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PRETRIAL DETENTION AND CASE OUTCOMES, PART 1: NONFELONY CASES

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FINAL REPORT

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I. INTRODUCTION

A. Background of the Study

This is the first report in a two-part series addressing the relationship between pretrial detention and case outcomes. Part 1 focuses on nonfelony cases; Part 2 on felony cases. The research on nonfelony cases (Part 1) was completed first and has already been summarized in CJA's *Research Brief* series (Phillips 2007a). This is the full study upon which that Brief was based. The research on felony cases (Part 2) has also been completed and will soon be released for publication. In order to allow each report to stand alone, some introductory and methodological material is repeated in both reports. A *Research Brief* summarizing the findings for felony cases will follow next year.

This research is an outgrowth of the Judicial Release and Bail Decision Project, which was undertaken several years ago by the New York City Criminal Justice Agency, Inc. (CJA), to analyze the factors influencing release and bail decisions in two boroughs of New York City (Phillips 2004a, 2004b; Phillips and Revere 2004a; 2004b). While the earlier research focused on antecedents of the arraignment decision, the current research examines its aftermath. The judge's decision to release on recognizance (ROR) or to set bail at arraignment has an immediate effect on the defendant's liberty while awaiting the outcome of the case. Detention, in turn, may affect the outcome itself. The impact of detention on case outcomes is the principal focus of this research, but the preliminary issue of the relationship between bail amount and detention is also addressed.

One of CJA's primary functions is to interview arrestees held for Criminal Court arraignment and to provide the court with a recommendation regarding flight risk, using objective information collected in the pre-arraignment interview. The CJA recommendation system has its roots in the seminal research done four decades ago by the Manhattan Bail Project of the Vera Foundation (later the Vera Institute of Justice), which showed that there was a connection between pretrial detention and the severity of case outcomes (Ares *et al*. 1963; Rankin 1964).[1] The research also showed that defendants with strong community ties could be released with no cash bail conditions because they were not likely to flee. These findings fueled the bail reform movement of the 1960s and fostered the spread throughout the country of pretrial service agencies based on the Vera model. Reducing unnecessary pretrial detention has always been the mission of CJA, which has been responsible for operating the recommendation system ever since the Agency became independent from Vera in 1977. The inherent injustice of detention only for the poor is the basis of that mission, but the Manhattan Bail Project's claim to have demonstrated a link between detention and severity of case outcomes added to its urgency.

It is now time to revisit the question of whether detention *in itself* really affects case outcomes. Pretrial detention is associated with a greater likelihood of conviction and incarceration, but the interpretation of that association is in dispute. On the one hand, the relationship could be *causal*: simply being detained could be responsible for harsher outcomes because jailed defendants are less able to build a defense, or because they are under pressure to plead guilty, or even because juries and judges are more likely to attribute guilt to a defendant who is brought to court from jail. On the other hand, the relationship could be *spurious*: by setting high bail, judges

[1] See also Ares and Sturz (1962) for a description of the origins of and rationale for the Manhattan Bail Project, written before any research results had been obtained.

may detain defendants they think will be convicted and sentenced to jail, so that the same factors that influence detention—the nature of the offense and the defendant's criminal record, for example—are also the factors that lead to conviction and imprisonment. If the relationship is spurious, detention itself is not responsible for higher conviction or imprisonment rates.

Prior research on detention and case outcomes has been almost entirely restricted to felony cases, so virtually nothing is known about the effects of pretrial detention in less serious cases. The present study addresses this imbalance by examining the effects of detention separately for nonfelony cases in Part 1, before moving on in Part 2 to re-examine the question in regard to felony cases.

B. Review of Research

Two separate studies addressing the relationship between detention and case outcomes were undertaken as part of Vera's Manhattan Bail Project. The earlier one used retrospective data from over 3,000 Manhattan cases with an arrest in 1960 (Ares et al. 1963). The sample was restricted to defendants 21 years of age or older who were charged with a felony. Case outcomes for defendants who were released at the time of disposition were compared to outcomes for defendants who were in detention at disposition, controlling for charge type. Within every charge type, it was found that detained defendants were more likely to be convicted; and if convicted, were more likely to be sentenced to prison. However, the researchers acknowledged that more statistical controls would be necessary to determine if the relationship were a causal one.

The second Vera study addressed the question of causality by examining the effect on case outcomes of other factors, such as the defendant's criminal record, bail amount, family integration, and employment stability (Rankin 1964). The sample, drawn prospectively for the Manhattan Bail Project, consisted of felony arrests during 1961 and 1962. The relationships between detention and conviction, and between detention and incarceration, were not accounted for by these other factors, leading to the conclusion that the findings "provide strong support for the notion that a causal relationship exists between detention and unfavorable disposition" (ibid., p. 655).

These conclusions quickly gained wide acceptance in the criminal justice community, and the Rankin study in particular continues to be frequently cited. However, its generalizability is limited. The sample size was small (N = 732), it was restricted to felony cases, and it excluded certain types of defendants (those with a recent drug charge or who admitted using drugs) and certain offenses (homicide, rape, and a few other violent charges). More important, in an effort to focus on *indigent* defendants, the sample was restricted to defendants with public defenders; it was further restricted to defendants for whom bail was set. (The earlier Ares study had included defendants released on pretrial parole, as release on recognizance was called, but this was a rarely used option prior to the work of the Manhattan Bail Project.[2]) Paroled defendants were purposely excluded from the Rankin sample "because release on recognizance in itself may have an effect on disposition in addition to the effect of freedom pending trial" (ibid., p. 642). As a consequence of the pioneering Vera research, the use of ROR became routine, and populations of defendants on pretrial release came to consist predominantly of people released without financial conditions. Released defendants in the Vera studies therefore may not be directly comparable to the majority of released defendants today, in New York or elsewhere.

[2] Only 2% of cases in the Vera sample of 1960 arrests were paroled (Ares et al. 1963, p. 77, Table 1).

A second limitation of the Vera research is that it was done before advances in computerized statistical techniques made it feasible to perform sophisticated multivariate analyses controlling simultaneously for a large number of factors. The Vera researchers relied on cumbersome crosstabulations that greatly limited the number of variables that could be controlled for. Charge severity, for example, was not controlled for even though the severity class of the felony charge could reasonably be assumed to affect both likelihood of pretrial detention and the probable sentence.

Efforts to replicate and improve upon the Vera studies quickly followed. In the early 1970s, the Legal Aid Society undertook a study in support of a lawsuit brought on behalf of detained defendants in Brooklyn (Legal Aid Society of the City of New York 1972).[3] Like the Rankin study, the Legal Aid research was also restricted to defendants with public defenders in Manhattan, but the sample included defendants released on recognizance as well as on bail; and it included misdemeanor as well as felony cases (although the size of the sample was only slightly larger). The research design was more ambitious in that it controlled for a far greater number of factors, including a variety of offense variables (severity, type, and aggravated circumstances), weight of evidence, criminal record, family ties, employment status, and bail amount. The findings supported the Vera conclusions and went a step further: compared to released defendants, detained defendants were not only more likely to be convicted and sentenced to incarceration; if incarcerated, they were also sentenced to longer terms. The memorandum presented to the court in support of the lawsuit argued that the study provided hard data to prove "something which has been known by veteran criminal lawyers for a long time: The court's decision at arraignment to detain or release the accused is a crucial factor affecting the outcome of a case" (ibid., p. 460).

Much additional research has provided further evidence of a link between pretrial detention and dispositions, as attested to in recent reviews of the literature (e.g., Free 2005; Spohn 2000). However, this relationship was the primary focus for only a few studies, some decades old (e.g., Brocket 1973; Landes 1974; Clarke and Koch 1976; Koza and Doob 1975). More often, pretrial detention was one of many factors tested in studies of the effects of some other variable—usually sex or race—on case outcomes (Chiricos and Bales 1991; Crew 1991; Guevara et al. 2004; Holmes and Daudistel 1984; Humphrey and Fogarty 1987; Kruttschnitt and Green 1984; Lizotte 1978; Nagel et al. 1982; Spohn and Holleran 2000; Unnever 1982). These studies generally found that pretrial detention had a significant effect on case outcomes; sometimes it fully accounted for the effect of sex or race; and sometimes it interacted with demographic fac-

[3] *Wallace v. Kern*, 481 F.2d 621, 1973. The class action lawsuit was started by seven indigent defendants in the Brooklyn House of Detention, who later brought in attorneys from the Center for Constitutional Rights (CCR) and the National Lawyers Guild as counsel. The Association of Legal Aid Attorneys (ALAA) provided support, including the research by Eric W. Single of Columbia University's Bureau of Applied Social Research that is summarized in the text. The suit charged that the conditions of pretrial detention and inadequacy of legal representation resulted in a lack of due process and equal protection because of the economic status of defendants who could not post bail. The synopsis of this suit on CCR's website (www.ccr-ny.org/v2/about/history/04.asp) states that the initial decision was in favor of the plaintiffs but this decision was later overturned by the appellate court. In the view of CCR, the lawsuit was nonetheless successful because "many of the changes the inmates were fighting to achieve were implemented despite the appellate court's unwillingness to provide relief." In addition, the lawsuit led to the publication of a prisoners' rights manual for pretrial detainees. The ALAA also considered the outcome to be a favorable one, in spite of the appellate setback, because it ultimately strengthened the fledgeling union and led to better working conditions for Legal Aid attorneys (www.alaa.org/pages/History.pdf).

tors to affect outcomes differently for males compared to females, or for blacks compared to whites.

The biennial reports issued by State Court Processing Statistics (SCPS)[4] are routinely—but inappropriately—cited to support claims that pretrial detention leads to increased likelihood of conviction or incarceration. These reports present descriptive statistics from 40 jurisdictions representative of the nation's 75 most populous counties. Among the regularly included tables is a three-way crosstabulation showing the percent convicted among defendants who were detained to disposition, compared to those who were released prior to disposition, by charge type. Data for 2002 (the latest available) show that conviction was more likely for detained defendants, and that this was especially pronounced when the arrest charge was a violent felony offense (Cohen and Reaves 2006). Likewise, a special report focusing on pretrial release using 1992 data showed that incarceration was a more likely outcome for detained defendants than for released defendants, especially for public-order offenses (Reaves and Perez 1994). While these findings are consistent with the hypothesis of a causal relationship, they should not be cited as evidence for this conclusion because statistical controls are lacking.

Within the past five years, three studies have been published that used multivariate analyses to address directly the question of whether pretrial detention affects case outcomes (Kellough and Wortley 2002; Leiber and Fox 2005; Williams 2003). All found a relationship between detention and case outcomes, controlling for a wide range of legal and defendant characteristics. The most sophisticated of these methodologically was a large-scale study of juveniles in Iowa, using data over a 21-year period and a sample of over 5,000 cases (Leiber and Fox 2005). Regression analyses were used to model 7 different decision points, controlling for a large number of factors, including a statistical correction for sample selection bias for outcomes at the later stages of processing. Interactions between race and detention were also tested in the models. The authors concluded that both detention and race influenced outcomes: directly, indirectly, and in interaction with each other. This study provides convincing evidence of a causal relationship between detention and various outcomes for juveniles, but it is not clear how well these findings translate to adult courts, with different decision-making procedures affecting detention and a very different range of case outcomes.

Another study, using a sample of 1,800 Canadian cases from 1993-1994, found that pretrial detention was the strongest predictor of guilty pleas, controlling for more than a dozen case and defendant characteristics (Kellough and Wortley 2002). A strength of this research was that it included, in addition to multivariate statistical analysis, interviews with detained defendants shortly after their bail hearings. Evidence from this qualitative aspect of the study strongly indicated that many defendants planned to plead guilty quickly to get out of jail, or to be moved from a detention cell to a more comfortable correctional facility. Although such motives are also likely to be found among New York City detainees, the Canadian situation was a little different in that, according to the study's authors, pretrial detention time is not automatically deducted from Canadian jail or prison sentences (ibid., p. 199). In New York, a defendant facing a long jail term knows that the time spent in pretrial detention will count towards that sentence, and so may feel less pressure to plead guilty quickly to avoid doing "dead time." Incarceration and sen-

[4] Until 1994 this series, published by the Bureau of Justice Statistics, was known as the National Pretrial Reporting Program (NPRP).

tence length were not modeled, so this study provided no evidence regarding the effect of detention on post-conviction outcomes.

The third example of recent research that found a causal relationship between pretrial detention and case outcomes was a study using a small sample (N=412) of felony cases in Florida (Williams 2003). Incarceration and sentence length were modeled, controlling for offense seriousness, prior record, attorney type, time to disposition, age, and an interaction variable for sex and race.[5] Williams found that for convicted defendants, pretrial detention was the strongest predictor of incarceration and was a significant predictor (but not the strongest) of sentence length. However, conviction was not modeled, with the result that this study shed no light on how detention affected case outcomes for most defendants. The analysis also failed to account for the possibility that restricting the samples to convicted (and, for the sentence length model, incarcerated) defendants resulted in exaggerating the effect of detention on the later outcomes — effects that could have been partly due to the influence of detention on conviction (and, for the sentence length model, on incarceration).

Adding to the questions raised by these studies, some other research projects have found only inconsistent or weak evidence that detention affects case outcomes. Referring to the Vera and Legal Aid Society studies, authors of one large-scale study wrote: "We did not find the same strong relationships between bail status and final disposition that much previous research led us to expect" (Eisenstein and Jacob 1977, p. 200). Their research, using data from 1972 for felony cases, encompassed three cities—Chicago, Detroit, and Baltimore—with very inconsistent results. In Chicago and Detroit, detained defendants were no more likely to be convicted than released defendants, whereas in Baltimore detention was the most important predictor of conviction. Once convicted, detained defendants were more likely to be incarcerated in Detroit but not in Chicago. In none of the cities was detention status related to the length of the sentence (ibid., p. 284). This research was methodologically elaborate for its time (multiple regression and multiple discriminant function analysis were the statistical techniques employed to control for a wide range of variables) but detention status was combined with other defendant characteristics together in one variable, making it difficult to interpret the results.

The best known and most influential research to raise serious doubts about the link between detention and conviction was part of a larger project undertaken in the 1970s by John Goldkamp and his colleagues to establish systems of voluntary bail guidelines in Philadelphia, Boston, Miami, and Phoenix (Goldkamp 1979; Goldkamp and Goffredson 1985). Recognizing that the bail guidelines research raised important issues about the possible effects of bail and release decisions for case outcomes, Goldkamp addressed those implications using data from Philadelphia (Goldkamp 1979; 1980). The study was designed to improve upon prior research by using a more representative sample (i.e., defendants released on ROR and bail were included, and the sample was not restricted to Legal Aid clients); by instituting more elaborate statistical controls to rule out spurious relationships; by examining a wider range of case outcomes than simply conviction and incarceration; and by testing two measures of detention (released within 24 hours [no/yes]; and detained to disposition [no/yes]).

The results were mixed. No bivariate relationship was found between detention and dismissal of the case, so multivariate models were not estimated for the dismissal outcome. Deten-

[5] An interaction variable accounts for the combined effects of two variables. An interaction variable for sex and race, for example, could be coded: black female; black male; white female; white male.

tion was found to have very little impact on likelihood of diversion,[6] or on likelihood of conviction, once charge and criminal history variables were controlled for in multivariate analyses. These relationships were declared to be "spurious" and "inconsequential" (Goldkamp 1980, p. 243-245). On the other hand, pretrial detention had a powerful effect on likelihood of an incarcerative sentence. Goldkamp drew the cautious conclusion that "*this analysis has been unable to 'write off' the entire relationship as wholly an artifact of spuriousness.* The contention that pretrial detention 'causes' a greater likelihood of incarceration as a sentencing outcome, though unproven here, cannot in fairness be wholly rejected." (ibid., p. 250; emphasis in original). Finally, detention was found to have a weak, but still consequential, impact on sentence length.

Goldkamp's finding that there was no causal relationship between detention and disposition has been cited often (e.g., Wheeler and Wheeler 1981; Williams 2003), and it is clearly in accord with Goldkamp's own conclusions, but it may be worth noting that the regression models presented to support these conclusions actually show that detention had a statistically significant effect on both diversion and conviction (Goldkamp 1980, Table 3, p. 242; Table 5, p. 244). However, the additional proportion of variance in the outcome explained by detention, after the effects of all the control variables were accounted for, was only 1% in each model. This suggested such a small impact that Goldkamp was justified in dismissing it altogether. In very large samples, as these were, an effect can be statistically but not substantively significant. Statistical significance means that the effect is not likely to have occurred by chance, but the magnitude of the effect may still be too small to make any real difference in the outcome.

Other research has failed to bring consensus to the subject. No relationship between pretrial detention and conviction was found in a study of felony cases in Houston, controlling for offense type; but detained defendants who were convicted had significantly higher imprisonment rates than released defendants (Wheeler and Wheeler 1981). The opposite was found in a study of juveniles undertaken around the same time: detention had a weak effect on disposition (the effect varied depending on age, sex, and race) and no effect on sentence (Frazier and Bishop 1985).

Although the preponderance of the evidence seems to indicate that some outcomes, at least, are adversely affected by detention, it would be difficult to argue from this review of the empirical research that a causal connection between pretrial detention and any case outcome has been definitively established. Many of the studies are old, methodologically crude, or of limited applicability. Even the more statistically sophisticated studies often did not control for the selection bias that could result from restricting the sample to convicted defendants (when the outcome to be assessed was incarceration), or to defendants sentenced to incarceration (when the outcome was sentence length). Very few studies included nonfelony cases, which are the majority of arrests, and not one study was found that modeled nonfelony cases separately. Finally, the definition of "detained" was often not explicit in the studies examined; when defined, it frequently meant detention to disposition, but sometimes it was merely a measure of detention status at arraignment. Some differences in findings might be attributable to differing definitions of detention.

[6] The diversion disposition in Philadelphia was not a conviction, although it was similar to probation (Goldkamp 1980).

For all of these reasons, another look at the relationship between detention and case outcomes is needed to resolve lingering questions. The current study was designed to remedy shortcomings in the prior research, initially focusing on nonfelony cases because they have so long been ignored. This study represents the first research in over 30 years to focus on the effects of pretrial detention on case outcomes in New York City.

C. Research Questions

The link between judicial arraignment decisions and pretrial detention is in some respects obvious: ROR by definition means release for the defendant, and in most cases bail set in any amount results in at least some pretrial detention. However, it was far from obvious how differences in bail amounts correspond to differences in the duration of detention. The first research question addressed this preliminary issue:

- How does the amount of bail set at arraignment affect the length of pretrial detention?

The primary research goal was to assess the effect of pretrial detention on case outcomes for defendants charged with nonfelony offenses. Three distinct research questions were formulated to account for the likelihood, given the results of prior research, that pretrial detention affects different case outcomes in different ways:

- Does pretrial detention affect likelihood of conviction?
- Does pretrial detention affect likelihood of incarceration, for convicted defendants?
- Does pretrial detention affect sentence length, for incarcerated defendants?

For each of the three questions regarding the effect of detention on case outcomes, the research also addressed how different measures of detention might produce different findings.

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II. METHODOLOGY

A. Description of the 2003-2004 Dataset

The data for this study were drawn from the CJA database, which contains detailed information about the defendant, the arrest, case processing, and case outcomes in both Criminal Court and Supreme Court for most arrests in New York City. The database contains arrest data received from the New York City Police Department (NYPD), case-processing data from the Office of Court Administration (OCA), bail-making data from the New York City Department of Correction (DOC), and criminal-history, demographic, and community-ties data obtained during the CJA pre-arraignment interview.

The 2003-2004 Dataset was originally created for another research project, for which it had already been extensively checked for errors and missing data, and corrected where possible. The dataset contains all arrests in New York City from October 1, 2003, through January 31, 2004. For the current research, the sample was restricted to docketed cases with a nonfelony charge entering arraignment. The sample was further restricted to cases that were continued past arraignment and had reached a final disposition by the time the dataset was created: mid-September 2004 for dispositions in Criminal Court and December 2004 for Supreme Court.[7] By the cutoff dates, 94% of the docketed cases in the dataset had been disposed. Of the cases targeted for the research sample—nonfelony cases that were continued past arraignment—89% had reached disposition, mostly in Criminal Court. A small number of cases that entered the Criminal Court arraignment with a top charge less severe than a felony were disposed in Supreme Court, and they were also retained in the research sample (n=271). The final sample of nonfelony cases that were disposed post-arraignment contained 28,766 cases. Of the cases in the sample that resulted in a conviction, 98% had been sentenced by the cutoff dates.

Some cases in the dataset were affected by the court restructuring that was implemented in the Bronx in late 2004. Since the restructuring, virtually all cases with a criminal charge (misdemeanor or felony) that are not disposed at Criminal Court arraignment are transferred to the Bronx Supreme Court for disposition. As a result, Criminal Court cases in the Bronx are atypical compared to the rest of the City because only cases disposed at arraignment, and cases with a charge less severe than a misdemeanor, have a Bronx Criminal Court disposition. Likewise, Supreme Court cases in the Bronx are atypical because a large proportion of them are equivalent to cases disposed in Criminal Court elsewhere (nonfelony cases). Even though the September 2004 cutoff date for tracking Criminal Court data occurred prior to the November restructuring, some nonfelony cases still open in Criminal Court in September were later transferred to Supreme Court and disposed prior to the December 2004 cutoff date for Supreme Court data. This small group of cases (n=253, not included in the 271 Supreme Court cases mentioned in the previous paragraph) was coded as though their dispositions had occurred in Criminal Court.

[7] Supreme Court data were needed for a handful of cases that were upgraded to felonies; for an even smaller number of indicted misdemeanors; and for Bronx cases that were transferred to the Supreme Court after court restructuring in November 2004 resulted in the routine transfer of misdemeanors out of the Criminal Court at arraignment.

B. Plan of Analysis

Each research question was addressed using bivariate and multivariate analyses. The bivariate analyses show the association between bail amount and detention, and the associations between detention and the three case outcomes. The multivariate models examine the same relationships in greater depth by controlling for the effects of a large number of other factors that could also influence the outcome. If a statistically significant relationship found in a bivariate analysis is no longer significant in the multivariate analysis, we conclude that the relationship is spurious. If the relationship is still a significant one, controlling for all the other factors in the multivariate model, we conclude that the relationship might well be a causal one.

Logistic regression was used for the multivariate models that have a dependent variable with only two categories (*yes* or *no*), such as conviction and incarceration. For the models with a continuous dependent variable (detention length and sentence length) ordinary least squares (OLS) regression was used. For a fuller explanation of the statistical techniques used in the multivariate analyses, see Appendix A.

The statistical procedure used for the regression analyses provided an estimate of the effect of detention alone, after accounting for the combined effects of all the control variables. This estimate was obtained by entering the control variables into the regression analysis as a block, without including detention in this first step. The R^2 statistic produced at the conclusion of the first step ("block 1 R^2") is a measure of the amount of variation in the outcome explained by all of the control variables. Detention was added in the second step. The "model R^2" statistic produced at the conclusion of the second step is an estimate of the amount of variation in the outcome explained by the control variables together with detention. The difference between the model R^2 and the block 1 R^2 is interpreted as the unique contribution of detention to the explanatory power of the model.

In order to determine what aspect of detention had the greatest effect on the outcome, three different detention variables (described in the next section) were tested in both the bivariate and multivariate analyses. Each multivariate analysis includes three separate models that are identical except that a different detention variable was entered in the second step. In this way the relative strength of the effect of each detention measure on the outcome can be compared to the strength of the other two measures.

C. Variables Used in the Analyses

The dependent and independent variables used in the multivariate regression models are described briefly below; the control variables are merely listed. For a more detailed description of the measurement and coding of all variables, and the distribution of each variable in the sample, see Appendix B.

Dependent Variables

Length of pretrial detention: the number of days from arraignment to first release prior to disposition of the case, or, if no pretrial release, to disposition.

Conviction: the defendant pled guilty or was tried and found guilty (yes/no).

Incarceration: the sentence for a convicted defendant included jail or prison, including time served (yes/no).

Sentence length: the sentence length in days, for defendants sentenced to incarceration; for defendants sentenced to time served, sentence length equals the length of pretrial detention.

Independent Variables

Bail amount: the dollar amount of bail (set to equal the bond amount, or the lesser cash alternative if one was ordered) at arraignment on the sample docket.

Pretrial detention: three separate measures were tested in order to examine the effects of different aspects of detention on case outcomes. The definition of detention used in all three measures was "held on bail." Cases with a defendant who was remanded without bail were excluded from the analyses, as remand is rarely used in New York except to hold defendants for transfer to another jurisdiction or in other exceptional circumstances. The time spent in custody between arrest and arraignment was not included in any of the detention measures because it occurred prior to the setting of bail. The three detention variables were:

- *Detained at arraignment:* detention status at arraignment in Criminal Court (detained = held on bail; not detained = ROR or release on bail).
- *Length of detention:* same variable described above as a dependent variable, but when it was used as an independent variable it was recoded into five categories, ranging from "released day of arraignment" to "detained longer than 60 days."
- *Detention status to disposition:* a four-category variable indicating whether the defendant was at liberty from arraignment to disposition; was detained from arraignment to disposition; or went in and out of detention between arraignment and disposition.

Control Variables

Charge variables
Number of arrest charges
Felony arrest charge
Offense type of top arraignment charge
Severity class of top disposition charge

Defendant variables
Criminal history
Sex
Age
Ethnicity

Case-processing variables
Borough of prosecution
Time to disposition
Transfer to Supreme Court

CJA interview variables
Recommended by CJA
Defendant expects someone at arraignment
Defendant reports full-time employment

Sample selection bias correction variables
Likelihood of conviction
Likelihood of incarceration

Not all control variables were used in every model. For example, the selection bias corrections were used to control statistically for possible bias introduced by restricting the sample to convicted cases (*likelihood of conviction*, used in the incarceration model), or to cases with an incarcerative sentence (*likelihood of incarceration*, used in the sentence length model). Neither was appropriate for the detention length and conviction models, which did not restrict the sample to convicted or incarcerated cases. Likewise, the CJA interview variables were used as controls only for the model of detention length, which they could be expected to affect, and not for the models of case outcomes, where any effect they might have would be a consequence of their influence on detention.

III. EXTENT AND DURATION OF PRETRIAL DETENTION

A. Detention at Arraignment

Table 1 shows that in 75% of the sample cases the defendant was released at arraignment. Most of these releases were on recognizance: in 72% of all cases (or 96% of all releases, not shown) the defendant was released on recognizance at arraignment. In a small proportion of cases the defendant posted bail in court: in 3% of all cases (or 4% of all releases, not shown) the defendant made bail at arraignment.

The defendant was held on bail at arraignment in the remaining 25% of cases. (Cases in which the defendant was remanded without bail were not included in the sample, as noted earlier.) Borough variations ranged from a 16% detention rate in Staten Island to 29% in Queens. Cases in which bail was made post-arraignment at a Department of Correction (DOC) facility were categorized as detained even if the release occurred the same day as the arraignment.

TABLE 1
Detention Status At Criminal Court Arraignment
Citywide And By Borough
(Nonfelony Cases Continued Past Arraignment)

Detention Status at Arraignment	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
ROR	3938 69%	6,165 72%	6,197 76%	3,545 69%	952 79%	20,797 72%
Made bail	199 4%	233 3%	144 2%	128 2%	67 6%	771 3%
Total released	4,137 73%	6,398 75%	6,341 77%	3,673 71%	1,019 84%	21,568 75%
Held on bail	1,544 27%	2,127 25%	1,855 23%	1,479 29%	193 16%	7,198 25%
Total	5,681 100%	8,525 100%	8,196 100%	5,152 100%	1,212 100%	28,766 100%

Percentages may not sum to 100%, and percent ROR plus percent made bail may not equal the percent released, because of rounding.

B. Detention to Disposition

Once released, nonfelony defendants were likely to remain at liberty through final case disposition, as shown in **Table 2**. The defendant remained at liberty from arraignment to disposition in 72% of nonfelony cases citywide, or in 95% of cases with a release at arraignment. The percentage of cases in which the defendant was at liberty throughout the pretrial period was lowest in the Bronx (68%) and Queens (69%) and highest in Staten Island (81%). In well over 90% of cases with a defendant who was released at arraignment in every borough, the defendant remained at liberty to disposition.

TABLE 2
Detention To Disposition
Citywide And By Borough
(Nonfelony Cases Continued Past Arraignment)

Detention Status	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
Released from arraignment to disposition	3,839 68%	6,111 72%	6,096 74%	3,555 69%	982 81%	20,583 72%
Released at arraignment & detained prior to disposition	298 5%	287 3%	245 3%	118 2%	37 3%	985 3%
(At liberty throughout as % of all released at arraignment)	(93%)	(96%)	(96%)	(97%)	(96%)	(95%)
Held on bail at arraignment & released prior to disposition	540 10%	938 11%	826 10%	847 16%	84 7%	3,235 11%
Detained from arraignment to disposition	1,004 18%	1,189 14%	1,029 13%	632 12%	109 9%	3,963 14%
(Detained throughout as % of all held on bail at arraignment)	(65%)	(56%)	(55%)	(43%)	(56%)	(55%)
Total	5,681 100%	8,525 100%	8,196 100%	5,152 100%	1,212 100%	28,766 100%

For defendants held on bail at arraignment there was more likely to be a change in pre-trial release status, although the majority remained in detention to disposition. Detention throughout the case occurred in 55% of cases citywide in which the defendant was held on bail at arraignment, or in 14% of all cases. The borough with the highest proportion of cases in which the defendant was detained to disposition was the Bronx (65% of cases with a defendant who was held on bail at arraignment, or 18% of all cases). Detention throughout the case was least likely in Staten Island (56% of cases with a defendant held on bail at arraignment, or 9% of all cases).

Queens and Staten Island present contrasting patterns. Although Queens had the higher rate of detention at arraignment (29%, compared to 16% in Staten Island; Table 1), defendants initially held on bail in Queens were less likely to stay in jail to disposition. Less than half of Queens detainees spent the entire pretrial period in jail (43% of those held at arraignment), compared to 56% of detainees in Staten Island (Table 2). The Bronx, on the other hand, had a high detention rate at arraignment (27%, Table 1) **and** the highest proportion of detainees who were held throughout the case (65%, Table 2), with the result that the Bronx was the borough with the

highest proportion of all cases with a defendant who spent the entire pretrial period in detention (18%).

For a sizeable minority of cases, about 15% of the citywide total, detention status changed at least once during the pretrial period. (Some defendants' detention status changed several times prior to case disposition, but attempting to track every movement into and out of custody was beyond the scope of this research.) In 72% of cases the defendant remained at liberty during the entire pretrial period, and in 14% of cases the defendant remained in custody for the entire period. In the remaining cases, the defendant was released initially and later detained (3%), or held on bail at arraignment and eventually released prior to disposition (11%).[8]

C. Length of Detention

The length of time defendants spent in pretrial detention is presented in **Table 3**. This measure represents the elapsed time in days from arraignment to the first predisposition release, or, in the absence of any release, to disposition of the case. The defendant was released on the day of arraignment (including 165 cases in which the defendant made bail at a DOC facility on the day of arraignment, not shown) in 76% of nonfelony cases citywide**.** In another 3% of cases the defendant was released the day after arraignment, followed by an additional 3% over the next two days.

There was a big jump in the number of cases for which pretrial detention ended on the fourth or fifth day after arraignment — 7% of all cases on those two days — at least in part because release is mandatory (under New York's Criminal Procedure Law §170.70) if the prosecutor fails to convert the misdemeanor complaint to an information within 5 days after arrest (6 days if a Sunday intervenes), which would fall on the fourth or fifth day after arraignment for most cases. After five days the defendant had been released or the case disposed in 89% of nonfelony cases. (A more precise estimate of the proportion attributable to mandatory release is given in Figure 1, following Table 5.)

The release/disposition rate slowed to a trickle after five days, and defendants who were still being held in pretrial detention after a week were likely to stay there for weeks or months longer. By 30 days after arraignment, the defendant in 96% of nonfelony cases was no longer being held in pretrial detention; after another month, 98%. In 311 nonfelony cases (about 1% of the sample), the defendant spent more than three months in pretrial detention.

[8] Cases with a defendant who was remanded without bail at arraignment were excluded from the analyses, but sometimes bail or ROR was revoked and a defendant was subsequently remanded without bail (usually because of a rearrest). Remand was not distinguished from detention on bail when it occurred post-arraignment.

TABLE 3
Length Of Pretrial Detention In Days
Citywide And By Borough
(Nonfelony Cases Continued Past Arraignment)

Detention Length	Bronx	(cum.)	Brooklyn	(cum.)	Manhattan	(cum.)	Queens	(cum.)	Staten Island	(cum.)	Citywide	(cum.)
Released day of arraignment[9]	4,168 73%	73%	6,429 75%	75%	6,408 78%	78%	3,708 72%	72%	1,020 84%	84%	21,733 76%	76%
1 day	105 2%	75%	254 3%	78%	243 3%	81%	285 6%	78%	27 2%	86%	914 3%	79%
2–3 days	195 3%	79%	256 3%	81%	221 3%	84%	258 5%	83%	30 2%	89%	960 3%	82%
4–5 days	544 10%	88%	627 7%	89%	489 6%	90%	366 7%	90%	64 5%	94%	2,090 7%	89%
6–7 days	81 1%	90%	132 2%	90%	67 1%	91%	86 2%	91%	7 1%	95%	373 1%	91%
8–14 days	128 2%	92%	250 3%	93%	137 2%	92%	127 2%	94%	19 2%	96%	661 2%	93%
15–21 days	100 2%	94%	136 2%	95%	112 1%	94%	71 1%	95%	8 1%	97%	427 1%	94%
22–30 days	97 2%	95%	124 1%	96%	120 1%	95%	69 1%	96%	11 1%	98%	421 1%	96%
31–60 days	138 2%	98%	176 2%	98%	194 2%	97%	109 2%	99%	15 1%	99%	632 2%	98%
61–90 days	54 1%	99%	66 1%	99%	82 1%	98%	35 1%	99%	7 1%	100%	244 1%	99%
91–120 days	36 1%	99%	42 <1%	100%	76 1%	99%	27 1%	100%	3 <1%	100%	184 1%	100%
121+ days	35 1%	100%	33 <1%	100%	47 1%	100%	11 <1%	100%	1 <1%	100%	127 <1%	100%
Total	5,681 100%		8,525 100%		8,196 100%		5,152 100%		1,212 100%		28,766 100%	

Percentages do not always total 100%, and cumulative percents do not always equal the sum of individual percents, because of rounding.

In **Table 4**, this information is recast, excluding cases with a release at arraignment, to show how long it took for selected percentiles of the detained population to reach the end of their pretrial detention (recognizing that sometimes pretrial detention ended, not by release, but by disposition of the case, which could result in further incarceration). Pretrial detention ended within 3 days for 25% of detainees; within 5 days for half of detainees; within 10 days for two thirds of detainees; within 18 days for three quarters of detainees; within 50 days for 90% of detainees; within 82 days for 95% of detainees; and within 146 days for 99% of detainees. It took 332 days to reach the end of pretrial detention for every person who had been held on bail at arraignment.

[9] Along with ROR and bail made at arraignment, also included are cases in which the defendant was held on bail at arraignment and gained release the same day by posting bail at a Department of Correction (DOC) facility.

TABLE 4
Number Of Days To Release Or Case Disposition By Percentile
Citywide And By Borough[10]
(Nonfelony Cases With A Defendant Held On Bail At Arraignment)

Percentile Released or Disposed	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
25%	4	3	3	2	3	3
50%	5	5	5	5	5	5
66%	11	10	15	6	7	10
75%	20	17	26	11	13	18
90%	51	42	65	37	46	50
95%	88	68	100	60	62	82
99%	152	153	155	112	105	146
100%	332 (n=1,544)	281 (n=2,127)	262 (n=1,855)	327 (n=1,479)	126 (n=193)	332 (n=7,198)
Mean	19	17	22	13	14	18
Median	5	5	5	5	5	5
Maximum	332	281	262	327	126	332

The average (mean) length of detention for nonfelony defendants who were detained at arraignment citywide was 18 days, as shown at the bottom of Table 4. The longest average detention time was in Manhattan (22 days) and the shortest was in Queens (13 days). However, the median length of time spent in detention in all boroughs was 5 days, which means that in every borough, detention time was equal to or shorter than 5 days for at least half of the cases. The higher *mean* detention time in Manhattan, compared to other parts of the City, reflects the fact that when defendants were held for more than 5 days in Manhattan, they tended to stay in for a longer time. This is evident from the data in Table 4 showing that detention lasted longer in Manhattan for each percentile above 50% (with the exception of the 100th percentile). For example, it took 100 days in Manhattan, compared to 60 days in Queens, for 95% of cases to reach the end of pretrial detention,

[10] Includes 165 cases with a defendant who made bail at a DOC facility on the same day as the arraignment. These cases were assigned a value of zero for length of detention.

D. Relationship Between Length of Detention and Detention to Disposition

Even though a quick guilty plea could make the pretrial detention period short for some defendants held to disposition, it is still a reasonable assumption that the longer the period of pretrial detention, the more likely that the defendant was detained to disposition. **Table 5** shows that this is indeed the case. Only 7% of cases with one day of pretrial detention had a defendant who was held to disposition. Among cases with a detention length of 2 to 3 days, defendants who were jailed to disposition remained in the minority (26%). Among cases in all the higher ranges of detention length, over half had a defendant who was still in custody at disposition. That proportion rose from 56% for cases with 4 or 5 days of pretrial detention to 90% or higher for cases with more than 60 days of pretrial detention.

TABLE 5
Percent Detained To Disposition By Length Of Pretrial Detention
Citywide And By Borough[11]
(Nonfelony Cases With A Defendant Held On Bail At Arraignment For 1 Day Or Longer)

Detention Length	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
1 day	8% (N=105)	8% (N=254)	12% (N=243)	1% (N=285)	30% (N=27)	7% (N=914)
2–3 days	41% (N=195)	24% (N=256)	31% (N=221)	14% (N=258)	27% (N=30)	26% (N=960)
4–5 days	70% (N=544)	50% (N=627)	53% (N=489)	46% (N=366)	56% (N=64)	56% (N=2,090)
6–7 days	48% (N=81)	82% (N=132)	40% (N=67)	66% (N=86)	71% (N=7)	63% (N=373)
8–14 days	75% (N=128)	74% (N=250)	73% (N=137)	70% (N=127)	74% (N=19)	73% (N=661)
15–21 days	78% (N=100)	85% (N=136)	82% (N=112)	83% (N=71)	63% (N=8)	82% (N=427)
22–30 days	89% (N=97)	87% (N=124)	83% (N=120)	87% (N=69)	82% (N=11)	86% (N=421)
31–60 days	91% (N=138)	85% (N=176)	87% (N=194)	84% (N=109)	93% (N=15)	87% (N=632)
61–90 days	87% (N=54)	88% (N=66)	90% (N=82)	94% (N=35)	100% (N=7)	90% (N=244)
91–120 days	89% (N=36)	86% (N=42)	95% (N=76)	85% (N=27)	67% (N=3)	90% (N=184)
121+ days	100% (N=35)	88% (N=33)	85% (N=47)	91% (N=11)	100% (N=1)	91% (N=127)
Total	66% (N=1,513)	57% (N=2,096)	58% (N=1,788)	44% (N=1,444)	57% (N=192)	56% (N=7,033)

(The N in parenthesis in each cell represents the total number on which the percentage is based.)

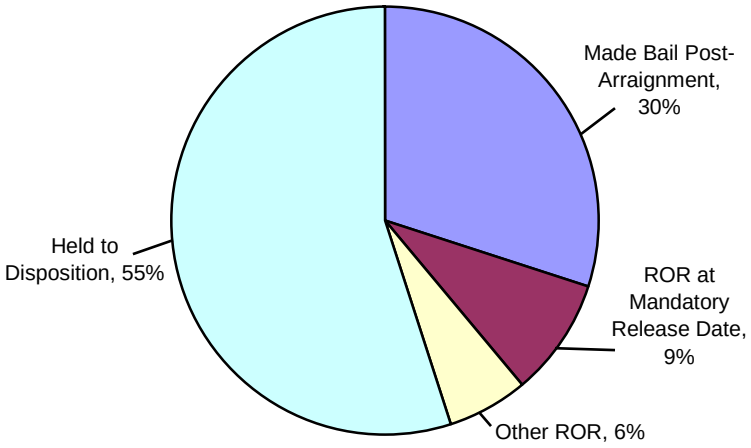
[11] The total number included in this table is smaller than for Table 4 because cases with a defendant who posted bail at a DOC facility on the same day as arraignment (n=165) are excluded from this table, whereas they were included in Table 4.

E. Detention Outcomes

Figure 1 shows how pretrial detention was concluded for all cases with a defendant held on bail at arraignment. In less than a third of these cases (30%), the defendant eventually made bail prior to disposition; in over half of them (55%), the defendant was never released prior to disposition. [12]

In the remainder of cases (15%), the defendant was released on recognizance prior to disposition. The timing of the majority of these releases was consistent with mandatory release requirements that affect defendants who are still in detention five or six days after arrest if the prosecutor has not yet filed formal charges.[13] RORs that occurred outside this time frame were probably made for some reason other than the mandatory release law, such as a breakdown of the evidence that convinced the judge that the defendant would not be convicted.

FIGURE 1
Detention Outcomes
For Nonfelony Cases With A Defendant Held On Bail At Arraignment



N = 7,198

[12] The percent detained to disposition reported in Table 5 is slightly higher (56%) because Figure 1 includes all cases with a defendant held on bail at arraignment, whereas Table 5 includes only defendants held on bail for at least one day.

[13] The criteria for including a case in the category "ROR at Mandatory Release Date" were: (a) the defendant was held on bail at arraignment; and (b) ROR was ordered 5 or 6 days after arrest. There is no way of knowing from our data why the judge ordered ROR, so this estimate—based on the timing and type of release—may include some releases that were ordered for other reasons, and may exclude some made because of the mandatory release requirements that occurred outside this time frame.

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IV. EFFECT OF BAIL AMOUNT ON DETENTION

Bail was set at arraignment in 28% of the cases in the nonfelony sample (Table 1), in amounts ranging from $50 to $50,000. The mean bail amount was $1,119, and the median was $750. (Cases with bail set at $1 were excluded from the calculation of means and medians, and from the following analyses, because a $1 bail amount indicates that higher bail was set, or the defendant was remanded, on another case.)

In the previous section data were presented showing that bail set at arraignment was usually followed by a stay in jail, sometimes a protracted one, prior to disposition. Only a small proportion of defendants posted bail at arraignment (Table 1), and for those who did not, half stayed in jail for 5 days or longer (Table 4).

It stands to reason that the amount of bail set, in combination with the defendant's financial resources, would affect how quickly release is obtained. In general, one would expect defendants to be able to make bail more quickly when the amount is relatively low. However, high bail amounts could actually lead to shorter periods of pretrial detention if the prospect of a lengthy jail stay influences defendants to plead guilty quickly. In addition, bail bondsmen may be more willing to underwrite high bail amounts, which are more profitable, leaving defendants with low bail to fend for themselves (Kennedy and Henry 1997). Procedural considerations, such as the law requiring release after 5 days if the prosecutor has not filed an information (CPL §170.70), also play a role. (A similar statute pertaining to felony cases was not applicable to this sample of defendants charged with misdemeanor and lesser offenses.) Finally, it could be that for many defendants the bail amount is irrelevant because raising any sum is beyond reach.

A. Bivariate Analysis

Despite these complications, low bail amounts were found to be associated with shorter detention, and high bail amounts were associated with longer detention, as shown in **Table 6**. The mean number of days the defendant spent in pretrial detention was 8 days for cases with bail set under $500, compared to 32 days for cases with bail set at $4,000 or higher. The mean detention length increased with each increase in bail amount. The medians also rose: from 4 days for cases with bail set below $750 to 8 days for cases with bail set at $4,000 or higher.

Without knowledge of a particular defendant's financial resources, or taking into account other facts about the defendant or the case, a judge setting bail under $500 could estimate a 13% probability that the defendant would make bail at arraignment; a 21% probability that the defendant would not make bail at arraignment but would be out within a day; a 6% probability that the defendant would be released on recognizance on or around the CPL §170.70 date; a 24% probability that he or she would remain in jail for a week or more; and a 44% probability that this defendant would not gain release prior to disposition of the case. For cases with bail set at $4,000 or higher, the probability that the defendant would make bail at arraignment or be out within one day decreased to 4% and 8% respectively, while the likelihood of remaining in detention for a week or longer rose to 52%.

As expected, the proportion of cases in which the defendant was apparently released under the mandatory release statute, CPL §170.70, did not vary much with bail amount because mandated release does not require any bail to be posted. The estimated percent of mandatory releases did not vary from the overall mean (9%) by more than a few percentage points for cases in any bail amount category.

Table 6
Length Of Pretrial Detention By Bail Amount At Arraignment[14]
(Nonfelony Cases With Bail Set At Arraignment)

Bail Amount	Number of cases	Mean detention length (in days)	Median detention length (in days)	Bail made at arraignment	Detained 1 day or less	Mandatory release[15]	Detained 7 days or longer	Detained to disposition
Less than $500	574 (100%)	8	4	72 (13%)	118 (21%)	34 (6%)	135 (24%)	253 (44%)
$500–$749	2,547 (100%)	11	4	345 (14%)	461 (18%)	194 (8%)	674 (26%)	1,078 (42%)
$750–$999	958 (100%)	14	5	97 (10%)	128 (13%)	95 (10%)	293 (31%)	447 (47%)
$1,000–$1,499	1,634 (100%)	15	5	156 (10%)	198 (12%)	142 (9%)	584 (36%)	810 (50%)
$1,500–$1,999	815 (100%)	17	5	47 (6%)	78 (10%)	81 (10%)	349 (43%)	461 (57%)
$2,000–$3,999	796 (100%)	24	6	44 (6%)	55 (7%)	80 (10%)	392 (49%)	459 (58%)
$4,000 and above	171 (100%)	32	8	7 (4%)	13 (8%)	12 (7%)	89 (52%)	100 (58%)
Combined amounts	7,495 (100%)	15	5	768 (10%)	1,051 (14%)	638 (9%)	2,516 (34%)	3,608 (48%)

Because the five columns at right both overlap and omit some possibilities, they do not total 100%.

B. Multivariate Analysis

A multivariate analysis confirmed that the bail amount set at arraignment was the strongest predictor of the length of pretrial detention, controlling for a large number of defendant and case characteristics (**Table 7**). Every $1,000 increase in bail amount was accompanied by an average increase of 2.3 days in pretrial detention time (standardized *beta* = .14).

Nearly as important a predictor of detention length was a prior felony conviction (standardized *beta* = .12). Defendants with a prior felony conviction spent an average 6.83 days longer in detention than defendants with no previous adult arrests, after accounting for other significant factors. In addition, disposition on a felony charge in the instant case significantly increased length of detention by 21.67 days (standardized *beta* = .10), compared to disposition on a class A misdemeanor.

Weaker, but statistically significant, relationships were found between detention length and some variables derived from information collected in the CJA interview, including the CJA recommendation, whether the defendant expected someone at arraignment, and employment. These relationships were negative, indicating that a lack of family and community ties, as well as lack of income, led to longer detention.

(continued on page 24)

[14] Cases with bail set at $1 (n=474) were excluded.

[15] Criteria used to estimate release under CPL §170.70: the defendant was held on bail at arraignment and not released until ROR was ordered 5 or 6 days after arrest.

TABLE 7
Ordinary Least Squares Regression Model Of Length Of Pretrial Detention
(Nonfelony Cases With Bail Set At Arraignment: N=6,585)[16]

Independent Variables	Standardized ß	ß
Amount of bail set at arraignment (in dollars) divided by 1,000	0.14***	2.30
Recommended by CJA	–0.03*	–2.33
Defendant expects someone at arraignment	–0.06***	–3.71
Defendant reports full-time employment	–0.04**	–2.14
Number of arrest charges *(1- 4)*	0.01	0.26
Felony arrest charge	0.02	0.98
Offense type of top arraignment charge: *(Reference category = harm to persons)*		
Weapon	<–0.01	–0.60
Property crime	0.05***	3.91
Drug	–0.05**	–3.28
Sex crime	–0.01	–2.55
Theft intangible	–0.01	–1.64
Misconduct	–0.02	–1.83
Obstruction of justice	–0.01	–1.05
Vehicle & Traffic Law	–0.04**	–5.01
Type unknown / other	–0.01	–4.17
Severity class of top disposition charge: *(Reference category = class A misdemeanor)*		
Felony	0.10***	21.67
Class B or unclassified misdemeanor	–0.02	–1.24
Violation or infraction	–0.03*	–2.04
Borough *(Reference category = Bronx)*		
Brooklyn	<–0.01	–0.20
Manhattan	0.04*	2.59
Queens	–0.03	–1.83
Staten Island	–0.02	–3.95
Criminal History *(Reference category = first adult arrest)*		
Prior adult arrest	0.01	0.94
Misdemeanor conviction	0.02	1.03
Felony conviction	0.12***	6.83
Sex *(male=1, female=2)*	<–0.01	–0.40
Age *(Reference category = age 21-30)*		
16-18	0.01	1.79
19-20	<0.01	0.29
31-40	<–0.01	–0.20
41-50	–0.01	–0.54
51-60	–0.02	–2.49
61+	–0.01	–3.72
Ethnicity *(Reference category = black)*		
Hispanic	<0.01	0.04
White	–0.02	–1.51
Other	–0.02	–3.63
Model R^2 = .07		

Dependent variable: Length of pretrial detention in days. See Appendix B for variable coding.
*statistically significant at p < .05; **statistically significant at p < .01; ***statistically significant at p < .001

[16] Excluding cases with bail set at $1.

Other weak predictors of detention length included several offense types: Drug charges and VTL (Vehicle and Traffic Law) offenses at arraignment were associated with shorter detention, and charges classified as property crimes were associated with longer detention, compared to offenses in the "harm to persons" category. (For descriptions of offense type categories and the charges included in each, see Appendix B.) Finally, prosecution in Manhattan was associated with a small but statistically significant increase in detention length, compared to the reference category (the Bronx), even after controlling for other explanatory factors. This supports the earlier observation that the longest mean detention times were found in Manhattan (Table 4).

All together, the variables in the model accounted for only 7% of the variance, indicating that it is very difficult to predict with any degree of accuracy how long a defendant will remain jailed once bail is set.

V. EFFECT OF DETENTION ON CONVICTION

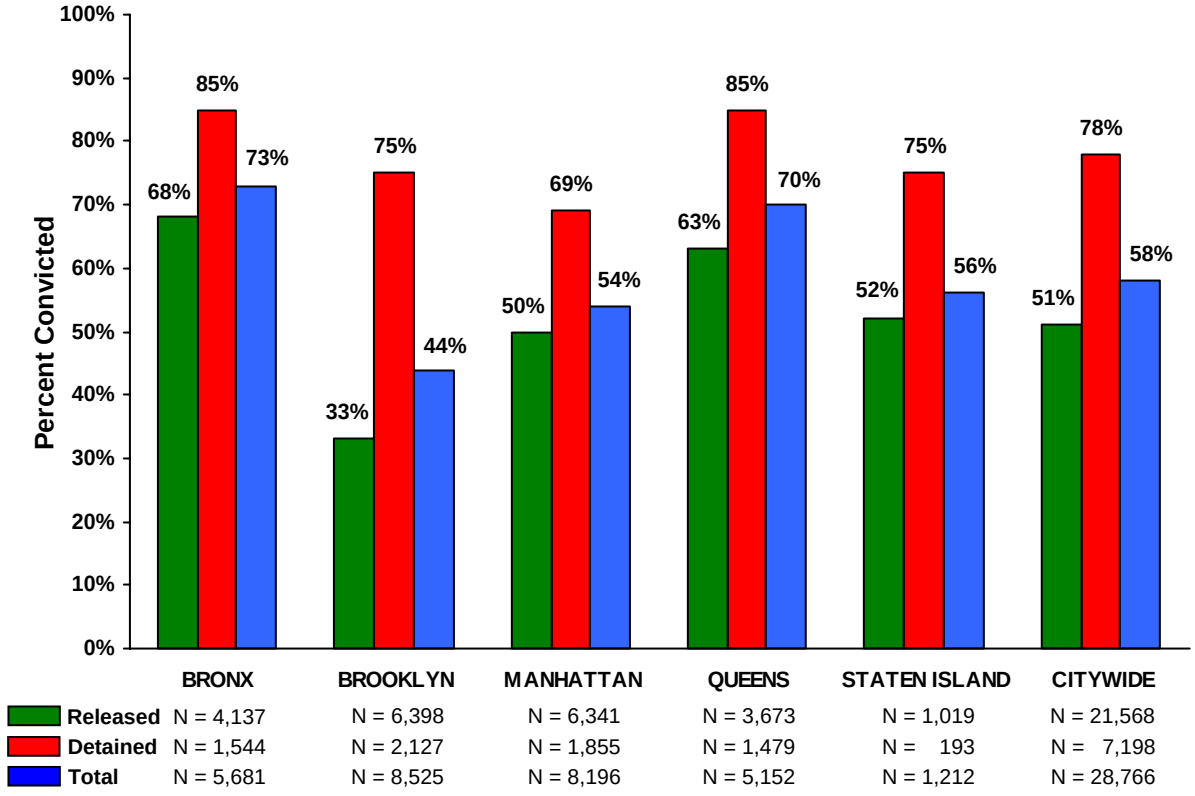
A. Bivariate Analyses

Bivariate relationships between the likelihood of conviction and the three measures of detention are shown in Figures 2, 3, and 4.

A conviction was obtained in over half of nonfelony cases citywide (58%), but there were wide borough variations, as shown in **Figure 2.** Conviction rates ranged from 44% in Brooklyn to 73% in the Bronx.

A conviction was much more likely in cases with a defendant who was detained at arraignment, regardless of whether it occurred in a borough with a high or a low conviction rate. Citywide, 51% of cases with a released defendant ended in conviction, compared to 78% of cases with a detained defendant. The association between detention and conviction was statistically significant in all boroughs, but it was especially strong in Brooklyn. The conviction rate for cases with a released defendant in Brooklyn was only 33%, compared to 75% of cases with a detained defendant—an increase of 42 percentage points. The increase in conviction rate for cases with a detained defendant, compared to cases with a released defendant, was in the range of 17 to 23 percentage points in all other boroughs.

FIGURE 2
Conviction Rate For Nonfelony Cases
By Detention Status At Arraignment
Citywide And By Borough



Likelihood of conviction appeared to be affected, not only by detention at the arraignment appearance, but also by how long the period of detention lasted. The conviction rate rose within each range of detention length shown in **Figure 3,** up to two months. Citywide conviction rates were lowest for cases with no detention (51%; including cases with a defendant who made bail at a DOC facility on the same day as the arraignment); higher for cases with one day of detention (67%); even higher for cases with 2 to 7 days of detention (76%); and highest for cases with 8 to 60 days of detention (88%). In every borough the same pattern was found.

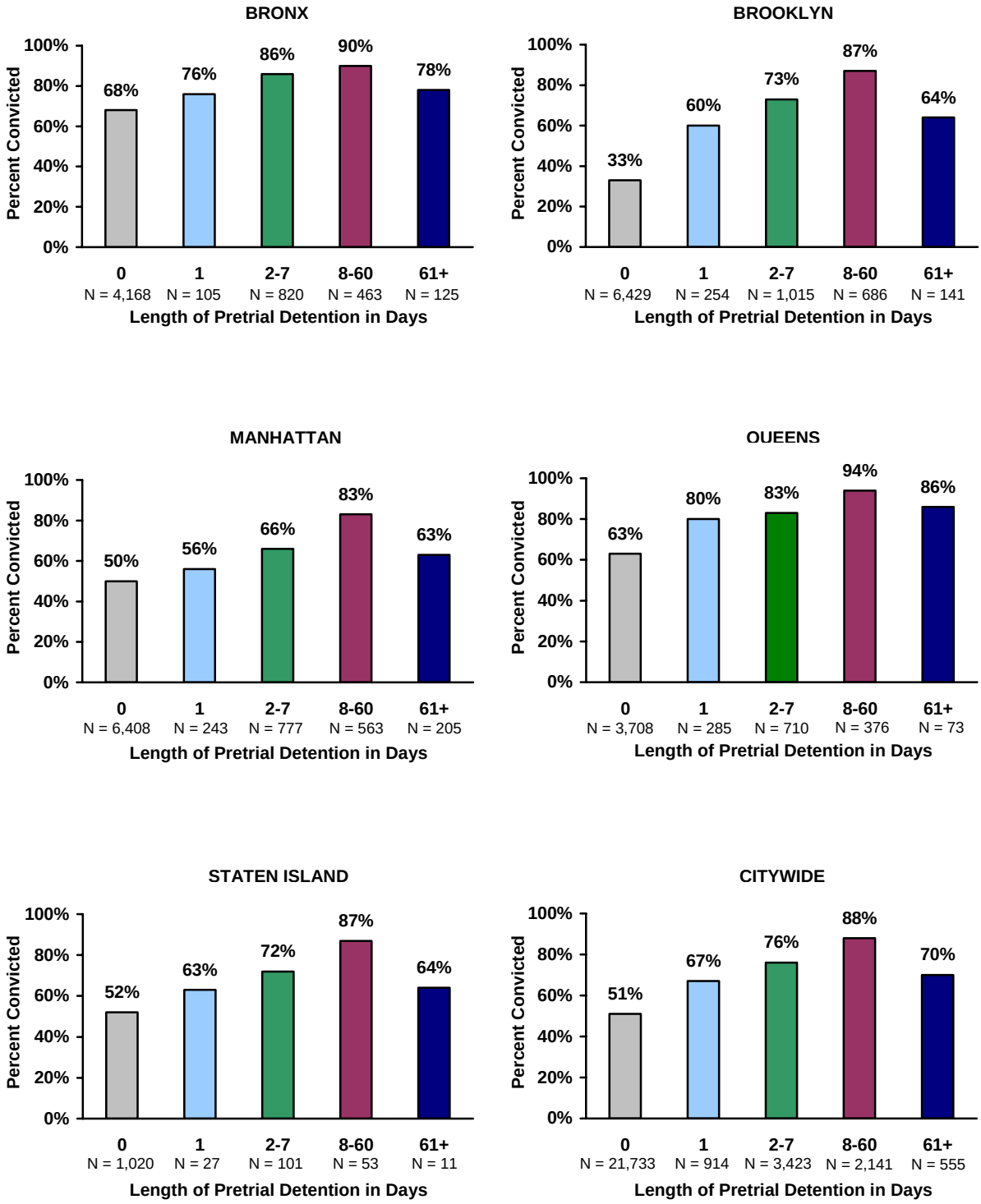
For cases with over 60 days of detention, however, likelihood of conviction dropped to 70% citywide, and a comparable drop was found in every borough. This group of cases with extremely long detention times comprised a very small subset of cases (only 2% of the sample). A tentative explanation for their relatively low conviction rate, in spite of the fact that nearly all were detained to disposition (90%, not shown), is suggested by the fact that a disproportionate number of defendants in this subset had another case open concurrently (46%, compared to only 27% in the sample as a whole; not shown). The long period of detention, unusual for nonfelony cases, could be a reflection of what was happening on another case rather than on the sample case.[17]

Even one day of detention was associated with a sizeable increase in the conviction rate. Citywide, a 16-percentage-point increase in conviction was found for cases with no detention compared to cases with one day of detention. This was the largest increase between any two detention-length categories. The effect of only one day of detention was most notable in Brooklyn, where the conviction rate was 33% for cases with no detention compared to 60% for cases with one day of detention.

The data presented in Figure 3 show that most of the borough variation in overall conviction rates can be attributed to cases with the least amount of detention. For cases with no detention, conviction rates ranged from 33% in Brooklyn to 68% in the Bronx, a spread of 35 percentage points. For each increase in detention length up to 60 days, the borough differences diminished. Among cases with a defendant who was in detention from 8 to 60 days, most defendants were convicted in every borough (from 83% in Manhattan to 94% in Queens).

[17] Data on open cases may be unreliable, so the search for an explanation was expanded to an examination of cases with $1 bail set at arraignment. Bail was set at $1 on a disproportionately large number of cases with over 60 days detention, which supports the "other case" explanation because judges often set $1 bail when the defendant is remanded, or held on higher bail, on another case. Bail in the amount of $1 was set at arraignment for 22% of the cases in this subset, compared to 2% for the sample as a whole. Moreover, a spot check showed that in many cases with a higher amount of bail set at arraignment, the amount was changed to $1 post-arraignment. The bivariate analyses were re-run several ways: excluding cases with a defendant who had an open case at the time of arrest on the sample case; excluding cases with a defendant who had $1 bail set at arraignment; excluding cases with a defendant who had either an open case or $1 bail; excluding cases with multiple dockets or an open case; excluding cases with a defendant who had another case in the research file (indicating a re-arrest during the study period). However, as none of these exclusions made much difference in the results, the explanation is suggested as a partial one at best.

FIGURE 3
Conviction Rate For Nonfelony Cases By Length Of Pretrial Detention Citywide And By Borough



The most important measure of detention appeared to be the third: whether the defendant was in detention, or at liberty, throughout the pretrial period. Data were presented earlier showing that there was a strong likelihood that defendants held in detention for more than a week were never released pretrial, and the longer the detention, the more likely this was to be true (Table 5). However, some defendants whose cases were disposed very quickly were also detained to disposition, and some defendants were released pretrial after months in detention. The two measures are therefore quite distinct, though closely related.

Figure 4 compares conviction rates for cases with a defendant who was released throughout the pretrial period; cases with a defendant who was detained at arraignment but released at some point following the arraignment and prior to disposition; cases with a defendant who was released at arraignment but spent some time in detention prior to disposition; and cases with a defendant who was held in detention for the entire pretrial period.

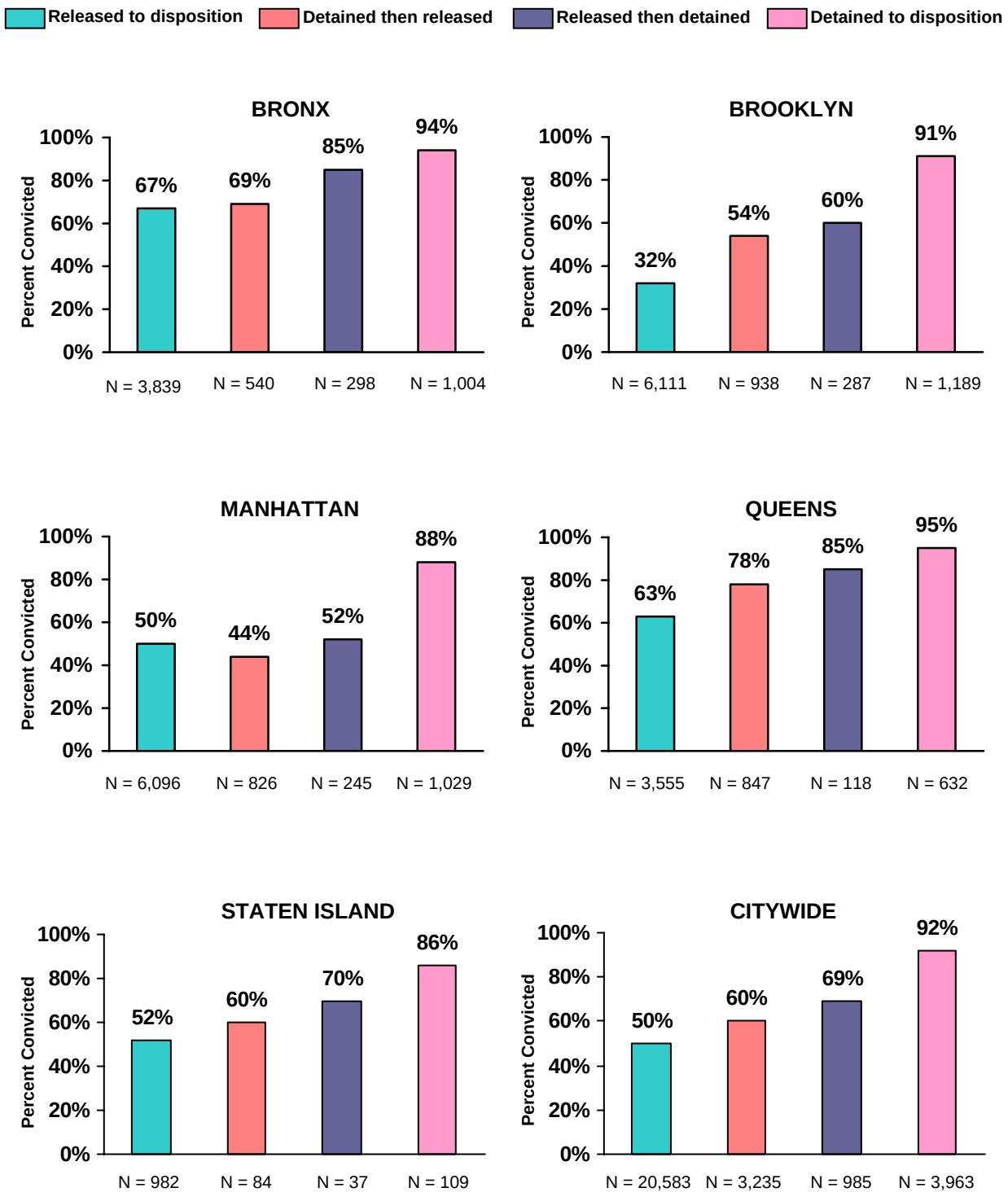
Conviction rates were highest for cases in which the defendant was not released prior to disposition. The citywide conviction rate for cases with no pretrial release was 92%. By contrast, the conviction rate for cases in which the defendant was at liberty from arraignment to disposition was 50%—not much different from the conviction rate shown in Figure 2 for release at arraignment (51%), or from the rate shown in Figure 3 for zero days detention (which includes 164 cases in which the defendant posted bail later the same day; also 51% convicted). These categories overlapped considerably because most defendants released at arraignment stayed at liberty for the duration of the case.

As might be expected, conviction rates for cases with a defendant who spent some, but not all, pretrial time in detention fell in a midrange between the low rates for cases with no pretrial detention and the high rates for cases with no pretrial release. Release after an initial period of detention was associated with a citywide conviction rate of 60%—10 percentage points higher than the rate associated with no pretrial detention (50%). Detention following an initial release was associated with still higher conviction rates (69% citywide).

Although there was much borough variation in the effect on likelihood of conviction found for each detention-to-disposition category, the relative order of effects was the same in each borough (with one exception): the lowest conviction rate was associated with no detention, followed by detention at arraignment with later pretrial release, followed by release at arraignment with later pretrial detention, followed by no pretrial release. The exception was in Manhattan, where detention at arraignment with later release was associated with a lower conviction rate (44%) than no detention at all (50%). Likelihood of conviction in Manhattan increased noticeably only for cases with no pretrial release, compared to all others.

Pearson's product moment correlations confirm that all three detention variables had a statistically significant relationship with conviction, of moderate strength. The strongest relationship with conviction was found for detention to disposition ($r = .29$). The correlations of conviction with detention at arraignment and with length of detention (both $r = .24$) were weaker.

FIGURE 4
Conviction Rate For Nonfelony Cases By Detention To Disposition Citywide And By Borough



B. Multivariate Analyses

Each measure of detention had a strong bivariate relationship to conviction, so each was also tested in a multivariate statistical model, controlling for a wide range of case and defendant characteristics. **Table 8** shows the results of the multivariate analyses, using logistic regression to measure the proportion of variance in the outcome (conviction, in this case) that was explained by the variables in the analyses. Three models are presented in the table: the same control variables were used in all three models, but they differed in the measure of detention that was entered in each. In Model 1 the detention variable was detention status at arraignment; in Model 2 the detention variable was length of pretrial detention; in Model 3 the detention variable was detention status to disposition.

The control variables were first entered together as a block, and the proportion of variance in conviction outcomes explained by all of them together is presented as the Nagelkerke R^2 for block 1. The R^2 for the control variables (block 1) was .30 for all three models, which is interpreted to mean that roughly 30% of the variation in conviction could be accounted for by these factors alone. The detention variable was entered after the first block of variables so that its independent contribution to the model R^2 could be assessed. The model R^2 is the proportion of variance explained by all of the variables, including detention, so the unique contribution of detention is the difference between the block 1 R^2 and the model R^2.

In Model 1, the addition of detention raised the R^2 to .32, an increase of 2 percentage points over the variance explained by the control variables. The model R^2 for Model 2 was .33, only slightly better. It made little difference whether detention was measured merely as detention status at arraignment (Model 1) or as the length of time the defendant spent in pretrial detention (Model 2). Each of these detention variables had a statistically significant impact on likelihood of conviction, but not much additional variance was explained when detention status was known. Offense type and the borough of prosecution were the factors that most strongly affected likelihood of conviction.

Model 3 shows that the aspect of pretrial detention most important for likelihood of conviction was whether a defendant was jailed for the duration of the case. With the measurement of detention used in Model 3 (detention status to disposition), the addition of detention to the multivariate analysis increased the explained variance from .30 to .36, meaning that detention alone explained 6% of the variance in likelihood of conviction. It was still true that other case and defendant characteristics together had a much larger impact on conviction than did pretrial detention, but a 6-percentage-point increase in explained variance is substantial.

A comparison of the standardized *betas* (ß) for the variables within each model is an indication of the relative importance of each factor in accounting for conviction. The standardized ß for "detained to disposition" in Model 3 is remarkably large (.54)—larger than any other variable in the model with the exception of a VTL offense (.56), which also greatly increased the likelihood of conviction. The odds that the defendant would be convicted were over 9 times greater in cases with detention to disposition, compared to cases with no pretrial detention, after accounting for the combined effect of all other influential factors. Being detained at some point pretrial had a much weaker (though also statistically significant) effect on likelihood of conviction; what really made a difference was whether the defendant was in jail throughout the processing of the case.

TABLE 8
Logistic Regression Models Of Conviction
(Nonfelony Cases Continued At Arraignment)

	Model 1 *Detention measured as:* Detention Status at Arraignment (N=24,964)		**Model 2** *Detention measured as:* Length of Detention in Days (N=24,964)		**Model 3** *Detention measured as:* Detention Status to Disposition (N=24,964)	
Control Variables	Standardized ß	Odds ratio	Standardized ß	Odds ratio	Standardized ß	Odds ratio
Number of arrest charges *(1- 4)*	0.13***	1.21	0.13***	1.21	0.12***	1.21
Felony arrest charge	–0.04***	0.87	–0.04**	0.88	–0.03**	0.88
Offense type of top arraignment charge: *(Reference category = harm to persons)*	***		***		***	
Weapon	0.11***	2.54	0.11***	2.55	0.10***	2.52
Property crime	0.25***	2.82	0.24***	2.75	0.20***	2.57
Drug	0.41***	3.95	0.40***	3.97	0.36***	3.84
Sex crime	0.15***	3.55	0.15***	3.54	0.13***	3.40
Theft intangible	0.28***	5.18	0.27***	5.15	0.24***	4.97
Misconduct	0.15***	1.88	0.14***	1.86	0.12***	1.79
Obstruction of justice	0.06***	1.38	0.06***	1.38	0.05***	1.37
Vehicle & Traffic Law	0.63***	13.34	0.61***	13.34	0.56***	13.50
Type unknown / other	0.01	1.53	0.01	1.53	0.01	1.59
Borough *(Reference category = Bronx)*	***		***		***	
Brooklyn	–0.49***	0.25	–0.47***	0.25	–0.42***	0.26
Manhattan	–0.38***	0.33	–0.37***	0.33	–0.33***	0.34
Queens	–0.06***	0.83	–0.05**	0.85	–0.02	0.92
Staten Island	–0.14***	0.38	–0.14***	0.38	–0.12***	0.40
Transfer to Supreme Court *(no=0, yes=1)*	0.09***	3.16	0.09***	3.21	0.07***	2.94
Time to disposition *(in days)*	–0.22***	0.99	–0.21***	0.99	–0.15***	0.99
Criminal history *(Reference category = first adult arrest)*	***		***		***	
Prior adult arrest	0.07***	1.25	0.07***	1.24	0.05***	1.20
Misdemeanor conviction	0.13***	1.63	0.13***	1.61	0.10***	1.48
Felony conviction	0.17***	1.61	0.15***	1.57	0.10***	1.40

(continued on the following page)

TABLE 8 (continued)

	Model 1 *Detention measured as:* Detention Status at Arraignment		**Model 2** *Detention measured as:* Length of Detention in Days		**Model 3** *Detention measured as:* Detention Status to Disposition	
Control Variables	Standardized ß	Odds ratio	Standard-ized ß	Odds ratio	Standardized ß	Odds ratio
Sex *(male=1, female=2)*	–0.04***	0.86	–0.04***	0.85	–0.04***	0.84
Age *(Reference category = age 21-30)*	***		***		***	
16-18	0.06***	1.28	0.05***	1.27	0.05***	1.26
19-20	0.03*	1.17	0.03*	1.16	0.03*	1.16
31-40	0.02	1.05	0.01	1.04	0.01	1.03
41-50	0.02	1.06	0.01	1.04	0.01	1.04
51-60	–0.02	0.90	–0.02	0.88	–0.02	0.87
61+	–0.01	0.85	–0.01	0.84	–0.01	0.87
Ethnicity *(Reference category = black)*			*		*	
Hispanic	0.00	0.99	0.00	0.99	0.00	1.01
White	0.03*	1.11	0.03*	1.12	0.03**	1.14
Other	0.02	1.12	0.02	1.13	0.02*	1.15
Nagelkerke R^2 for Block 1	**.30**		**.30**		**.30**	
Detention Variables						
Detained at arraignment *(no=0, yes=1)*	0.34***	2.73	[not entered in Model 2]		[not entered in Model 3]	
Detention (in days) *(Reference category = released day of arraignment)*	[not entered in Model 1]		***		[not entered in Model 3]	
1 day			0.08***	1.86		
2-7 days			0.22***	2.41		
8-60 days			0.35***	5.72		
61+ days			0.08***	2.21		
Detention to disposition *(Reference category = no pretrial detention)*	[not entered in Model 1]		[not entered in Model 2]		***	
Detained at arraign-ment, released pretrial					0.09***	1.51
Released at arraign-ment, detained pretrial					0.12***	2.49
No pretrial release					0.54***	9.17
Nagelkerke R^2 for Model	**.32**		**.33**		**.36**	
(contribution of detention)	**.02**		**.03**		**.06**	

* statistically significant at p < .05; ** statistically significant at p < .01; *** statistically significant at p < .001
All coefficients and odds ratios are presented for the model after the inclusion of detention.
See Appendix B for variable coding.

Interactions

Interactions of detention (using the "detention to disposition" variable) with borough, offense type, criminal history, ethnicity, and sex were tested but are not shown here. A separate logistic regression model was estimated for each value of each of these variables (see Appendix C, Table C-1). For almost every variable tested for interactions, the result was that pretrial detention did significantly predict conviction within every category of the variable, but the strength of the effect varied.

Detention had a stronger influence on likelihood of conviction in cases with a defendant who:

- was prosecuted in Brooklyn (especially compared to Manhattan and Staten Island);
- was charged with an offense categorized as "harm to persons" or "misconduct" (especially compared to a VTL offense; in VTL cases, which had much higher conviction rates and lower detention rates than other cases, detention had no effect on likelihood of conviction);
- had a prior conviction (especially compared to a defendant with no prior adult arrest);
- was black or Hispanic (compared to white).

Detention affected likelihood of conviction nearly equally for males and females.

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VI. EFFECT OF DETENTION ON INCARCERATION

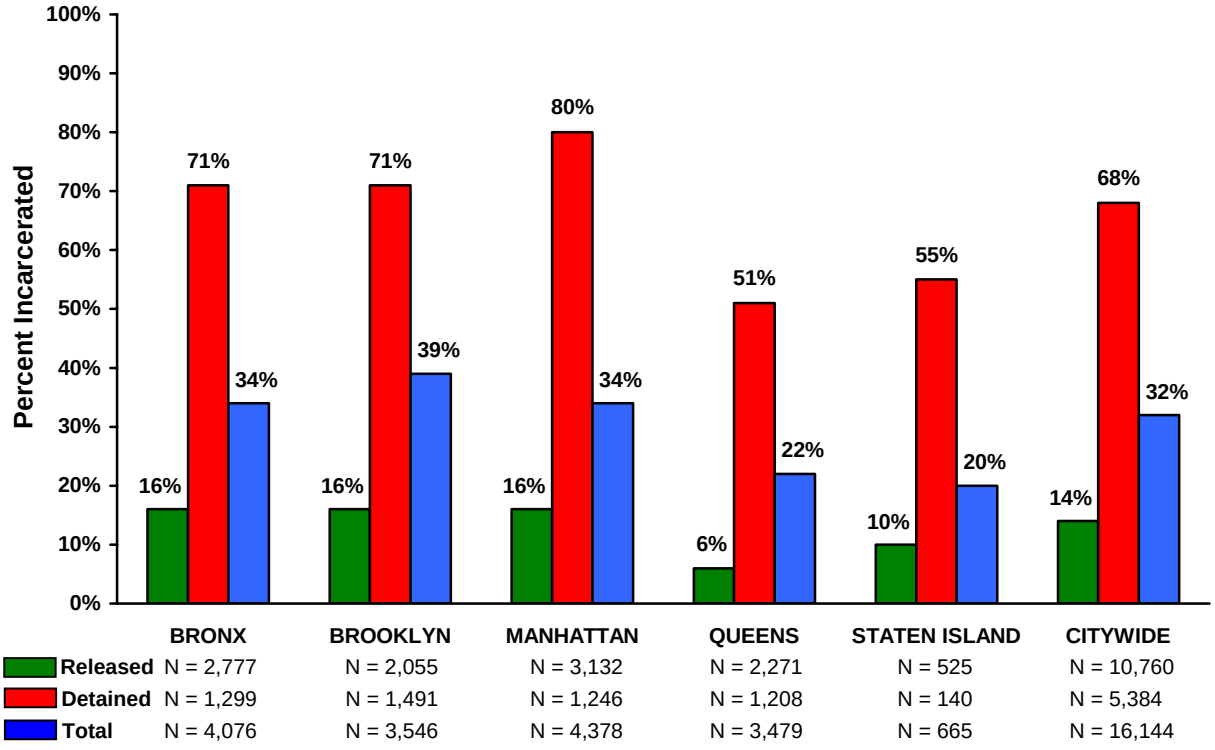
A. Bivariate Analyses

Bivariate relationships between the three measures of detention and the likelihood of incarceration (including time served) for convicted defendants are shown in Figures 5, 6, and 7.

Figure 5 shows that an incarcerative sentence was imposed in about a third of nonfelony cases that ended with a conviction citywide (32%). Incarceration rates in convicted cases ranged from 20% in Staten Island to 39% in Brooklyn.

The bivariate relationship between detention status at arraignment and incarceration appeared much stronger than the relationship with conviction. Citywide, defendants were sentenced to incarceration in 14% of cases with a defendant released at arraignment, compared to 68% of cases with a detained defendant. This is a difference of 54 percentage points, and the difference was at least this great in the Bronx, Brooklyn, and Manhattan. In Queens and Staten Island, both of which had relatively low incarceration rates for both released and detained defendants, the difference was 45 percentage points. In every borough, the likelihood of incarceration was low for convicted defendants who had been released at arraignment and high for convicted defendants who had been detained at arraignment.

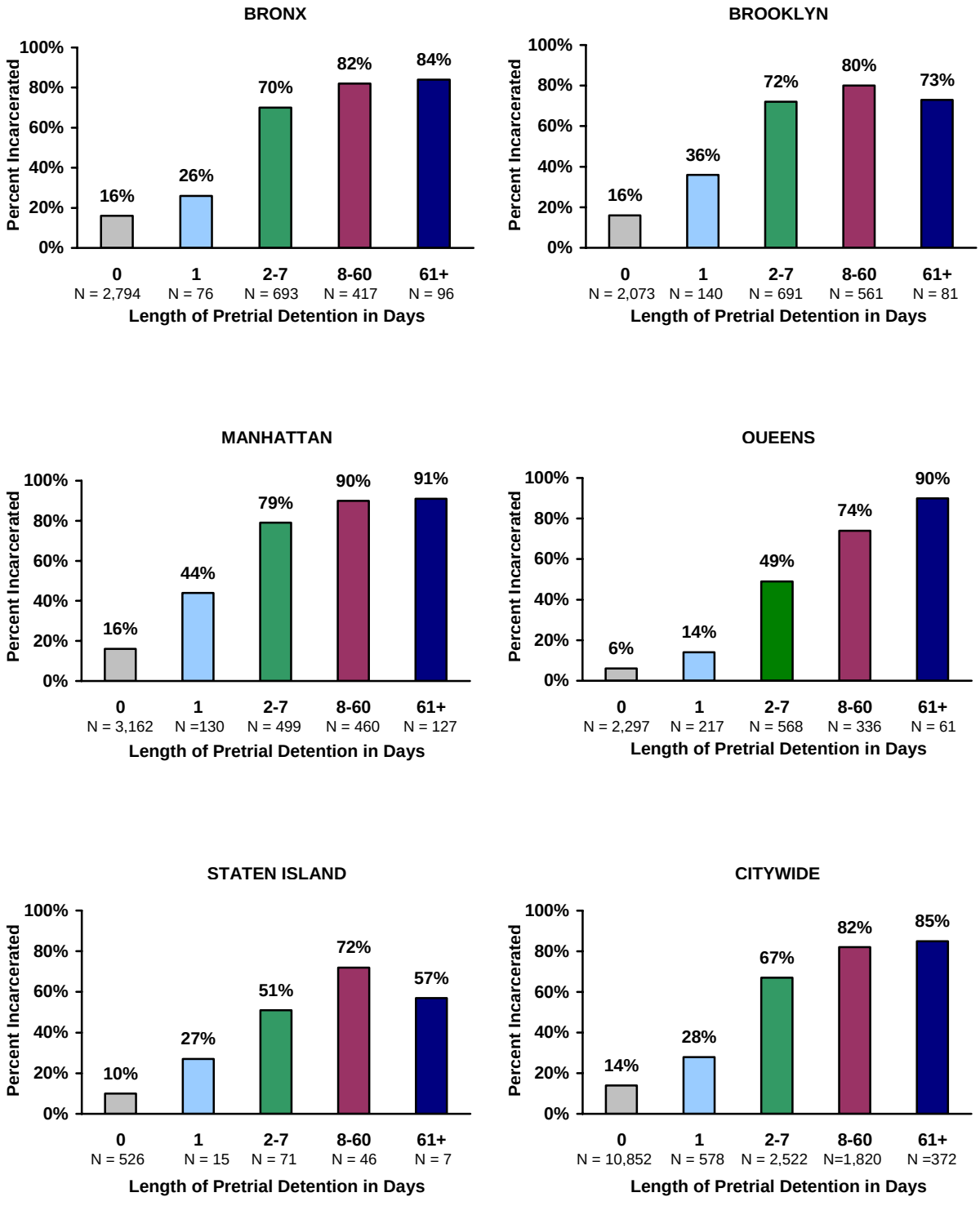
FIGURE 5
Incarceration Rate For Nonfelony Cases (Convictions Only)
By Detention Status At Arraignment
Citywide And By Borough



The relationship between incarceration and length of pretrial detention, citywide and by borough, is shown in **Figure 6.** For cases in which the defendant was detained for longer than a week and convicted, likelihood of incarceration was over 80% citywide—and 85% for cases with a defendant in detention for more than two months. The difference in incarceration rates between cases in the lowest detention-length category (0 days) and the highest (over 60 days) was 71 percentage points (14% compared to 85%). This is much greater than the 55-percentage-point difference in incarceration rates between cases with a defendant released versus detained at arraignment, which indicates that the relationship shown in Figure 6 is stronger than the relationship shown in Figure 5.

With minor variations, the same pattern was found in each borough. Incarceration rates were low for cases with a defendant who was released on the same day as the arraignment, and rose with each higher category of detention length. The largest jump in incarceration rates occurred after one day in detention in each borough. After 60 days in detention, the incarceration rate did not rise much further and in Brooklyn and Staten Island even dropped slightly. However, the number of cases in Staten Island with over 60 days detention (n = 7) was too small for reliable results.

FIGURE 6
Incarceration Rate For Nonfelony Cases (Convictions Only) By Length of Pretrial Detention Citywide and By Borough

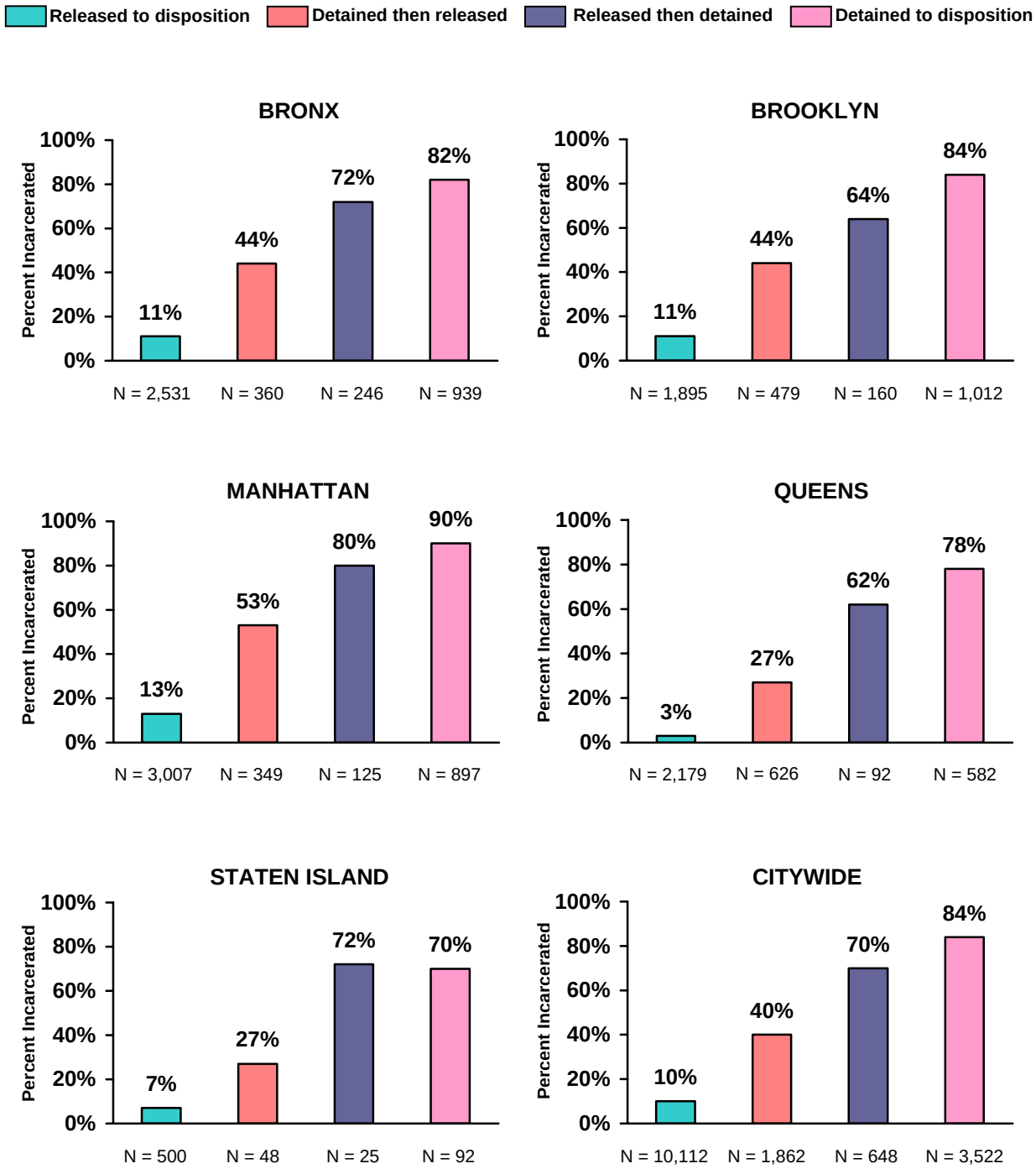


The bivariate relationship between the third measure of detention—detention to disposition—and incarceration was stronger still. **Figure 7** shows that the incarceration rate for convicted defendants who were never detained pretrial was 10% citywide, rising to 40% for cases with a defendant who was detained at arraignment and later released, to 70% for cases with a defendant who was released at arraignment and later detained, and to 84% for cases with a defendant who was detained to disposition.

In every borough the incarceration rates for cases with a convicted defendant who was at liberty throughout the case were lower than the lowest rates found using the other two measures. And the highest rates were better differentiated by the categories of the detention to disposition variable than by detention length in days, or detention at arraignment. Being first released and later detained had more negative consequences for the defendant than did an initial detention followed by release; this result had also been found for likelihood of conviction.

Pearson's product moment correlations between incarceration and all three detention variables were quite strong, and strongest for detention to disposition: .56 for detention status at arraignment; .59 for length of pretrial detention; and .66 for detention to disposition.

FIGURE 7
Incarceration Rate For Nonfelony Cases (Convictions Only)
By Detention To Disposition
Citywide And By Borough



B. Multivariate Analyses

In addition to the control variables that were entered into the multivariate analyses of conviction, two additional controls were added to the incarceration models. One of these was a variable to control statistically for possible sample bias introduced by restricting the analysis to convicted cases (see Appendix A for an explanation of the technique used to control for sample bias). The other was the severity class of the top disposition charge, added because sentence severity would be expected to reflect directly the severity of the offense. The variable indicating whether a case was transferred to Supreme Court was dropped from this model because of its high correlation with the severity of the disposition charge. Three models were constructed, with a different pretrial detention variable entered in each, using the same procedure as before. The results are shown in **Table 9**.

Compared to the statistical models of conviction, much more of the variation in likelihood of an incarcerative sentence was accounted for by the control variables: the block 1 R^2 was .60 for the three models (compared to .30 for conviction shown in Table 8). Detention was statistically significant in all three models, but added very little to the proportion of variance explained by the control variables. Only in Model 3, where detention was measured as detention status to disposition, did the addition of detention add more than one percentage point to the proportion of variance explained by the model. Detention status to disposition explained an additional 3% of the variance in incarceration, after accounting for the combined effects of all the other significant factors. As a clue to likelihood of incarceration, it was more important to know if the defendant had stayed in detention throughout the pretrial period than to know if he or she was detained at arraignment, or how long the detention lasted.

This conclusion is reinforced by comparing the standardized *betas* and odds ratios for the three detention measures. The standardized *beta* was .11 for detention at arraignment, with odds of incarceration not quite doubled for cases with a defendant who was detained at arraignment (Model 1). For cases with a defendant who was detained from 8 to 60 days, the standardized *beta* was .16, and the odds of incarceration were triple the odds for cases with a defendant who was released on the day of the arraignment (Model 2). For cases with a defendant who was never released pretrial, the standardized *beta* was .58—the largest standardized *beta* for any single factor—and the odds of incarceration for a never-released defendant were 27 times greater than for a defendant who was at liberty to disposition (Model 3).

The overall effect of detention on the likelihood of incarceration was not large, even in Model 3, after the combined effects of all the other relevant factors were taken into account. The number of arrest charges, offense type, severity of the conviction charge, borough of prosecution, length of time to disposition, the defendant's criminal history, ethnicity, and likelihood of conviction (the control for sample bias) together affected likelihood of an incarcerative sentence much more than did detention. On the other hand, no other single factor *by itself* had a greater effect on incarceration. The next largest standardized *beta* in Model 3, after defendants with no pretrial release (.58), was for cases that were disposed with a top charge no more severe than a violation or infraction (–.36). The negative coefficient indicates that defendants in these cases were less likely to be sentenced to jail than cases in the reference category (cases with a class A misdemeanor disposition charge).

TABLE 9
Logistic Regression Models Of Incarceration
(Convicted Nonfelony Cases Only)

	Model 1 *Detention measured as:* Detention Status at Arraignment (N=14,036)		**Model 2** *Detention measured as:* Length of Detention in Days (N=14,036)		**Model 3** *Detention measured as:* Detention Status to Disposition (N=14,036)	
Control Variables	Standardized ß	Odds ratio	Standardized ß	Odds ratio	Standardized ß	Odds ratio
Selection bias correction: *likelihood of conviction*	0.55***	238.34	0.45***	95.37	–0.20***	0.13
Number of arrest charges *(1- 4)*	–0.06***	0.87	–0.05***	0.89	0.04**	1.10
Felony arrest charge	0.02	1.13	0.02	1.11	–0.01	0.95
Offense type of top arraignment charge: *(Reference category = harm to persons)*	***		***		***	
Weapon	–0.03*	0.69	–0.01	0.81	0.06***	2.42
Property crime	–0.06***	0.67	–0.04*	0.76	0.11***	2.18
Drug	–0.10***	0.60	–0.05*	0.77	0.23***	3.71
Sex crime	0.00	0.96	0.01	1.18	0.11***	5.05
Theft intangible	0.08***	0.48	–0.05**	0.64	0.14***	4.06
Misconduct	0.06***	1.59	0.08***	1.79	0.15***	3.33
Obstruction of justice	0.01	1.15	0.02	1.22	0.05***	1.76
Vehicle & Traffic Law	–0.50***	0.05	–0.43***	0.07	0.02	1.14
Type unknown / other	0.03***	8.83	0.03***	9.60	0.04***	15.42
Severity class of top disposition charge: *(Reference category = class A misdemeanor)*	***		***		***	
Felony	–0.02*	0.55	–0.01	0.65	0.01	1.38
Class B or unclassified misdemeanor	–0.10***	0.54	–0.09***	0.56	–0.09***	0.56
Violation or infraction	–0.39***	0.17	–0.39***	0.17	–0.36***	0.18
Borough *(Reference category = Bronx)*	***		***		***	
Brooklyn	0.25***	3.93	0.22***	3.24	–0.05*	0.77
Manhattan	0.28***	4.20	0.25***	3.63	0.03	1.16
Queens	–0.06***	0.72	–0.06***	0.73	–0.07***	0.66
Staten Island	0.06***	2.09	0.05***	1.84	–0.03*	0.70
Time to disposition *(in days)*	0.06***	1.00	0.06***	1.00	–0.06**	0.99

(continued on the following page)

TABLE 9 (continued)

Control Variables	Model 1 *Detention measured as:* Detention Status at Arraignment		Model 2 *Detention measured as:* Length of Detention in Days		Model 3 *Detention measured as:* Detention Status to Disposition	
	Standardized ß	Odds ratio	Standardized ß	Odds ratio	Standardized ß	Odds ratio
Criminal history *(Reference category = first adult arrest)*	***		***		***	
Prior adult arrest	0.05**	1.33	0.06**	1.38	0.09***	1.65
Misdemeanor conviction	0.07***	1.55	0.08***	1.67	0.14***	2.44
Felony conviction	0.19***	2.54	0.20***	2.63	0.26***	3.65
Sex *(male=1, female=2)*	0.02	1.15	0.01	1.11	–0.02	0.88
Age *(Reference category = age 21-30)*	*		*		n.s.	
16-18	–0.04**	0.74	–0.04**	0.73	–0.01	0.90
19-20	0.00	0.98	0.00	0.99	0.01	1.15
31-40	0.00	0.98	–0.01	0.95	0.01	1.03
41-50	–0.03*	0.84	–0.04**	0.82	–0.02	0.90
51-60	0.01	1.10	0.00	1.03	0.00	1.01
61+	–0.01	0.75	–0.01	0.72	–0.01	0.77
Ethnicity *(Reference category = black)*	***		***		**	
Hispanic	–0.01	0.96	–0.01	0.96	–0.01	0.97
White	–0.05***	0.70	–0.05***	0.72	–0.03*	0.83
Other	–0.09***	0.46	–0.08***	0.47	–0.06***	0.55
Nagelkerke R^2 for Block 1	**.60**		**.60**		**.60**	
Detention Variables						
Detained at arraignment *(no=0, yes=1)*	0.11***	1.68	[not entered in Model 2]		[not entered in Model 3]	
Detention (in days) *(Reference category = released day of arraignment)*	[not entered in Model 1]		***		[not entered in Model 3]	
1 day			–0.02*	0.77		
2-7 days			0.10***	1.89		
8-60 days			0.16***	3.06		
61+ days			0.08***	3.17		
Detention to disposition *(Reference category = no pretrial detention)*	[not entered in Model 1]		[not entered in Model 2]		***	
Detained at arraignment, released pretrial					0.15***	2.90
Released at arraignment, detained pretrial					0.23***	15.92
No pretrial release					0.58***	26.85
Nagelkerke R^2 for Model	**.60**		**.61**		**.63**	
(contribution of detention)	**<.01**		**.01**		**.03**	

*statistically significant at p < .05; **statistically significant at p < .01; ***statistically significant at p < .001
All coefficients and odds ratios given in the table are for the final model after the inclusion of detention.
See Appendix B for variable coding.

Interactions

Interactions between detention to disposition and selected control variables were tested in the incarceration model, using the same variables as were tested for interactions in the conviction model—borough, offense type, criminal history, ethnicity, and sex—plus the severity of the disposition charge (Appendix C, Table C-2). Detention was a significant predictor of likelihood of incarceration in all of the separate models for each value of each variable, although in some boroughs (Brooklyn and Manhattan) and for some offense types (harm to persons; property; misconduct), detention added less than three percentage points to the explained variance.

On the other hand, defendants charged with a VTL offense—although their chances of conviction were not affected by detention—were at greater risk of incarceration, once convicted, if they had been detained. Detention alone explained 8% of the variance in likelihood of incarceration for VTL cases (Table C-2). This was the largest effect found in any of the interaction models.

In addition to cases with a defendant charged with a VTL offense, detention also had a stronger influence on likelihood of incarceration in cases with a defendant who was:

- prosecuted in Staten Island;
- convicted of a lesser severity charge (compared to a class A misdemeanor).

Neither of these differences was very pronounced. There was no difference between males and females in the impact of detention on likelihood of incarceration, and almost no differences among ethnic groups or among defendants with varying criminal histories.

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VII. EFFECT OF DETENTION ON SENTENCE LENGTH

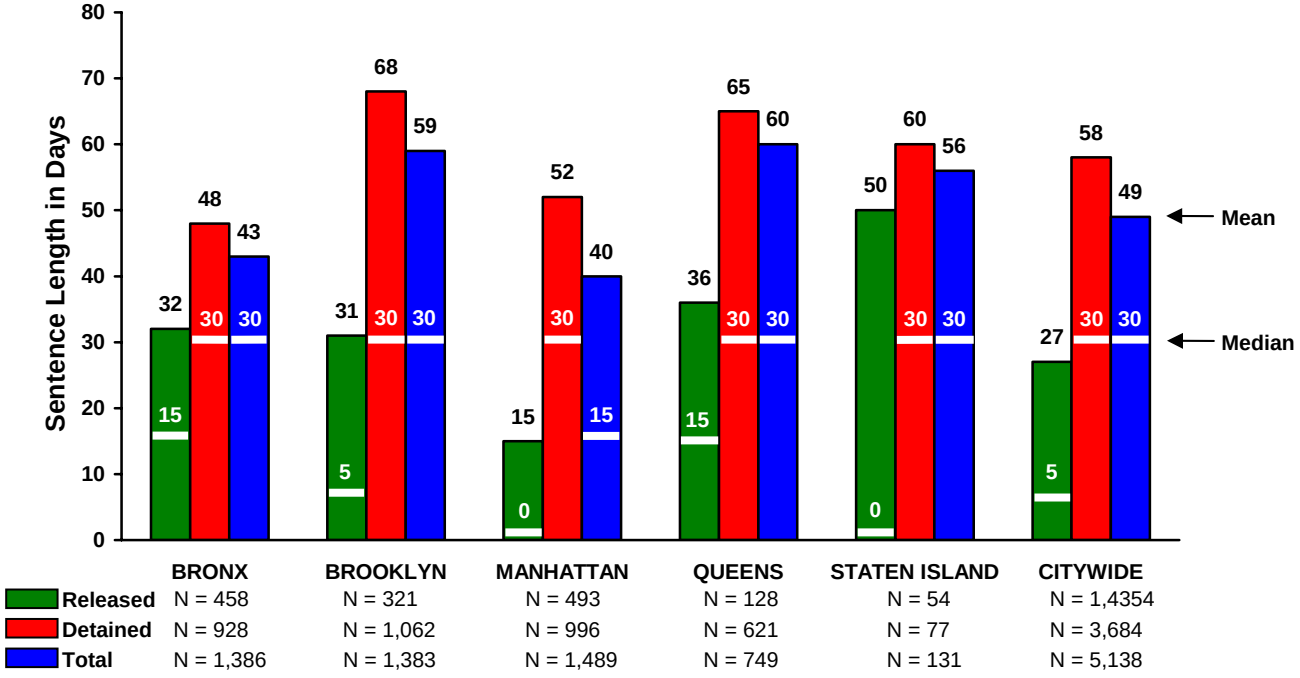
A. Bivariate Analyses

Bivariate relationships between the length of the sentence, for defendants sentenced to incarceration, and the three measures of detention are shown in Figures 8, 9, and 10.

The mean sentence length for nonfelony cases with a defendant who was sentenced to incarceration was 49 days, as shown in **Figure 8.** The median sentence length was 30 days, which means that half of the cases received a sentence of 30 days or less in jail. However, detention at arraignment had a large effect on sentence length. For cases with a defendant who was detained at arraignment, the mean sentence length was more than double the sentence length for cases with a defendant who was released at arraignment: 27 days (released), compared to 58 days (detained). The difference in the medians was even more striking: 5 days (released) compared to 30 days (detained).

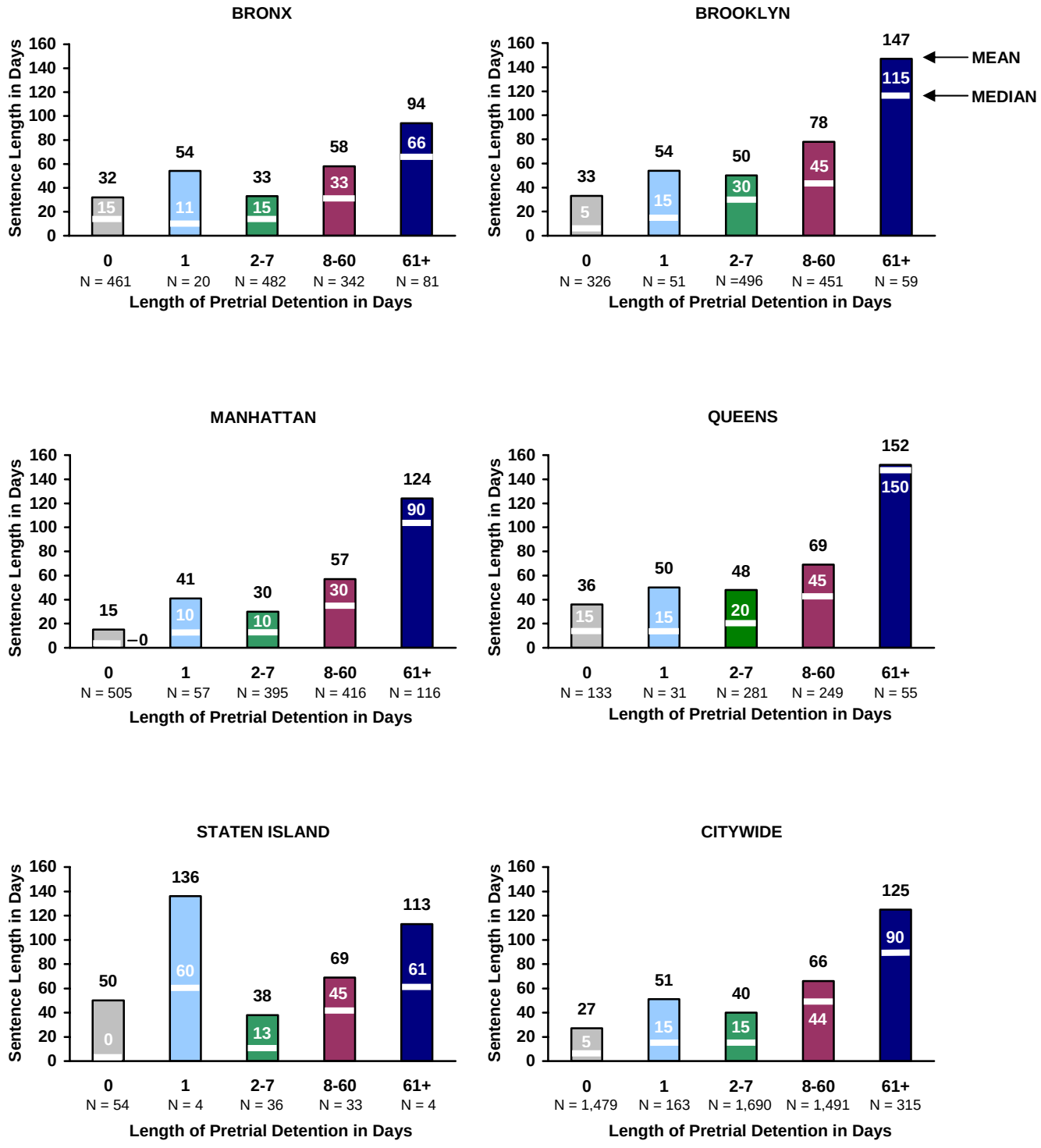
The longest mean sentences were found in Brooklyn and Queens (59 and 60 days, respectively) and the shortest were in Manhattan (40 days). In Manhattan half of the sentences were 15 days or less, the only borough in which the median was under 30 days. In every borough the mean and the median sentences for cases of defendants who had been released at arraignment were considerably lower than for cases of defendants who had been detained at arraignment.

FIGURE 8
Mean And Median Sentence Length In Days For Nonfelony Cases (Sentenced To Incarceration) By Detention Status At Arraignment Citywide And By Borough



The relationship between pretrial detention and sentence length appeared more pronounced using the second detention variable, length of detention measured in days. Mean and median sentence lengths for cases that fell within each category of detention length are shown in **Figure 9**. While the increase in sentence length was not a steady rise from the shortest category of detention length to the longest, a very large difference was found in the length of sentences for cases with no pretrial detention compared to those with over two months of detention. Citywide, that difference was between an average sentence of 27 days (median = 5 days) for cases with no detention, and 125 days (median = 90 days) for cases with more than two months detention.

FIGURE 9
Mean And Median Sentence Length In Days For Nonfelony Cases (Sentenced To Incarceration) By Length Of Pretrial Detention Citywide And By Borough



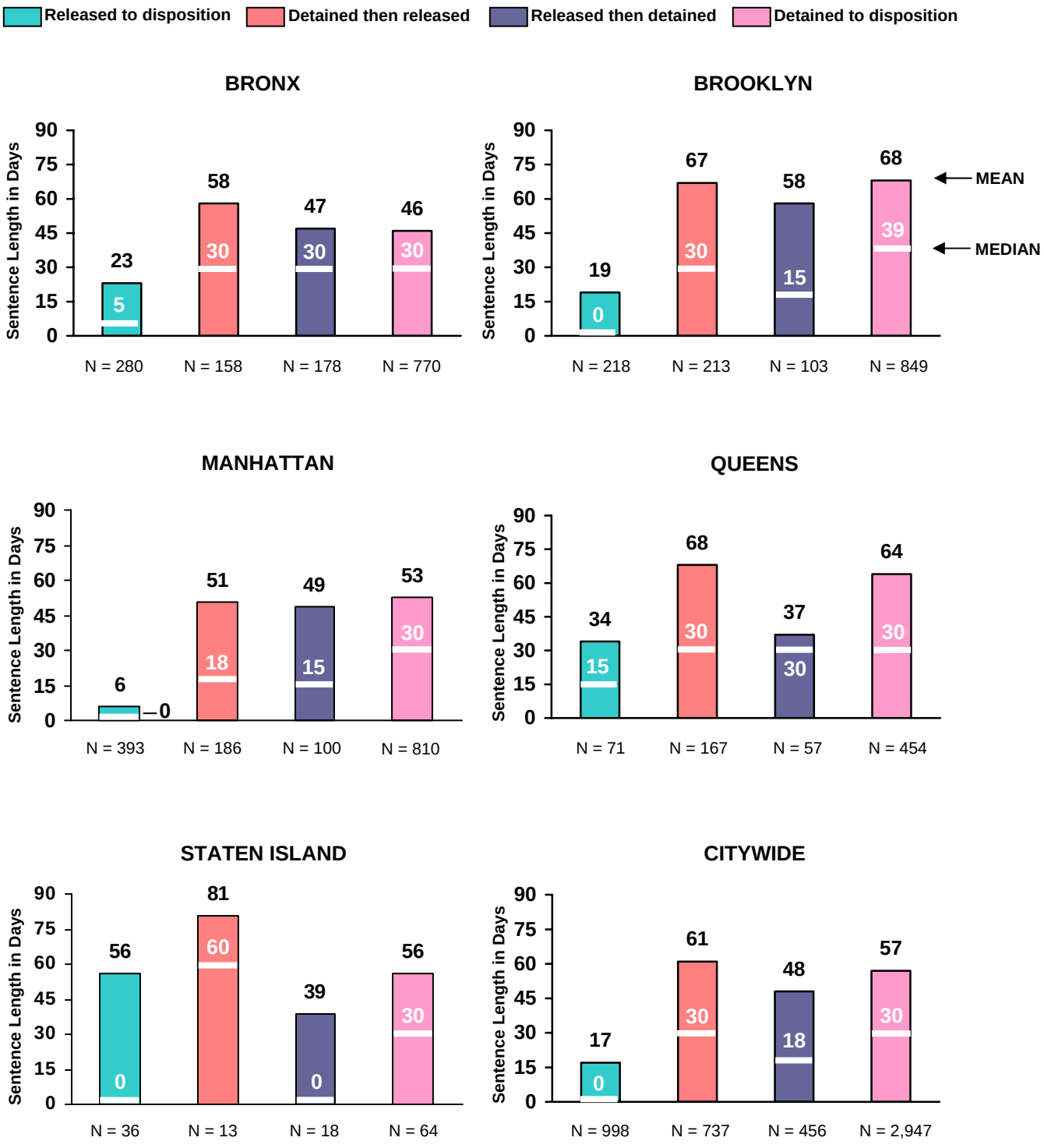
The last measure of detention, to disposition of the case, has been shown in the previous chapters to have the strongest impact—of the three detention variables—on both conviction and incarceration. The same result was not found for sentence length. Nevertheless, detention to disposition had a moderately strong relationship with sentence length.

Of cases with a defendant who was convicted and sentenced to incarceration, the shortest sentences were given in cases with a defendant who was at liberty from arraignment to disposition. The citywide mean sentence for this group was 17 days (median = 0), as shown in **Figure 10**. (A sentence length of zero for an incarcerative sentence is not the contradiction it appears to be. Defendants who were released at arraignment and were sentenced to time served were counted as receiving an incarcerative sentence, but the sentence length for such cases was zero because it was set to equal length of pretrial detention starting from arraignment, whereas the courts also give credit for the time in detention between arrest and arraignment.)

The mean and median sentence lengths for defendants released from arraignment to disposition are shorter than for all defendants released at arraignment (Figure 8) and for all defendants released on the same day as the arraignment (Figure 9): 27 days was the mean (median = 5) for the lowest category of the first two detention variables. However, in terms of sentence length it did not seem to matter much if a defendant was released following detention, detained following release, or even detained all the way through the case to disposition. Sentences for these groups were all longer than for cases with a defendant who had no pretrial detention, but they did not differ greatly from each other. Detainment from arraignment to disposition appeared to have no more serious consequences for sentence length than a period of detention followed by release.

Pearson's product moment correlations between sentence length and the three detention variables were found to be weak with detention to disposition (.15) and with detention status at arraignment (.17), and stronger with length of detention in days (.24). All were statistically significant.

FIGURE 10
Mean And Median Sentence Length In Days For Nonfelony Cases (Sentenced To Incarceration) By Detention To Disposition Citywide And By Borough



B. Multivariate Analyses

An additional selection bias correction variable, the likelihood of incarceration, was added for the analysis of sentence length. This was necessary to control for possible sample selection bias resulting from the further restriction of the sample to cases with an incarcerative sentence. This variable was entered in the sentence length models along with the selection bias correction variable for likelihood of conviction. Otherwise, the control variables and detention variables are identical to those entered in the multivariate analyses of incarceration shown in Table 9.

The multivariate statistical procedure used for the analysis of sentence length was ordinary least squares regression, which produces slightly different statistics from those presented in the logistic regression tables. Instead of odds ratios, unstandardized *betas* are reported in the table. These coefficients can be interpreted as the average number of days' increase (positive coefficients) or decrease (negative coefficients) in sentence length associated with a unit change in the independent variable, controlling for all other variables in the model. For example, **Table 10** shows that sentences were about three or four weeks longer in Brooklyn compared to the Bronx, the exact coefficient depending on which detention variable was entered in the model. The estimates produced by the three models were approximately 30 days longer in Brooklyn compared to the Bronx for Model 1; 24 days longer for Model 2; and 32 days longer for Model 3.

The contribution of detention to the prediction of sentence length was virtually nonexistent for Models 1 and 3. Neither detention status at arraignment nor whether the defendant was in detention to disposition had any effect on sentence length after the effects of the other variables had been accounted for. Being detained at arraignment was statistically significant, but added almost nothing to the explanatory power of the model. Detention to disposition was not statistically significant.

The length of detention in days, unlike the other two measures, had a statistically significant effect on sentence length *and* independently contributed two percentage points to the total variance explained by the model (Model 2).[18] Pretrial detention lasting longer than a week significantly increased the average sentence length, compared to the average for cases in which the defendant was released on the day of the arraignment. Detention lasting a week or less had no significant impact on sentence length, but for cases with a defendant detained from 8 to 60 days, sentences were on average 22 days longer; and for cases with a defendant detained over 60 days, sentences were on average 56 days longer, compared to cases with no overnight detention.

[18] Some small differences between the models reported here and the results as summarized in *Research Brief* #14 are the result of additional work done to refine these models after the publication of the Brief. Referring to Model 2, the *Research Brief* reported that "the control factors explained 45% of the variation in sentence length, and detention explained only an additional 1%." In the final model presented here, control factors explained 44%, and detention an additional 2%. Additionally, the *Research Brief* reported that detention status at arraignment was not a significant predictor of sentence length (Model 1), whereas in the revised model presented in the current document, detention status at arraignment is statistically significant. In both versions of the model this detention variable has no additional impact on the outcome beyond the impact of the control variables, so the conclusion (that detention length is a better predictor than detention at arraignment) is unchanged. One other minor difference between a statement made in *Research Brief* #14 and a finding reported here is noted in footnote 23 on page 59.

TABLE 10
Ordinary Least Squares Regression Models Of Sentence Length
(Nonfelony Cases Sentenced To Incarceration)

	Model 1 *Detention measured as:* Detention Status at Arraignment (N=4,700)		**Model 2** *Detention measured as:* Length of Detention in Days (N=4,700)		**Model 3** *Detention measured as:* Detention Status to Disposition (N=4,700)	
Control Variables	Standardized ß	ß	Standardized ß	ß	Standardized ß	ß
Selection bias correction: *likelihood of conviction*	0.17***	73.86	0.08**	36.99	0.21***	91.25
Selection bias correction: *likelihood of incarceration*	–0.02	–4.72	–0.02	–5.28	0.08	24.51
Number of arrest charges *(1- 4)*	0.05***	4.15	0.05***	4.65	0.04**	3.62
Felony arrest charge	0.01	2.68	0.01	2.30	0.01	3.06
Offense type of top arraignment charge: *(Reference category = harm to persons)*						
Weapon	–0.04**	–20.24	–0.02	–10.88	–0.04**	–24.97
Property crime	0.02	3.47	0.04*	9.47	–0.01	–1.12
Drug	–0.14***	–25.21	–0.08***	–13.01	–0.18***	–32.24
Sex crime	–0.04**	–21.95	–0.02	–12.45	–0.06**	–30.13
Theft intangible	–0.11***	–36.75	–0.08***	–23.38	–0.14***	–44.35
Misconduct	–0.07***	–17.55	–0.05**	–13.04	–0.09***	–23.26
Obstruction of justice	–0.02	–8.04	–0.02	–6.33	–0.03*	–11.04
Vehicle & Traffic Law	–0.09***	–41.03	–0.06***	–16.31	–0.09***	–43.73
Type unknown / other	<0.01	15.27	<0.01	3.76	<0.01	1.50
Severity class of top conviction charge: *(Reference category = class A misdemeanor)*						
Felony	0.54***	489.11	0.54***	487.70	0.54***	486.81
Class B or unclassified misdemeanor	–0.08***	–18.33	–0.08***	–17.92	–0.07***	–15.74
Violation or infraction	–0.14***	–35.13	–0.15***	–35.83	–0.11***	–26.46
Borough *(Reference category = Bronx)*						
Brooklyn	0.16***	30.12	0.12***	23.64	0.17***	32.41
Manhattan	0.03	4.59	–0.01	–2.18	0.03	5.19
Queens	0.06***	14.35	0.05***	12.67	0.07***	16.24
Staten Island	0.03*	17.20	0.02	12.27	0.03**	19.74
Time to disposition *(in days)*	0.16***	0.20	0.10***	0.12	0.16***	0.20

(continued on the following page)

TABLE 10 (continued)

	Model 1 *Detention measured as:* Detention Status at Arraignment		**Model 2** *Detention measured as:* Length of Detention in Days		**Model 3** *Detention measured as:* Detention Status to Disposition	
Control Variables	Standardized ß	ß	Standardized ß	ß	Standardized ß	ß
Criminal history *(Reference category = first adult arrest)*						
Prior adult arrest	–0.04*	–11.83	–0.03	–8.02	–0.05*	–13.16
Misdemeanor conviction	–0.05	–9.49	–0.02	–3.37	–0.06*	–12.60
Felony conviction	–0.01	–1.39	0.02	3.20	–0.03	–5.02
Sex *(male=1, female=2)*	<0.01	1.03	<0.01	0.54	<0.01	1.67
Age *(Reference category = age 21-30)*						
16-18	<–0.01	–1.57	<–0.01	–1.37	<–0.01	–1.40
19-20	<–0.01	–0.98	<–0.01	–0.20	–0.01	–1.70
31-40	0.01	2.47	0.01	2.24	0.01	2.36
41-50	0.01	2.65	0.02	3.49	0.02	3.18
51-60	0.02	7.23	0.02	5.75	0.02	7.43
61+	<–0.01	–9.36	–0.01	–13.96	–0.01	–8.51
Ethnicity *(Reference category = black)*						
Hispanic	0.01	1.58	0.01	1.64	0.01	1.76
White	0.01	3.18	0.01	5.42	0.01	3.92
Other	0.01	7.42	0.01	10.37	0.02	9.42
Adjusted R^2 for Block 1	**.44**		**.44**		**.44**	
Detention Variables						
Detained at arraignment *(no=0, yes=1)*	0.06***	10.75	[not entered in Model 2]		[not entered in Model 3]	
Detention (in days) *(Reference category = released day of arraignment)*	[not entered in Model 1]				[not entered in Model 3]	
1 day			<0.01	1.75		
2-7 days			0.02	4.03		
8-60 days			0.12***	21.93		
61+ days			0.16***	55.89		
Detention to disposition *(Reference category = no pretrial detention)*	[not entered in Model 1]		[not entered in Model 2]			
Detained at arraignment, released pretrial					0.02	4.78
Released at arraignment, detained pretrial					–0.06	–16.31
No pretrial release					–0.05	–9.10
Adjusted R^2 for Model	**.44**		**.46**		**.44**	
(contribution of detention)	**<.01**		**.02**		**<.01**	

*statistically significant at p < .05; **statistically significant at p < .01; ***statistically significant at p < .001
All coefficients and odds ratios are presented for the model after the inclusion of detention.
See Appendix B for variable coding.

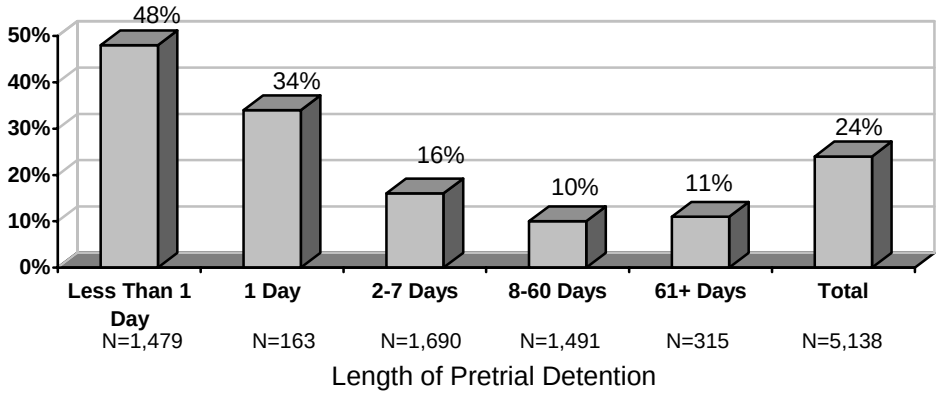
Much more important than any measure of detention was the severity of the conviction charge: conviction on a felony charge added nearly 500 days to the average sentence for a class A misdemeanor. The standardized *beta* for conviction on a felony charge was by far the largest of any variable in the model (0.54 in all three models). Likewise, conviction on a lesser severity charge (violation or infraction) was a strong predictor of a shorter sentence: from approximately 26 days (Model 3) to 35 days (Models 1 and 2) shorter than the average sentence imposed in convictions on class A misdemeanors.

Another relatively strong predictor was the borough of prosecution. Sentence lengths in Brooklyn tended to be longer than in other boroughs. This difference became apparent in the bivariate analyses (Figure 8), and is now confirmed in the multivariate analyses. Queens rivaled Brooklyn in sentence lengths before the effects of other factors were taken into account, but Table 10 shows that sentences in Brooklyn were longest, all else being equal. Nonetheless, Queens sentences were also significantly longer than sentences in Bronx cases (the reference category), whereas sentences in Manhattan and Staten Island did not differ significantly from those in the Bronx.

The probability of conviction was also a significant predictor of sentence length, an indication that without controlling for this factor, the contribution of other variables, including detention, would be exaggerated.

We considered the possibility that sentences of "time served" were responsible for the relationship between length of detention and sentence length. Almost a quarter of the incarcerative sentences in this sample were sentences of time served, as shown in Figure 11. Most of the time served sentences were clustered among the cases with a day or less of detention, including nearly half of the cases with a defendant who was released on the day of the arraignment (less than 1 day in detention). (As explained earlier, when a defendant is released at arraignment and sentenced to time served, the "time served" is the time in custody between arrest and arraignment.)

FIGURE 11
Percent Sentenced To Time Served For Nonfelony Cases (Sentenced To Incarceration) By Length of Pretrial Detention



To determine if sentences of time served were responsible for the relationship between detention length and sentence length, the multivariate analyses were repeated, excluding all cases with a sentence of time served (not shown). As expected, the relationship was somewhat weaker without the time served cases. However, pretrial detention lasting longer than 7 days still significantly predicted longer sentences in this restricted sample. Figure 10 (Model 2) shows that detention independently explained 2% of the variance in sentence length when sentences of time served were included; this dropped to 1% when time served cases were excluded. The coefficients also shrank, but not by much: detention longer than two months increased the predicted sentence length by 56 days as shown in Figure 10 (Model 2, unstandardized *beta*); this dropped to 46 days when cases with a sentence of time served were excluded.

We conclude that the small effect of detention length on sentence length was reduced further, but was not entirely accounted for, by sentences of time served. This is primarily because only the longer periods of detention significantly affected sentence length, and time served sentences were infrequent among these cases.

Interactions

Because length of detention in days was the only detention variable to have any effect on sentence length, interactions between that measure and the control variables were tested (Appendix C, Table C-3). Detention lasting over two months was a significant predictor of sentence length in most of the separate models.

Detention had a slightly stronger influence on sentence length in cases with a defendant who:

- was charged with a misconduct offense (especially compared to a drug offense);
- had a prior misdemeanor conviction;
- was white (especially compared to Hispanic);
- was female.

All of these interactions were small in magnitude, reflecting a difference of only about 3 percentage points in the proportion of variance explained by detention for the various subgroups. There was virtually no difference in the strength of the effect of detention by borough or the severity class of the disposition charge.

VIII. SUMMARY AND DISCUSSION

A. Summary of Findings

Pretrial Detention For Nonfelony Cases. Three fourths of nonfelony defendants were released at arraignment, and all but 5% of them remained at liberty until disposition of the case. On the other hand, those who were held on bail at arraignment were not likely to be released quickly. Of those held on bail at arraignment, 30% managed to make bail prior to disposition, and another 15% were eventually released on recognizance, leaving the remainder—over half—jailed until the case was disposed. For a third of those held on bail at arraignment, pretrial detention lasted longer than 10 days; and one out of 10 stayed in jail more than 50 days before release or disposition of the case.

The three measures of detention—release status at arraignment, length of pretrial detention in days, and detention status to disposition—were closely related, but not identical. Release at arraignment corresponded closely to release throughout the pretrial period, but detention at arraignment was not as closely tied to detention throughout; and arraignment release status could not capture the nuances of the measures that took into account the length of detention or detention for only a part of the pretrial period. Likewise, the length of detention provided a strong clue as to whether a defendant was detained to disposition, but there were cases with a brief period of detention to disposition, as well as cases with lengthy detention that ended prior to disposition. Consequently, it was no surprise that the effect of detention on case outcomes varied noticeably, but not dramatically, depending on which measure was used. The measures containing more information—length of pretrial detention and detention status to disposition—turned out to be the most useful. Detention status to disposition was the most effective in predicting conviction and incarceration, while the number of days spent in detention better predicted sentence length.

Effect of Bail Amount on Length of Detention. The amount of bail influenced the length of detention, and was in fact the strongest predictor of detention length among more than a dozen case and defendant characteristics in a multivariate analysis. Higher bail tended to result in longer detention. However, so many unmeasurable or unavailable factors influenced length of detention that the model predicted very little of the variation in detention length. The law requiring release under certain circumstances (CPL §170.70), practices of bail bondsmen, and especially the defendant's ability to end pretrial detention by pleading guilty combined to diminish the power of the model to predict length of detention, and to dilute the effect of bail amount. Slightly more than a third of defendants with bail set gained their release by actually posting bail;[19] pretrial detention was more likely to end by disposition of the case. Moreover, even low bail was out of reach for many defendants. The defendants in half of the cases with bail under $500 stayed in pretrial detention for at least four days, and almost a fourth were detained for a week or longer.

[19] Not shown. Figure 1 showed that 30% of defendants who were *held* on bail at arraignment eventually posted bail prior to disposition (26.7% of cases with bail set). Adding to these the defendants who posted bail at arraignment (3% of all cases, as reported in Table 1; or 9.7% of cases with bail set) results in 36% of all defendants with bail set who posted bail before disposition of the case.

Effect of Detention on Conviction. Bivariate relationships between conviction and all three detention variables were strong, and strongest for detention status to disposition. The overall conviction rate was 58%, compared to 92% for cases with a defendant who was detained to disposition, and 50% for cases with a defendant who was not detained at all prior to disposition. This relationship did not appear to be spurious: even after controlling for the effects of a large number of case and defendant characteristics, detention to disposition still had a statistically significant effect on likelihood of conviction. Moreover, this measure of detention added 6 percentage points to the proportion of variance explained by the control variables. Detention to disposition was not the only influence on likelihood of conviction, but it was one of the most important single factors. The other two detention measures had less of an effect, which is consistent with the suggestion that a major way in which detention influences conviction is by encouraging a guilty plea.

Effect of Detention on Incarceration. Detention appeared to have an even stronger effect on incarceration when the bivariate relationships alone were examined, but much of this relationship was accounted for by the control variables. The incarceration rate for all convicted cases was 32%, compared to 84% for cases with a defendant who was detained to disposition, and only 10% for cases with no pretrial detention. In the multivariate analyses, however, detention to disposition independently accounted for only 3% of the variance in likelihood of incarceration. The other two measures of detention, although statistically significant, added a trivial amount—1% or less—to the proportion of variance explained by the control variables. While the control variables together accounted for much more of the variance in incarceration than did detention, detention to disposition was nevertheless the most important *single* factor influencing a convicted defendant's likelihood of being sentenced to jail or prison time.

Effect of Detention on Sentence Length. Sentence length had the weakest relationship with detention. The length of pretrial detention, rather than detention to disposition, was the best predictor of sentence length, but it was not a strong predictor. Moreover, it was only when detention lasted for over a week that it was associated with a significant increase in sentence length. More important influences on sentence length were the severity of the disposition charge, borough, and offense type. To the proportion of the variance in sentence length explained by these control variables, the length of detention accounted for only a trivial additional amount (2%).

B. Discussion

This research supports the hypothesis that simply being held in jail prior to disposition of the case does have an adverse effect on case outcomes, especially the likelihood of conviction. Its effect on likelihood of incarceration was found to be weaker, after removing the part of that effect that was merely the result of the same factors also making conviction more likely; and after factoring out other important predictors of incarceration as well. Even for incarceration, however, detention had an independent impact that was substantively, as well as statistically, significant. On the other hand, the research does not provide much support for the claim that detention also affects sentence length, because this effect—although statistically significant—was found to be negligible in size.

These conclusions were reached using a conservative yardstick: the additional proportion of variance explained by detention, after removing the effects of all other predictors. There is no formal criterion for how much a variable should add to the explanatory power of a model in or-

der to be considered substantively important; our rule of thumb was to consider anything less than 3% to be a trivial addition. As this research has shown, statistical significance can be found even in the absence of this more stringent criterion because the size of the sample, as well as the magnitude of the effect, govern statistical significance. In a very large sample, such as the one used in this research, even a tiny effect can be statistically significant and yet also be of little practical consequence. Statistical significance means only that the results are unlikely to have occurred by chance and says nothing about the substantive importance of the finding.

Even if the chances of being convicted and incarcerated are greater for detained defendants, however, detention is not necessarily a cause of the outcome. It could be that judges are more willing to set bail, or to set high bail, for defendants they think will be convicted and sentenced to jail or prison. By this argument, the relationship is real, but the causal direction is the opposite of the interpretation suggested here. This was the point made in a decades-old New York appellate court decision rejecting the claim made on behalf of a group of detained defendants that their detention put them at higher risk of conviction; the court wrote that "It is not because bail is required that the defendant is later convicted, it is because he is likely to be convicted that the bail may be required."[20]

Our multivariate models controlled for many factors that affect likelihood of conviction, such as number of arrest charges, offense type, borough, and the defendant's criminal history. In order to refute the court's argument definitively, however, ideally one should also control for strength of evidence. The problem is that this is a very illusive concept to measure, and is usually unavailable to research studies, including ours. We found only three examples of prior research that claimed to control for strength of evidence (Clarke and Koch 1976; Landes 1974; Legal Aid Society 1972). Although it's unclear if the measures used in at least two of the three really measured strength of evidence, the researchers found consistently that detention was still a significant predictor of case outcomes even when "strength of evidence" was held constant.[21]

We had no direct measure of the strength of the evidence, but we considered using bail amount as a proxy. A recent CJA study found that the prosecutor's bail request, which is by all accounts a good summary measure of strength of evidence (and in our research was found to be a good predictor of conviction and incarceration), is also the most important factor in predicting the amount of bail set (Phillips 2004a, 2004b; Phillips and Revere 2004a, 2004b). Bail request data had been manually collected through courtroom observations for that earlier study, and was not available for the current research. However, the close link between the prosecutor's bail request and the amount of bail set by the judge suggests that the bail amount could stand in for the bail request, and thereby offer a rough approximation of the strength of the evidence.

Bail amount was not included among the control variables in the final models presented in this report because of the problems of interpretation arising from the fact that—aside from whatever measure it might provide regarding strength of evidence—it is also the mechanism by which detention is ordered. It would be difficult to untangle what part of the effect of bail

[20] Judges v. Bellamy, 41 A.D.2d 196, 341 N.Y.S.2d 137 (1973). Thanks to Mari Curbelo, CJA Director of Special Courts Programs, for this citation from her unpublished memorandum, "Notes Regarding the Comparison of ABA and NAPSA Pretrial Standards to New York's Pretrial Statutes, Case Law and Practice" (December 8, 2004).

[21] The measure of "strength of case" used by Clarke and Koch was time from commission of crime to arrest; the measure used by Landes was the bail amount. The Legal Aid Society study used two measures, both of which were more directly related to strength of evidence: existence of a confession; and whether physical evidence was found on the defendant.

amount to attribute to its case strength component and what part to attribute to the resulting detention. However, this interpretive problem became moot when additional analyses (not presented) showed that controlling for bail amount did not substantially change the results for conviction, incarceration, or sentence length. After the addition of bail amount as a control variable, the proportion of variance explained uniquely by detention dropped by one percentage point for likelihood of conviction (from .06 to .05); remained unchanged for likelihood of incarceration (.03 with or without bail amount), and dropped by one percentage point for sentence length (from .02 to .01). This would not change our conclusions that detention had the strongest effect on likelihood of conviction, also had a small effect on likelihood of incarceration, and had only a trivial effect on sentence length.

While this provides further support for the causal hypothesis, we must still be cautious in interpreting our results. In fact, causal connections can never be proved statistically because there is always the possibility that some unknown or unavailable factor influenced both the independent variable and the outcomes.

The omission in most prior studies of any statistical correction for sample selection bias raises doubts about the claims made in some of those studies that detention affects incarceration and sentence length. In the current research, evidence of some selection bias was found in both the convicted-cases sample (used for the incarceration models) and in the incarcerated-cases sample (used for the sentence length models). When the selection bias control variables were omitted from the models, the proportion of variance explained by detention rose. Had we not controlled for the effects of sample selection bias, we would have concluded (mistakenly) that the effect of detention on incarceration was stronger than its effect on conviction, and that the effect of detention on sentence length, though small, was large enough to be substantively important. This suggests that prior research done without such corrections may well have exaggerated the effect of detention on both incarceration and sentence length. At the same time, the current research confirms that detention does have an effect on incarceration even after removing the bias created by selecting only convicted cases.

The results of the interaction analyses increase our confidence in these conclusions because they showed that detention affected case outcomes in a very similar way, with only minor variations, in every borough of New York City and regardless of the demographic characteristics of the defendant and most case characteristics. An exception was found for cases in which the charge was a Vehicle and Traffic Law offense: among these cases, detention had no significant effect on conviction but a strong effect on incarceration. This follows from the fact that very few defendants in nonfelony VTL cases are detained whereas conviction rates for these offenses are high. In addition, likelihood of conviction was only trivially affected by detention among cases with a defendant with no criminal history; this is another type of case in which judges are reluctant to impose detention when the offense is not serious, even if conviction is likely. Otherwise, the findings were remarkably stable across jurisdictions, subgroups of defendants, and types of cases.

The focus on nonfelony cases in this research sets it apart from all previous empirical studies that we found in the literature on detention and case outcomes—including the Vera and Legal Aid Society studies, which were limited to felony cases, and which to our knowledge are the only previous studies on this topic undertaken in New York City. Earlier researchers focused on felony cases undoubtedly because a much larger proportion of defendants in felony cases are detained, which leads to the inference that pretrial detention is a more serious issue for felony

cases. Yet the current research has shown that pretrial detention has serious implications in minor cases as well. The majority of defendants charged with a nonfelony offense face no jail time, even if convicted, so pretrial detention creates a strong incentive to plead guilty to get out of jail. Many others can expect to be sentenced to time served, which also would mean immediate release in return for a guilty plea. The alternative is to remain in jail indefinitely in the hopes of eventual dismissal or acquittal. Meanwhile, much needed income is forfeited, a job may be lost, children and other family members suffer, an already fragile family may fall apart. Given this pressure, it would be surprising if pretrial detention did *not* influence the likelihood of conviction for the quarter of nonfelony cases in which the defendant is detained (Kellough and Wortley, 2002; Bibas, 2004).

A different explanation could account for the effect of pretrial detention on sentences. In a recent address to a statewide group of policy advisers, a former defense attorney urged the audience to look at it from the opposite angle: it is not that detention results in more severe sentences, he suggested, but that pretrial release results in *less* severe sentences. Release gives the defendant a chance to prove that he or she can behave responsibly. A released defendant can get a job, support his family, stay out of trouble, and demonstrate that he is turning his life around. This gives the defense attorney some positive things to tell the judge prior to sentencing, and could well convince the court to impose a conditional discharge or perhaps a fine rather than sending someone to jail.[22]

All of these considerations, and the data presented in this report, lead to the suggestion that a causal loop probably best describes the relationship of detention to case outcomes. Case-related factors affect outcomes, judges adjust bail setting in response to those same (and other) factors, and the resulting detention (or pretrial freedom) has an additional small effect on both conviction and sentencing.

In addition to the higher risk of conviction and incarceration for detained defendants, there is also reason for concern about the cases for which detention did *not* lead to negative outcomes. In 22% of nonfelony cases with a detained defendant, the defendant was ultimately acquitted or the case was dismissed.[23] In an additional 24% of cases with detention, the defendant was convicted but the sentence did not include any jail (not even time served). This means that nearly half of detained defendants served time in jail only because they were unable to post bail—often a very small amount. (The median bail amount for all cases was $750, and it was the same for this subgroup of cases.) Moreover, in more than a quarter of the cases of defendants who were detained and not facing jail, the defendant did not pose a high risk of flight according to CJA's assessment.

The implications of the arraignment bail decision are highlighted by these findings. Setting bail, even in a low amount, results in substantial detention for many defendants, which in turn increases likelihood of negative case outcomes. This was a compelling part of the rationale for the Vera Institute's efforts to promote the use of ROR with the development of an objective recommendation system. Had further research established that the link between detention and case outcomes is illusory, there would still be abundant reason to advocate for release of defen-

[22] Remarks made by Alan Rosenthal, currently a director of the Center For Community Alternatives in Syracuse, NY, in an address to the Subcommittee on Supervision in the Community of the New York State Commission on Sentencing Reform, August 9, 2007.

[23] This differs slightly from the 24% reported in *Research Brief* #14 because of additional work to refine the analyses completed after publication of the Brief (see also footnote 18).

dants who have not yet been convicted of anything (and might not be), who are assessed to be good risks to return to court, and who are in jail only because they do not have the money for bail. However, this research leaves open the real possibility that for a sizable minority of defendants in nonfelony cases, lacking the money to post bail has severe consequences that extend far beyond the immediate loss of liberty.

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APPENDIX A
Statistical Procedures

MULTIVARIATE REGRESSION

The multivariate statistical procedures used in this report are logistic regression and ordinary least squares (OLS) regression. Logistic regression is appropriate when the dependent variable is dichotomous, as it was for the analyses of conviction and incarceration. OLS regression is appropriate when the dependent variable is an interval-level continuous variable, as it was for the analyses of length of detention and sentence length, both of which were measured in days. The two regression methods are similar in their interpretation, but differ in the specific statistics they provide.

The results of a regression analysis, taken as a whole, are referred to as a model. The model is interpreted as a numerical description of the relative importance of all the factors (independent variables) that influence an outcome (dependent variable), and an estimate of the degree to which the outcome can be predicted from a knowledge of those factors. Statistics for each independent variable indicate its net effect on the dependent variable, after the effects of all other variables have been taken into account; and the proportion of the variation in the dependent variable that is explained cumulatively by all the independent variables. The statistics presented in this report for the logistic regression models are the *standardized beta, odds ratio*, and *Nagelkerke* R^2. Statistics for the OLS regression model are the *standardized beta, unstandardized beta*, and *adjusted* R^2. The statistics and their interpretations are described following an explanation of statistical significance.

Statistical significance

The statistical significance of the variable, simultaneously controlling for all other variables in the model, is indicated by asterisks: from one asterisk to denote the least stringent level of statistical significance ($p < .05$) to three asterisks denoting the most stringent level ($p < .001$). The level of statistical significance is a measure of the likelihood that the relationship found in the sample could have occurred merely by chance. It is standard practice to consider a relationship to be statistically significant if the likelihood is less than 5% ($p < .05$) that the result occurred by chance; an even smaller likelihood—for example, less than 1% ($p < .01$)—is better. The most stringent level of significance ($p < .001$) indicates that the likelihood of the result occurring by chance is less than 1 in 1,000.

Both the magnitude of the effect and the size of the sample enter into determining the level of statistical significance. The samples used for this research were quite large: almost 25,000 for the conviction models, over 13,000 for the incarceration models, and about 4,600 for the sentence length models. These are much larger samples than were used in most of the prior research reviewed in the literature survey. The advantage of large samples is that a weak, but real, effect is unlikely to be missed simply because the number of cases was too small for it to be detected by the statistical analysis. However, statistical significance should not be confused with substantive significance. If the sample size is large enough, very weak effects can attain statistical significance; this means that there is a high degree of certainty that the effect is real, but its importance may be trivial.

Standardized *Beta*

The standardized *beta* coefficient, given for both logistic and OLS regression models, is a measure of the strength of the effect of the independent variable on the dependent variable, controlling for all other variables in the model. Although some inferences can be drawn about the strength of a variable's effect from the odds ratio in logistic regression or the unstandardized *beta* in OLS regression, the standardized *beta* is a better measure of strength precisely because it is *standardized* to take into account the number of categories in the independent variable and the distribution of cases among categories. Standardized *betas* can be directly compared to assess the relative strength of variables; neither odds ratios nor unstandardized *betas* can be used in this way. The value of the standardized *beta* ranges from 0 (no effect) to 1 (maximum effect), and the sign indicates the direction of the relationship: a positive sign indicates that as the value of the independent variable increases, the value of the dependent variable also increases; a negative sign indicates that as the value of the independent variable increases, the value of the dependent variable decreases.

To illustrate from one of the models of conviction presented in this report (Table 8, Model 1): the standardized *beta* for a VTL offense type (charged at arraignment with a Vehicle and Traffic Law offense) was .63, which was the largest standardized *beta* in the model. This indicates that being charged with a VTL offense was the most powerful predictor of conviction, and it was almost twice as strong a predictor as being detained at arraignment (standardized *beta* .34).

Odds Ratio (logistic regression only)

The odds ratio measures the change in odds of an event occurring when the value of the independent variable changes, controlling for all other variables in the model. An odds ratio greater than 1 indicates an increase in the odds of the predicted event occurring when the value of the independent variable is higher; less than 1 indicates a decrease in the odds of the predicted event occurring when the value of the independent variable is higher. To illustrate again from the first conviction model (Table 8, Model 1): the odds ratio for detention at arraignment was 2.73. This means that the odds of conviction were nearly 3 times greater for a defendant who was detained at arraignment (coded as 1), compared to the odds of conviction for a defendant who was released at arraignment (coded as 0).

For categorical variables, such as the borough of prosecution (used as a control variable in all the models), odds ratios are calculated in reference to a specified category. In the models presented in this report, the Bronx was the reference category for the borough variable. In Model 1 of Table 8, the odds ratio for Brooklyn was 0.25, meaning that the odds of conviction in Brooklyn (controlling for all the other variables in the model) were only a quarter of the odds of conviction in the Bronx. Odds ratios less than 0 are sometimes better understood when the inverse is taken (1 divided by the odds ratio), which in this example would yield the interpretation that the odds *against* conviction in Brooklyn were 4 times greater than the odds against conviction in the Bronx. (Or, the odds of conviction in the Bronx were 4 times greater than the odds in Brooklyn.)

Unstandardized *Beta* (OLS regression only)

Odds ratios are not relevant when the outcome being predicted is continuous, rather than an event that either did or did not happen. Therefore, the OLS regression models of detention

length and sentence length do not present odds ratios, but instead present unstandardized *beta* coefficients. The unstandardized *beta* indicates the average change in the dependent variable for each unit of change in the independent variable, measured in the same units as the dependent variable. The sign (negative or positive) indicates the direction of change. In the model of detention length, for example (Table 7), the unstandardized *beta* for the bail amount was 2.30. The bail amount was coded in $1,000 increments, so the interpretation is that for every increase of $1,000 in the amount of bail set, the average length of pretrial detention rose by 2.3 days (after accounting for the effects of all other independent and control variables).

R^2 (Nagelkerke R^2, adjusted R^2)

The model R^2 is interpreted as roughly the proportion of variance in the outcome that is explained jointly by all of the independent variables in the model, ranging from 0 to 1 (100%). Although the specific version of the R^2 statistic for the logistic regression models (Nagelkerke R^2) is different from that reported for the OLS regression model (adjusted R^2), the interpretation is the same. The low R^2 for the length of detention model (.07, Table 7) indicates that most of the variation in detention length could not be accounted for by the variables available for the analysis. On the other hand, the R^2 values for the incarceration models (Table 9) were much higher (.60 to .63), indicating that these models were more successful in accounting for incarceration outcomes.

In this research, a two-step procedure was used in most of the regression models: in the first step all of the control variables were entered together in a block; in the second step detention was entered by itself. An R^2 value was calculated for all the control variables at the end of the first step; the Block 1 R^2 indicates how much of the variation in the outcome was accounted for by the control variables alone. The Model R^2 was calculated after the detention variable was added to the model; it indicates how much of the variation in the outcome was accounted for by the control variables plus the detention variable. The difference between the two, reported on the last row of each model, represents the contribution to the Model R^2 made by detention alone, after the effects of all the control variables were already taken into account.

SELECTION BIAS[1]

We considered the possibility that selection bias may have been introduced into some of the models by virtue of the fact that only certain cases could have been included in the analytic sample. For example, the models predicting incarceration included only cases in which the defendant was convicted. Selection bias may occur if the variables that influence conviction also influence likelihood of incarceration. The same issue arises for the models of sentence length, because they included only cases in which the defendant was sentenced to a jail or prison term. Unless a correction for selection bias is included in the models, the estimates of the effects of the independent variables may be overstated or understated.

All three measures of detention were found to be significant predictors of conviction, so in order to assess accurately the importance of detention for incarceration, it was necessary to remove that part of the effect that resulted simply from the fact that all the defendants in the sam-

[1] This section and the statistical procedures used in the analyses to control for sample selection bias benefited greatly from the assistance of Richard R. Peterson, Director of CJA's Research Department. The explanations of selection bias and statistical methods for controlling it borrow heavily from Peterson (2004), Technical Appendix.

ple had been convicted. Not doing so could exaggerate the importance of detention on incarceration, because all or part of the apparent effect on incarceration could actually derive from its effect on conviction. Likewise, the apparent effect of detention on sentence length could derive from its effect on conviction or incarceration, or both. To remove the portion of the detention effect attributable to sample selection bias, two control variables were added to the regression models.

For the analysis of incarceration, a control variable was included that estimated the predicted probability of conviction. This control variable was created using the best model of conviction presented in Table 8, which was Model 3, and saving as a new variable the predicted probability of conviction that is calculated by the logistic regression analysis. This selection bias control variable was significant in all three of the incarceration models, indicating that sample selection bias did indeed affect the results. With the probability of conviction controlled for in the first step, the Block 1 R^2 for each model presented in Table 9 thereby included this possible source of sample bias along with the effects of all the other control variables on incarceration, thereby separating these effects from any additional variance accounted for by detention on incarceration alone.

The same procedure was followed for the models of sentence length (Table 10). A control variable for the predicted probability of incarceration was created using the strongest model of incarceration presented in Table 9, which again was Model 3. The predicted probability of incarceration was then included as a second selection bias control variable (along with probability of conviction) in each sentence length model presented in Table 10. Likelihood of conviction was significant in all three sentence length models, as well as in the incarceration models. Likelihood of incarceration was not found to be statistically significant in these models. Problems of multicollinearity (explained below) created some fluctuations in the significance levels and coefficients for the bias control variables, but this does not affect R^2 statistics. As a result, we are confident that the effects of sample selection bias were accounted for in the first step of the analyses, and any additional explained variance that resulted from adding detention in the second step could reasonably be attributed to its independent effect on sentence length alone.

MULTICOLLINEARITY

We were concerned that high correlations between each of the bias correction variables and some of the independent variables in the models, and between the two bias correction variables themselves, would introduce distortions in the results associated with the statistical problem of multicollinearity. The problem is that two independent variables that are highly correlated with each other are to some extent measuring the same thing, and it is difficult to separate out the unique effect of each on the outcome. Since many of the same factors influence conviction and incarceration, it was unavoidable that the probabilities of each would be highly correlated with each other and with some of the independent variables in each model. As Nie et al. (1975, p. 340) pointed out, "The situation is somewhat paradoxical . . . The more strongly correlated the independent variables are . . . the greater the need for controlling the confounding effects. However, the greater the intercorrelations of the independent variables, the less the reliability of the relative importance indicated by the partial regression coefficients."

Even in the presence of severe multicollinearity, however, variables other than the highly intercorrelated ones are not affected, nor is the proportion of variance explained by the model. Consequently, multicollinearity is not necessarily disastrous, especially if the focus is on variables other than the intercorrelated ones. The problem is that the individual impact of the affected variables on the outcome may not be accurately assessed if the multicollinearity is severe.

Multicollinearity would not be a problem in the models presented in Tables 9 and 10 were it not for the bias control variables, as indicated by low intercorrelations among the independent variables. However, when the sample of convicted cases used to model incarceration was examined for correlations with probability of conviction, it was found that this bias control variable was highly correlated (>.4) with all three of the detention variables, and with a dummy offense type variable (the reference category "harm to persons and property"). These high correlations for the incarceration models ranged from .43 to .56, which is not extremely high but still worrisome.

More troublesome were the correlations for the sample of incarcerated cases (used in the sentence length analyses) between the probability of incarceration and some control variables related to severity of the disposition charge (.52 and .56); between the probability of incarceration and the detention variables (from .52 to .74); and between the two bias control variables (.62).

To check further for the presence of multicollinearity, we examined the collinearity diagnostic statistics for the sentence length models generated by the SPSS multiple regression program: tolerance, variance inflation factors (VIF), and condition indexes (CI). (Collinearity diagnostics are not available for logistic regression, which was used for the incarceration analyses.)

Tolerance and VIF are measures of the intercorrelations among independent variables, and are better indications of multicollinearity than simple bivariate correlations because each independent variable is regressed on all others (in effect, a series of regression models with each independent variable as the dependent variable in one model, and all others as the independent variables). Tolerance and VIF are reciprocals of each other: a high VIF indicates a high degree of intercorrelation, and a low tolerance indicates the same thing. A tolerance of less than .20 (or less stringently, .10) is commonly taken to indicate a problem with multicollinearity. No tolerances were less than .10 in sentence length Models 1 and 2, but the tolerance was less than .20 for the both bias control variables, as well as criminal history variables. The situation was worse for sentence length Model 3, in which tolerances for both bias control variables, along with some detention dummy variables, were less than .10.

For VIF, a value greater than 4.0 is a common criterion for indicating multicollinearity, but 5.0 or even 10.0 are sometimes used. VIF values greater than 10 were found only in sentence length Model 3. However, VIF values for the bias control variables and criminal history variables for Models 1 and 2 were also high (around 6 and 7)

Finally, the CI values (in conjunction with variance proportions) provide a further diagnostic tool for identifying multicollinearity. The CI is based on a statistic (eigenvalue) that evaluates how much new information each component contributes to predicting the outcome (the number of components equals the number of independent variables, plus one for the constant). CIs are the square root of the ratio of the largest eigenvalue to each individual eigenvalue; high CIs (greater than 30) should be examined. If a variable (component) with a high CI contributes strongly (variance proportion greater than .5) to the variance of two or more variables, a multi-

collinearity problem is indicated. Using this tool, we identified a multicollinearity problem for sentence length Model 3: a component with CI=89 contributed strongly to the variance of both bias control variables, as well as some charge variables. No multicollinearity problem was found for Models 1 and 2, according to this diagnostic tool. (For more information about multicollinearity diagnostics, see Belsley et al., 2004.)

These diagnostics together raised enough concerns about multicollinearity, especially for sentence length Model 3, that we put considerable time and effort into addressing the issue. Two frequently suggested remedies—deleting one of the highly correlated variables, or combining them into an index that includes both—were not options because either would have defeated the purpose of the research. Detention was integral to the hypothesis being tested, and controlling for sample selection bias was the only way to ensure that the effect of detention on incarceration and sentence length was not inflated. Two other remedies, however, were feasible and were tested in both the incarceration and sentence length models:

- New bias control variables were constructed using—instead of the best models predicting conviction and incarceration—models that were similar but used a slightly different set of independent variables. We tested four alternate probability-of-conviction variables and six alternate probability-of-incarceration variables (one of which was also tested in 5 different versions, each of which incorporated a different probability-of-conviction variable).
- Transformations were computed of one of the bias control variables (only one, because if both were transformed the original correlations would be retained). Probability of incarceration was transformed in two ways, using (1) the logarithm of the probability, and (2) the square root.

Neither of these approaches was successful. Although some of these efforts reduced some of the troublesome intercorrelations, increased some tolerances, and decreased some VIF statistics, a good solution—one that removed all the warning flags for multicollinearity according to all the diagnostic measures—was not found.

Nevertheless, we are confident that, although there is a high degree of multicollinearity in some models presented in this report, there is no reason to be concerned about the findings or conclusions of this study. Cohen and Cohen (1975) point out that because R-squares are not affected by multicollinearity, entering variables hierarchically can produce a reliable assessment of the impact of each additional variable through an examination of additional variance explained at each step. It is only when the variables are entered simultaneously, and interpretation depends on a comparison of coefficients, that the importance of highly interrelated independent variables may be lost because of multicollinearity. This was precisely the procedure followed in the present research. The detention variables were entered in the second step, after the effects of all other variables, including bias controls, had been partialled out. We based our conclusions on any increase, or lack thereof, in the R-square resulting from the addition of detention. Cohen and Cohen consider this "a superior solution."

Confidence in our findings was also bolstered by the general stability of the models across the many alternative versions tested. Each incarceration and sentence length model was re-run numerous times, with differently computed bias control variables: with the bias controls computed using alternative models, and using mathematical transformations of the original bias controls. The symptoms of multicollinearity that make interpretation treacherous—unstable or

unlikely coefficients and signs—did afflict the bias control variables themselves (note the large positive coefficients for probability of conviction in the incarceration Models 1 and 2, compared to the negative coefficient in Model 3), and some of the offense type variables also were affected. However, it was reassuring to note that the effect of detention on the outcome was remarkably stable throughout all of these tests. The conclusions drawn in the text about the independent effect of detention on incarceration and sentence length were confirmed by every alternative model tested. To the extent that multicollinearity was a problem in our models, all the evidence indicates that it did not affect the relationships we were most interested in.

Finally, we ran all of the models without the bias control variables as a test of their effect on the final models. By comparing the models with and without the bias control variables, we could examine the effect of introducing multicollinearity into the models, as this problem was not present without the bias controls. The results were exactly what would be expected if there were *no* multicollinearity: the importance of detention in each model was slightly greater without the sample bias control variables. Without the controls, the effect of detention on the outcome appears larger because the role of detention in placing the case in the sample of convicted, or incarcerated, cases was not first removed. The lack of sample selection bias controls in previous research has drawn criticism for that very reason. Our primary conclusion, that detention affects case outcomes *even after accounting for selection bias*, is justifiable only with the inclusion of the bias control variables. Confidence in this conclusion was further enhanced by the observation that there were no inexplicable shifts in the signs or coefficients of detention variables after the inclusion of the bias control variables, which would indicate instability due to multicollinearity.

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APPENDIX B

TABLE B
Description, Coding, And Distributions Of Variables

Dependent Variables	Coding	Distributions
Length of pretrial detention (for detained cases) The number of days from arraignment to first release prior to disposition of the case (conviction, dismissal, or acquittal); or, if no pretrial release, number of days from arraignment to disposition. For DAT cases with a failure to appear at the scheduled arraignment, length of detention was calculated from the defendant's return to court (the actual arraignment).	Interval (number of days). 0 = made bail at arraignment or post-arraignment on the same day as arraignment. (Length of detention was coded categorically when used as an independent variable. See below under "Independent Variables.")	mean = 18 days median = 5 days range = 0 to 332 days N = 7,198 (detained at arraignment)
Conviction *Convicted* was defined as pled guilty or tried and found guilty; *not convicted* included all other case outcomes (dismissal, acquittal, and adjournment in contemplation of dismissal).	Dichotomy. 1 = Convicted 0 = Not convicted	1 = 16,541 (58%) 0 = 12,225 (42%) Total 28,766 (100%)
Incarceration *Incarcerated* was defined as a sentence that included jail or prison (including split sentences of incarceration plus probation; and sentences of time served). *Not incarcerated* included all other sentences (straight probation, conditional or unconditional discharge, fine, or a choice of fine or jail).	Dichotomy. 1 = Incarcerated 0 = Not incarcerated	1 = 5,138 (32%) 0 = 11,005 (68%) Total 16,143 (100%) (excluding convictions that were missing the sentence)
Sentence Length The length of the sentence in days for defendants sentenced to jail or prison. For defendants sentenced on a felony charge to an indeterminate prison term, the minimum term was used as the measure.	Interval (number of days). Sentences of time served were set equal to the length of pretrial detention. 0 = a sentence of time served with no post-arraignment pretrial detention	mean = 49 days median = 30 days range = 0 to 1,640 days N = 5,138 (sentenced to incarceration)

Percentages may not sum to 100% because of rounding.

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Table B Description, Coding, And Distributions Of Variables (continued)

Independent Variables	Coding	Distributions
Bail amount The amount of bail set at arraignment on the sample docket. Bail amount was set to equal the cash alternative when a cash amount was set along with a higher bond amount. Cases with a bail amount of $1 at arraignment were excluded from analyses.	Used as an independent variable in multivariate analyses in Table 7 (length of detention). Interval (dollar amount divided by 1,000 used in statistical model).	$1 474 (6%) $50 – $499 574 (7%) $500 – $749 2,547 (32%) $750 – $999 958 (12%) $1,000 – $1,499 1,634 (21%) $1,500 – $1,999 815 (10%) $2,000 – $2,499 254 (3%) $2,500 – $5,000 653 (8%) over $5,000 60 (1%) Total 7,969 (100%) (cases with bail set) [excluding $1] mean = $1,119 median = $750 range = $50 to $50,000
Detained at arraignment *Detained* was defined as held on bail (defendants who were remanded without bail were excluded); *not detained* was defined as released on recognizance or made bail at arraignment. Defendants who were held on bail at arraignment were coded *detained* even if they posted bail at a DOC facility later the same day. For DAT cases with a failure to appear at the scheduled arraignment, detention was based on what happened at the defendant's return to court (the actual arraignment).	Used as an independent variable in multivariate analyses for Model 1 in Tables 8, 9, and 10 (case outcomes). Dichotomy. 1 = Detained 0 = Not detained	1 = 7,198 (25%) 0 = 21,568 (75%) Total 28,766 (100%)
Length of pretrial detention The number of days from arraignment (for DAT cases with a failure to appear at the scheduled arraignment, the date of return to court was used as the starting point) to first release (or to disposition, if no pretrial release) grouped into 5 categories from shortest to longest. For the sentence length analyses, the number of days was not recoded into categories.	Used as an independent variable in multivariate analyses for Model 2 in Tables 8, 9, and 10 (case outcomes). Ordinal (Table 8 and Table 9). Interval (Table 10). *Reference category:* 0 = Released day of arraignment 1 = Detained for 1 day (released day after arraignment) 2 = Detained from 2 to 7 days 3 = Detained from 8 to 60 days 4 = Detained longer than 60 days	0 = 21,733 (76%) 1 = 914 (3%) 2 = 3,423 (12%) 3 = 2,141 (7%) 4 = 555 (2%) Total 28,766 (100% mean = 4 days median = 0 days minimum = 0 days maximum = 332 days

Percentages may not sum to 100% because of rounding.

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Table B Description, Coding, And Distributions Of Variables (continued)

Independent Variables	Coding	Distributions		
Detention to disposition Four categories reflecting whether the defendant was detained, at liberty, or both, throughout case processing. If both, the variable further distinguishes cases depending on release status at arraignment.	Used as an independent variable in multivariate analyses for Model 3 in Tables 8, 9, and 10 (case outcomes). Categorical. *Reference category:* 0 = No pretrial detention 1 = Detained at arraignment & released pre-disposition 2 = Released at arraignment & detained pre-disposition 3 = Detained from arraignment to disposition	0 = 1 = 2 = 3 = Total	20,583 3,235 985 3,963 28,766	(72%) (11%) (3%) (14%) (100%)
Control Variables	**Coding**	**Distributions**		
Recommended by CJA The CJA release recommendation was grouped into two categories: *Recommended* includes only defendants assigned the top recommendation category. Defendants assigned any other recommendation category (including those assessed to be at moderate risk) were categorized as *not recommended*.	Used as a control variable in multivariate analyses only in Table 7 (length of detention). Dichotomy. 1 = Recommended 0 = Not recommended	1 = 0 = Total =	8,774 16,848 25,622	(34%) (66%) (100%)
Defendant expects someone at arraignment The defendant told the CJA interviewer that he or she expected a family member or friend at arraignment. "Don't know" responses were combined with "No."	Used as a control variable in multivariate analyses only in Table 7 (length of detention). Dichotomy. 1 = Yes 0 = No/Don't know	1 = 0 = Total =	7,009 17,487 24,496	(29%) (71%) (100%)
Defendant reports full-time employment The defendant told the CJA interviewer that he or she was employed, in school, or in a training program full time. Verified and unverified responses were grouped together; an unresolved conflict was coded *No*.	Used as a control variable in multivariate analyses only in Table 7 (length of detention). Dichotomy. 1 = Yes 0 = No	1 = 0 = Total =	12,520 12,128 24,648	(51%) (49%) (100%)
Number of arrest charges The CJA database receives up to 4 arrest charges from the NYPD; a value of 4 indicates 4 or more.	Used as a control variable in all multivariate analyses presented in Tables 8, 9, and 10 (case outcomes). Interval.	1 = 2 = 3 = 4 = Total	14,312 9,180 3,490 1,784 28,766	(50%) (32%) (12%) (6%) (100%)
Felony arrest charge At least one arrest charge of felony level severity.	Dichotomy. 1 = Yes 0 = No	1 = 0 = Total	5,562 23,204 28,766	(19%) (81%) (100%)

Percentages may not sum to 100% because of rounding.

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Table B Description, Coding, And Distributions Of Variables (continued)

Control Variables	Coding	Distributions		
Offense type of top arraignment charge *Harm to persons*: assault; endangering the welfare of a child; sexual abuse. *Weapon*: possession charges. *Property crime*: petit larceny, criminal mischief; possession of stolen property. *Drug*: misdemeanor drug possession; marijuana possession and sale. *Sex crime*: prostitution; public lewdness. *Theft intangible*: theft of services; trademark counterfeiting; forgery. *Misconduct*: criminal trespass; harassment; unauthorized use of a vehicle. *Obstruction of justice*: criminal contempt; resisting arrest; promoting prison contraband. *Vehicle & Traffic Law*: aggravated unlicensed operation of a motor vehicle; driving under the influence of alcohol. *Type unknown / other*: mostly non-criminal Administrative Code charges; a few misdemeanor riot charges usually categorized as "harm to persons and property" were also included here because there were too few for a separate category.	Categorical. *Reference category:* 0 = Harm to persons 1 = Weapon 2 = Property crime 3 = Drug 4 = Sex crime 5 = Theft intangible 6 = Misconduct 7 = Obstruction of justice 8 = Vehicle & Traffic Law 9 = Type unknown / other	0 = 1 = 2 = 3 = 4 = 5 = 6 = 7 = 8 = 9 = Total	8,684 717 3,318 5,087 722 1,465 3,311 1,893 3,532 37 28,766	(30%) (2%) (12%) (18%) (3%) (5%) (12%) (7%) (12%) (<1%) (100%)
Severity class of top disposition charge Severity class of the most severe charge at disposition, grouped into 4 levels of severity.	Used as a control variable in multivariate analyses in Tables 9 & 10 (incarceration and sentence length). Categorical. *Reference category:* 0 = Class A misdemeanor 1 = Felony 2 = Class B or unclassified misdemeanor 3 = Violation or infraction	0 = 1 = 2 = 3 = Total	15,472 148 4,491 8,618 28,729	(54%) (1%) (16%) (30%) (100%)
Transfer to Supreme Court The case was transferred and disposed in the Supreme Court. (Misdemeanor cases in the Bronx are routinely transferred to the Bronx Supreme Court for adjudication; these cases are considered the equivalent of Criminal Court cases and are not coded as transferred to Supreme Court.)	Used as a control variable in Table 8 (conviction analysis). Dichotomy. 1 = Yes 0 = No	1 = 0 = Total	271 28,495 28,766	(1%) (99%) (100%)

Percentages may not sum to 100% because of rounding.

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Table B Description, Coding, And Distributions Of Variables (continued)

Control Variables	Coding	Distributions
Borough Borough of prosecution.	Categorical. *Reference category:* 0 = Bronx 1 = Brooklyn 2 = Manhattan 3 = Queens 4 = Staten Island	0 = 5,681 (20%) 1 = 8,525 (30%) 2 = 8,196 (28%) 3 = 5,152 (18%) 4 = 1,212 (4%) Total 28,766 (100%)
Time to disposition Number of days from Criminal Court arraignment to disposition of the case in either Criminal or Supreme Court.	Interval (number of days).	mean = 89 days median = 78 days range = 1 to 446 days N = 28,766
Criminal history Defendant's adult criminal record at the time of the sample arrest.	Categorical. *Reference category:* 0 = No criminal record (may have prior sealed case) 1 = Prior adult arrest (including open case), no conviction 2 = Prior misdemeanor conviction, no felony conviction 3 = Prior felony conviction (with or without misdemeanor conviction)	0 = 8,692 (34%) 1 = 5,484 (22%) 2 = 3,851 (15%) 3 = 7,314 (29%) Total 25,341 (100%)
Sex Defendant's gender identity as recorded by the CJA interviewer or by the NYPD.	Dichotomy. 1 = Female 0 = Male	1 = 4,808 (17%) 0 = 23,951 (83%) Total = 28,759 (100%)
Age Defendant's age at the time of arrest.	Categorical. *Reference category:* 0 = 21–30 1 = 16–18 2 = 19–20 3 = 31–40 4 = 41–50 5 = 51–60 6 = 61 and older	0 = 9,101 (32%) 1 = 2,766 (10%) 2 = 2,045 (7%) 3 = 7,892 (27%) 4 = 5,179 (18%) 5 = 1,430 (5%) 6 = 353 (1%) Total 28,766 (100%) mean = 32 median = 31 range = 16 to 84
Ethnicity Defendant's ethnicity, as recorded in the CJA interview or by the NYPD.	Categorical. *Reference category:* 0 = Black 1 = Hispanic 2 = White 3 = Other	0 = 13,231 (47%) 1 = 8,738 (31%) 2 = 4,281 (15%) 3 = 1,783 (6%) Total 28,033 (100%)

Percentages may not sum to 100% because of rounding.

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Table B Description, Coding, And Distributions Of Variables (continued)

Bias Control Variables	Coding	Distributions
Probability of conviction Used in incarceration and sentence length models to control for possible sample selection bias resulting from restricting the analysis to convicted cases.	Interval (theoretically 0.00 to 1.00)	mean = .69400 median = .74970 minimum = .09863 maximum = .99842 N = 14,423 (convicted cases)
Probability of incarceration Used in sentence length models to control for possible sample selection bias resulting from restricting the analysis to incarcerated cases.	Interval (theoretically 0.00 to 1.00)	mean = .69623 median = .82496 minimum = .00399 maximum = .96311 N = 4,700 (incarcerated cases)

Percentages may not sum to 100% because of rounding.

APPENDIX C

Interaction Effects

Possible interactions between detention and selected control variables were examined and summarized briefly in the body of the text. Although the strength of the effect of detention on case outcomes did vary depending on the values of some of the controls, the overall conclusions did not change.

Interactions were analyzed by estimating a separate model for each value of selected control variables, using the same independent variables. For example, to analyze the interaction between borough and detention, a separate model for each borough was estimated, and the size of the unique contribution of detention in each borough was compared to the size of its contribution in the other boroughs. Likewise, separate models were estimated for the five most numerous offense types. Summary statistics for the separate models are reported in Table C-1 for effects on conviction; in Table C-2 for effects on incarceration; and in Table C-3 for effects on sentence length.

The full models are not shown. Each table includes only the Block 1 R^2, the Model R^2, the proportion of variance explained by detention (the difference between the two), and—in the last four columns—the significance levels for values of the detention variable. The detention variable used in the interaction analyses for conviction (Table C-1) and incarceration (Table C-2) was detention to disposition, which was the measure with the greatest effect on these two outcomes. Length of detention had a greater effect on sentence length than the other detention measures, so length of detention was the measure used in the interaction analyses for sentence length (Table C-3).

Table C-1
Interaction Of Detention With Selected Control Variables
Effects On Likelihood Of Conviction For Nonfelony Cases

Model *(Each row represents a separate model.)*	Block 1 R^2	Model R^2	Proportion of variance explained by detention	Significance Level of the effect of detention to disposition on conviction, controlling for all other variables in the model			
				Variable as a whole	Detained and later released[1]	Released and later detained[1]	No pretrial release[1]
Borough Models							
Bronx	.23	.29	.06	***	ns	***	***
Brooklyn	.40	.48	.08	***	***	***	***
Manhattan	.23	.27	.04	***	ns	***	***
Queens	.19	.24	.05	***	***	***	***
Staten Island	.37	.41	.04	***	ns	*	***
Offense Type Models							
Harm to persons	.18	.27	.09	***	***	***	***
Property	.31	.36	.05	***	**	***	***
Drug	.27	.32	.05	***	*	***	***
Misconduct	.24	.32	.08	***	ns	***	***
VTL	.11	.11	<.01	ns	ns	ns	ns
Criminal History Models							
First adult arrest	.31	.32	.01	***	***	***	***
Prior arrest, no conviction	.24	.28	.04	***	***	***	***
Misdemeanor conviction	.32	.40	.08	***	***	***	***
Felony conviction	.30	.39	.09	***	***	***	***
Ethnicity Models							
Black	.33	.40	.07	***	***	***	***
Hispanic	.27	.33	.06	***	***	***	***
White	.30	.33	.03	***	**	**	***
Sex Models							
Male	.29	.35	.06	***	***	***	***
Female	.36	.41	.05	***	***	***	***

[1] This column presents the statistical significance of the increase in likelihood of conviction, compared to the reference category (no pretrial detention): * p<.05; ** p<.01; *** p<.001; ns (not significant) p ≥.05.

Table C-2
Interaction Of Detention With Selected Control Variables
Effects On Likelihood Of Incarceration For Nonfelony Cases
(Cases Ending In Conviction)

Model *(Each row represents a separate model.)*	Block 1 R^2	Model R^2	Proportion of variance explained by detention	Significance Level of the effect of detention to disposition on incarceration, controlling for all other variables in the model			
				Variable as a whole	Detained and later released[2]	Released and later detained[2]	No pretrial release[2]
Borough Models							
Bronx	.57	.60	.03	***	***	***	***
Brooklyn	.60	.62	.02	***	***	***	***
Manhattan	.64	.66	.02	***	***	***	***
Queens	.64	.67	.03	***	***	***	***
Staten Island	.57	.63	.06	***	ns	***	**
Offense Type Models							
Harm to persons	.63	.65	.02	***	***	***	***
Property	.61	.63	.02	***	***	***	***
Drug	.51	.54	.03	***	***	***	***
Misconduct	.52	.53	.01	***	**	***	***
VTL	.37	.45	.08	***	***	***	***
Disposition Charge Severity Models							
Felony	[not enough cases for estimation of a separate model]						
A misdemeanor	.30	.34	.04	***	***	***	***
B or unclassified misdemeanor	.49	.55	.06	***	***	***	***
Violation or infraction	.29	.36	.07	***	***	***	***
Criminal History Models							
First adult arrest	.23	.26	.03	***	ns	***	***
Prior arrest, no conviction	.45	.49	.04	***	***	***	***
Misdemeanor conviction	.54	.59	.05	***	***	***	***
Felony conviction	.46	.51	.05	***	***	***	***
Ethnicity Models							
Black	.58	.61	.03	***	***	***	***
Hispanic	.60	.64	.04	***	***	***	***
White	.57	.61	.04	***	***	***	***
Sex Models							
Male	.60	.63	.03	***	***	***	***
Female	.64	.67	.03	***	***	***	***

[2] This column presents the statistical significance of the increase in likelihood of incarceration, compared to the reference category (no pretrial detention): * p<.05; ** p<.01; *** p<.001; ns (not significant) p ≥.05.

Table C-3
Interaction Of Detention With Selected Control Variables
Effects On Length Of Sentence For Nonfelony Cases
(Cases With A Defendant Sentenced To Incarceration)

Model *(Each row represents a separate model.)*	Block 1 R^2	Model R^2	Proportion of variance explained by detention	Significance Level of the effect of the length of detention on sentence length, controlling for all other variables in the model			
				Detained 1 day[3]	Detained 2-7 days[3]	Detained 8-60 days[3]	Detained 61+ days[3]
Borough Models							
Bronx	.37	.40	.03	ns	ns	***	***
Brooklyn	.46	.47	.01	ns	ns	**	***
Manhattan	.56	.58	.02	ns	ns	***	***
Queens	.35	.37	.02	ns	ns	*	***
Staten Island	.55	.55	<.01	ns	ns	ns	ns
Offense Type Models							
Harm to persons	.58	.60	.02	ns	ns	ns	***
Property	.36	.38	.02	ns	ns	**	***
Drug	.51	.52	.01	ns	ns	***	***
Misconduct	.29	.33	.04	ns	ns	***	***
VTL	.49	.51	.02	ns	ns	ns	**
Disposition Charge Severity Models							
Felony	[not enough cases for estimation of a separate model]						
A misdemeanor	.15	.19	.04	*	ns	***	***
B or unclassified misdemeanor	.12	.15	.03	ns	ns	*	***
Violation or infraction	.12	.17	.05	ns	ns	***	***
Criminal History Models							
First adult arrest	.60	.62	.02	**	ns	ns	ns
Prior arrest, no conviction	.52	.56	.04	ns	ns	ns	***
Misdemeanor conviction	.31	.38	.07	ns	ns	***	***
Felony Conviction	.47	.48	.01	ns	ns	***	***
Ethnicity Models							
Black	.45	.48	.03	ns	ns	***	***
Hispanic	.48	.49	.01	ns	ns	**	***
White	.40	.44	.04	ns	ns	ns	***
Sex Models							
Male	.45	.47	.02	ns	ns	***	***
Female	.31	.36	.05	ns	*	***	***

[3] This column presents the statistical significance of the increase in length of sentence, compared to the reference category (released the same day as arraignment): * p<.05; ** p<.01; *** p<.001; ns (not significant) p ≥.05.