences are estimated with a regression of the characteristic on treatment and controlling for randomization strata.





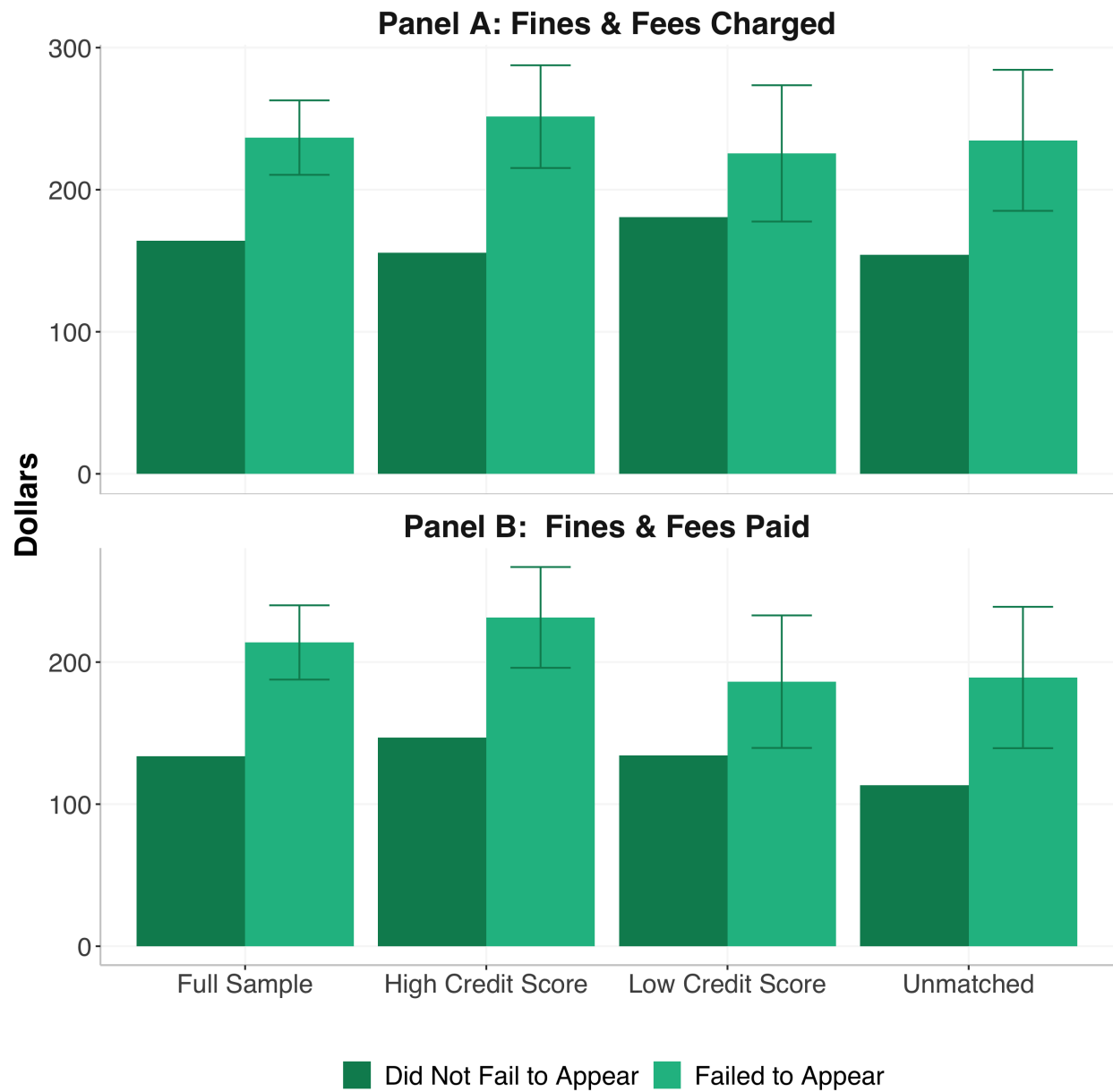
**Figure 2: Effects of any Text Message Treatment on Case Outcomes**

Notes: We plot the effects of the treatments relative to the control group on case resolutions. Panel A shows how cases resolve for the automatic conviction sample (N=10,889) and Panel B shows how cases resolve for the warrant sample (N=19,981). Payment plan and dismissal outcomes are not mutually exclusive with the rest of the outcomes. For example, a person may appear for court and also use a payment plan. The analysis controls for the variables shown in Table 1 as well as court time and court date and court building strata. Whiskers show 95 percent confidence intervals.

Table 2: Covariate Means for Compliers and Potential Compliers

	Automatic Conviction		Failure to Appear Warrant	
	Compliers (1)	Potential Compliers (2)	Compliers (3)	Potential Compliers (4)
Female	0.452 (0.039)	0.384 [0.96]	0.365 (0.052)	0.303 [0.917]
White	0.804 (0.036)	0.726 [0.989]	0.644 (0.052)	0.653 [0.445]
Black	0.118 (0.029)	0.174 [0.024]	0.207 (0.045)	0.268 [0.077]
Hispanic	0.028 (0.021)	0.063 [0.029]	0.090 (0.03)	0.046 [0.928]
Other Race	0.034 (0.015)	0.025 [0.704]	0.063 (0.02)	0.032 [0.95]
Age	33.292 (1.092)	33.703 [0.347]	35.856 (1.566)	34.528 [0.815]
Avg. Inc. of Zip Code	75.321 (3.029)	71.024 [0.934]	64.69 (3.732)	63.194 [0.683]
Prior Case	0.461 (0.041)	0.400 [0.936]	0.516 (0.056)	0.663 [0.004]
Prior FTA	0.137 (0.025)	0.142 [0.446]	0.219 (0.048)	0.445 [0.000]
Observations	1374	2267	1324	4271

Notes: This table reports means for compliers and potential compliers. Potential compliers are individuals in the control group who failed to appear. Bootstrapped standard errors, based on 1000 repetitions, are reported in parentheses. P-values from a t-test of whether the complier mean is greater than that of potential compliers and allowing for unequal variances are reported in brackets.



**Figure 3: The Impact of Failure to Appear on Fines and Fees for the Automatic Conviction Sample**

Notes: This figure shows the effect of a failure to appear on fine and fees charged and paid on the case. The sample is restricted to cases where a failure to appear leads to an automatic conviction and sentence. The darker bars, labeled “Did Not Fail to Appear,” show the complier mean, namely means for those who were assigned to treatment and for whom treatment prevents a failure to appear. The lighter bar, labeled “Failed to Appear,” shows the causal effect estimated using two stage least squares in which assignment to the interventions is an instrument for failure to appear, where the effect is added to the complier mean. Whiskers show 95 percent confidence intervals constructed using standard errors that are robust to heteroskedasticity. The high credit score sample is defined as those with VantageScores categorized by the credit agency as “Fair” or higher. The low credit score sample is defined as those with VantageScores categorized as “Poor” or lower. Regressions control for covariates in Table 1, time of day of the hearing, and randomization strata. The numbers underlying this figure can be found in Appendix Table A.3.

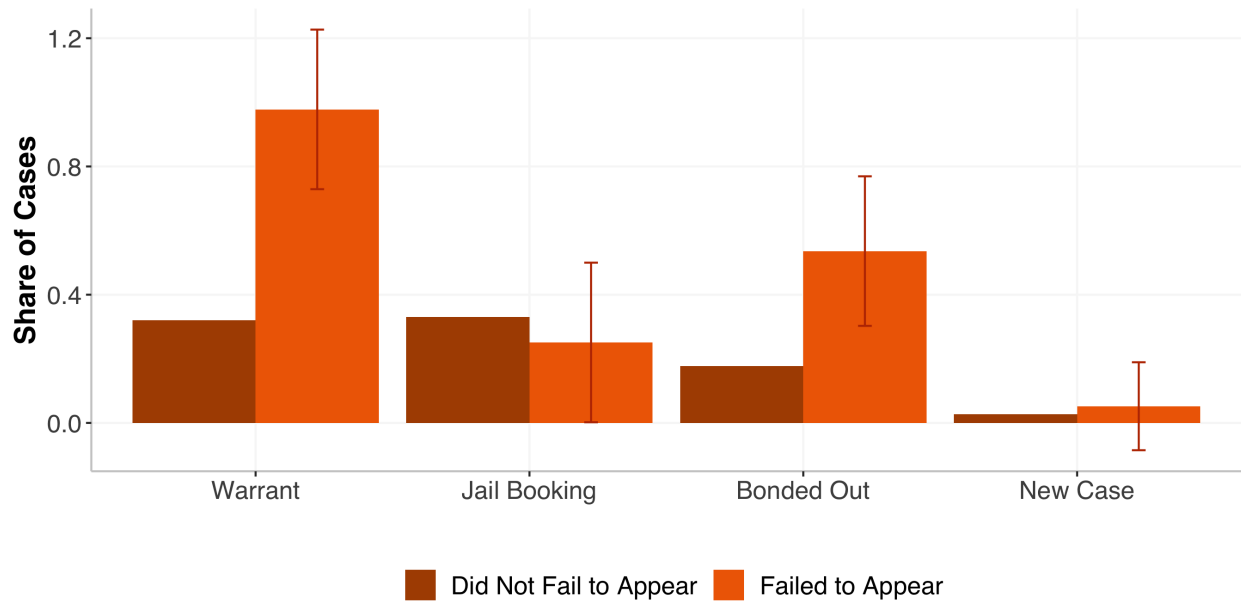


Figure 4: The Impact of Failure to Appear on Subsequent Court Contact for the Warrant Sample

Notes: This figure shows the effect of a failure to appear on future court contact. The sample is restricted to cases where a failure to appear leads to a bench warrant and that have a full 12 months of follow-up data available to us. The darker bars, labeled “Did Not Fail to Appear,” show the complier mean, namely means for those who were assigned to treatment and for whom treatment prevents a failure to appear. The lighter bars, labeled “Failed to Appear,” shows the causal effect estimated using two stage least squares in which assignment to the interventions is an instrument for failure to appear, where the effect is added to the complier mean. Whiskers show 95 percent confidence intervals constructed using standard errors that are robust to heteroskedasticity. Regressions control for covariates in Table 1, time of day of the hearing, and randomization strata. The numbers underlying this figure can be found in Appendix Table A.4.