CJA **NEW YORK CITY CRIMINAL JUSTICE AGENCY, INC.**

Jerome E. McElroy
Executive Director

PRETRIAL DETENTION AND CASE OUTCOMES, PART 2: FELONY CASES

Mary T. Phillips, Ph.D.
Project Director
and
Deputy Director, Research Department

FINAL REPORT

March 2008

52 Duane Street, New York, NY 10007 (646) 213-2500

PRETRIAL DETENTION AND CASE OUTCOMES, PART 2: FELONY CASES

Mary T. Phillips, Ph.D.
Project Director
and
Deputy Director, Research Department

Research Assistance:
Raymond P. Caligiure
Graphics and Production Specialist

Systems Programming:
Wayne Nehwadowich
Senior Programmer / Analyst

Administrative Support:
Annie Su
Administrative Associate

March 2008

When citing this report, please include the following elements, adapted to your citation style:

Phillips, Mary T. 2008. *Pretrial Detention and Case Outcomes, Part 2: Felony Cases.* New York: New York City Criminal Justice Agency, Inc.

PRETRIAL DETENTION AND CASE OUTCOMES, PART 2:
FELONY CASES

LIST OF TABLES

Tables in Appendixes:

Appendix B

Appendix C

LIST OF FIGURES

ACKNOWLEDGEMENTS

The author wishes to thank colleagues in the Research Department at CJA for their assistance in the completion of this project. Raymond P. Caligiure supplied statistical calculations and updated the charts. Annie Su created the original color charts for Part 1 of this project, upon which the figures in the current report are based. She also updated some of the sentencing data manually for Part 2, in addition to providing general administrative assistance. Richard R. Peterson, Director of the Research Department, offered both substantive and editorial suggestions, most of which have been incorporated.

Other colleagues provided valuable assistance during Part 1 of this project, the benefits of which carried over into Part 2. The review of the literature could not have been completed without Elyse J. Revere, who tracked down and obtained numerous articles and books cited in this report. Marian Gewirtz contributed important insights to the discussion of court practices pertaining to detention and release.

Contributions of colleagues from other departments are also greatly appreciated: Wayne Nehwadowich of the Information Systems Department created the dataset used in the analyses, and then re-compiled and updated it at a moment's notice; and Jerome E. McElroy, Executive Director of CJA, contributed many helpful comments and suggestions.

Finally, the author appreciates the thoughtfulness of Martin Schoenteich of the Open Society Justice Initiative in forwarding helpful bibliographic materials.

The methodology, findings, and conclusions of the study, as well as any errors, are the sole responsibility of the author.

I. INTRODUCTION

A. Background of the Study

This is the second report in a two-part series addressing the relationship between pretrial detention and case outcomes. The first report, which restricted the analyses to nonfelony cases, was prepared for the Office of the Criminal Justice Coordinator in June 2006. The full report was revised and released in November 2007 (Phillips 2007b), and it was summarized in *Research Brief No. 14* (Phillips 2007a). The current report, which extends the analysis to felony cases, was prepared for the Office of the Criminal Justice Coordinator in June 2007 and will summarized in an upcoming *Research Brief*. In order to allow each report to stand alone, some introductory and methodological material is repeated in both full reports.

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 current research. In addition, the preliminary issue of the relationship between bail amount and detention is also examined.

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 punishment before conviction 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.

With Part 1 of this series, we began 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 a matter of 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. Likewise, being released could give the defendant

[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.

an opportunity to show that he or she can behave responsibly, thereby creating a favorable impression on the judge. On the other hand, the relationship could be *spurious*: by setting high bail, judges 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, or for harsher sentences.

The findings presented in Part 1 led us to conclude that defendants in the sample charged with a nonfelony offense, although not very likely to be detained pretrial, were more likely to be convicted if they had been detained. Detained defendants who were convicted were also slightly more likely to be sentenced to incarceration than their released counterparts. For convicted defendants sentenced to jail, the effect of pretrial detention on the length of sentence was statistically significant but very weak, and occurred only when the pretrial detention had lasted longer than seven days. These conclusions were supported by multivariate analyses that showed that defendant and case characteristics accounted for most of the variation in all three case outcomes, but detention itself also played a role especially in regard to likelihood of conviction.

The present study repeats the same analyses with a sample of felony cases. Adverse effects of pretrial detention on felony case outcomes would affect a larger proportion of this population than of defendants in nonfelony cases. In felony cases bail is routinely set higher, release on recognizance is granted less often, and the result is a much higher pretrial detention rate among felony, as compared to nonfelony, 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 may be 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 may therefore not be directly comparable to the majority of released defendants today, in New York or elsewhere.

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 de-

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

[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).

cision 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 factors 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). SCPS also releases occasional special reports focusing on pretrial release, which have showed that conviction rates were higher for detained defendants (Cohen and Reaves 2007) or that incarceration was a more likely outcome for detained defendants (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.

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

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 sentence length were not modeled, so this study provided no evidence regarding the effect of detention on sentencing 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 research, 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. Once convicted, detained defendants were more likely to be incarcerated in Detroit but not in Chicago. In Baltimore, pretrial detention was the most important predictor of conviction, but had no effect on sentence. 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.

[5] An interaction variable accounts for the combined effects of two variables. An interaction variable for sex and race, for example, would compare the effects of being a black female, a black male, a white female, or a white male.

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 Goldkamp and his colleagues to establish systems of voluntary bail guidelines in Philadelphia, Boston, Miami, and Phoenix (Goldkamp 1979; Goldkamp and Gotffredson 1985). Recognizing that the bail guidelines research raised important issues about the possible effects of bail and release decisions for case outcomes, Goldkamp specifically 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. Detention 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 only 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).

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

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, even for felony cases. 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).

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.

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 (Part 1) because they have so long been ignored. With the completion of Part 2, the results of this project represent the first comprehensive research in over 30 years to focus on the effects of pretrial detention on case outcomes in New York City.

C. Research Questions

The research questions repeat, for felony cases, the same questions that were asked in Part 1 in regard to nonfelony cases.

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 initially charged with a felony offense. 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 examined how three different measures of detention might produce different findings.

[This page intentionally left blank.]

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 same dataset was used for the current analyses as was used for the Part 1 analyses, except that whereas in Part 1 the analyses were restricted to nonfelony cases, the Part 2 analyses are restricted to felony cases. The 2003-2004 Dataset contains all arrests in New York City from October 1, 2003, through January 31, 2004. Felony cases analyzed in the current study were defined as cases with a felony charge entering arraignment. The sample was further restricted to cases that were continued past arraignment. Cases in the original 2003-2004 Dataset were tracked until mid-September 2004 for dispositions in Criminal Court and to December 2004 for Supreme Court, but for the current research tracking was extended to March 2007 for Supreme Court (and for Criminal Court sentences).[7] After the updating had been completed, of the cases that fit the study criteria — cases with a felony arraignment charge that were continued past the arraignment — 94% had reached disposition. Cases with no final disposition were dropped from the research file, leaving 16,187 cases in the preliminary file. Finally, 460 cases with a defendant who was remanded (held without bail) at arraignment and 13 cases missing release status at arraignment were also dropped, leaving 15,714 cases in the final felony sample. Of the cases with a conviction in the sample, 95% had been sentenced by the cutoff dates.

Cases with a top charge of felony severity that was later amended to a nonfelony charge were retained in the research, and dispositions for these cases occurring in either Criminal Court or Supreme Court were included.

[7] Only 8% of felony cases that had remained in Criminal Court were still without a disposition by September 2004; these were not updated. A few cases (n=102) in the felony research sample with a conviction in Criminal Court were still without sentencing information in September 2004 (3% of convicted cases); they were updated manually. More serious was the large proportion of cases still open in Supreme Court in December 2004 awaiting disposition (17%); or convicted but not yet sentenced (23% of convictions). Dispositions and sentences in Supreme Court were updated by recompiling the Supreme Court data file for nearly 2,000 cases that were missing these outcomes.

B. Plan of Analysis

The analysis follows the same plan described in the preceding report for nonfelony cases. 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. For example, suppose that the block 1 $R^2 = .40$ and the model $R^2 = .50$: we would interpret this to mean that the control variables accounted for 40% of the variation in outcome, and detention accounted for an additional 10%.

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 (or was tried and found) guilty (yes/no).

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

Sentence length: the sentence length in days, for defendants sentenced to incarceration.

Independent Variables

Bail amount: the dollar amount of bail (set to equal the bond amount, or the 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 for some analyses 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; detained from arraignment to disposition; or a combination of released and detained.

Control Variables

Charge variables
Number of arrest charges
Number of felony arrest charges
Offense type of top arraignment charge
Severity class of top arraignment charge
Severity class of top disposition charge
Charge reduction (to nonfelony)

Case-processing variable
Borough

Defendant variables
Criminal history
Sex
Age
Ethnicity

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

Sample selection bias correction variables
Probability of conviction
Probability 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 (*probability of conviction*, used in the incarceration and sentence length models), or to cases with an incarcerative sentence (*probability of incarceration*, used only 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 most likely be a byproduct of their influence on detention.

III. EXTENT AND DURATION OF PRETRIAL DETENTION

A. Detention at Arraignment

Table 1 shows that in 40% of the sample cases the defendant was released at arraignment. Most of these releases were on recognizance: in 36% of all cases (or 88% 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 5% of all cases (or 12% of all releases, not shown) the defendant made bail at arraignment.

The defendant was held on bail at arraignment in the majority of felony cases (60%). The small number of cases in which the defendant was remanded without bail (n=455, not shown) were excluded from the analyses, so arraignment detention rates presented in this report refer exclusively to detention on bail. Cases in which bail was made post-arraignment at a Department of Correction (DOC) facility were categorized as "held on bail" even if the release occurred the same day as the arraignment; this occurred in a small number of cases (n=155).

Staten Island showed marked differences from the other four boroughs in detention rates and form of release. Both ROR and making bail at arraignment were more common in Staten Island than elsewhere: the Staten Island ROR rate was 45%, compared to 37% or less in other boroughs, and the percent making bail at arraignment was 13% in Staten Island, compared to 6% or less elsewhere. Combining both types of release, the release rate was about 20 percentage points higher in Staten Island (59%) than in other boroughs (where it ranged from 38% to 42%). Conversely, the defendant was held on bail in only 41% of Staten Island cases, which was almost 20 percentage points lower than the average (60%).

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

Detention Status at Arraignment	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
ROR	1,517 37%	1,077 34%	1,820 36%	985 35%	208 45%	5,607 36%
Made bail	220 5%	180 6%	188 4%	95 3%	60 13%	743 5%
Total released	1,737 42%	1,257 39%	2,008 39%	1,080 38%	268 59%	6,350 40%
Held on bail	2,359 58%	1,942 61%	3,107 61%	1,766 62%	190 41%	9,364 60%
Total	4,096 100%	3,199 100%	5,115 100%	2,846 100%	458 100%	15,714 100%

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, felony 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 37% of felony cases citywide, or in 92% of cases with a release at arraignment. The percentage of cases in which the defendant was at liberty throughout the pretrial period was around the citywide average in the four largest boroughs, but much higher in Staten Island (57%). In every borough, a defendant who was released at arraignment had a very high likelihood (over 90%) of remaining at liberty to disposition.

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

Detention Status	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
Released from arraignment to disposition	1,602 39%	1,159 36%	1,824 36%	1,021 36%	259 57%	5,865 37%
Released at arraignment & detained prior to disposition	135 3%	98 3%	184 4%	59 2%	9 2%	485 3%
(At liberty throughout as % of all released at arraignment)	*(92%)*	*(92%)*	*(91%)*	*(95%)*	*(97%)*	*(92%)*
Held on bail at arraignment & released prior to disposition	1,094 27%	1,047 33%	1,339 26%	884 31%	102 22%	4,466 28%
Detained from arraignment to disposition	1,265 31%	895 28%	1,768 35%	882 31%	88 19%	4,898 31%
(Detained throughout as % of all held on bail at arraignment)	*(54%)*	*(46%)*	*(57%)*	*(50%)*	*(46%)*	*(52%)*
Total	4,096 100%	3,199 100%	5,115 100%	2,846 100%	458 100%	15,714 100%

For defendants held on bail at arraignment there was likely to be a change in pretrial release status, as almost half were eventually released. Detention throughout the case occurred in 31% of all cases citywide, or in 52% of cases in which the defendant was held on bail at arraignment. Borough differences were not great, again with the exception of Staten Island, which had the smallest proportion of cases in which the defendant was detained to disposition (19% of all cases).

For about a third of the cases in the sample — 3% with an initial release plus 28% with an initial detention — detention status changed at least once during the pretrial period.[8] (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 37% of cases the defendant remained at liberty during the entire pretrial period, and in 31% of cases the defendant remained in custody for the entire period.

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 in 41% of felony cases citywide (including 155 cases in which the defendant did not make bail at arraignment, but did so later the same day at a DOC facility, not shown). In another 5% of cases the defendant was released (or the case disposed) the day after arraignment, followed by an additional 8% over the next two days. By the third day, the defendant in 54% of cases was no longer in pretrial detention.

There was a jump in the number of cases for which pretrial detention ended on the fourth or fifth day after arraignment — 14% of all cases on those two days — at least in part because release is mandatory if the prosecutor fails to file an indictment within five days after arrest (six days if a Sunday intervenes) for felony complaints, under New York's Criminal Procedure Law (CPL §180.80). For the cases in which the felony complaint was reduced to a misdemeanor at arraignment, a similar statute (CPL §170.70) requires release if the prosecutor fails to convert the misdemeanor complaint to an information within the same length of time. Four or five days after arraignment corresponds roughly to five or six days after arrest, so many of these were probably mandatory releases. However, disposition of the case rather than mandatory release was responsible for ending pretrial detention for many of the cases with four or five days of detention, and some defendants in these cases made bail (45% held to disposition and 16% made bail, not shown). A more precise measure was used to estimate the extent of mandatory release in Figure 1, following Table 5.

Within five days following arraignment the defendant had been released or the case disposed in 69% of felony cases. 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, pretrial detention had ended for 81% of felony cases; after four months (120 days), pretrial detention had ended for 92%. In 208 felony cases (about 1% of the sample), the defendant spent more than a year in pretrial detention.

The most noticeable difference among boroughs was the proportion with 4–5 days of detention, which was largest in the Bronx and Manhattan (17% in both) and very small in Queens (5%). This could be attributable to the policy in Queens of encouraging defendants to waive their rights to mandatory release and indictment by a grand jury, with the filing of a superior court information (SCI) in lieu of indictment.[9] Consistent with this possibility is the fact that of

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

[9] For sample cases disposed in Supreme Court, the SCI rate in Queens was 62%, compared to 14% in Manhattan and 25% in the Bronx. The citywide average SCI rate for cases disposed in Supreme Court was 26%.

the cases with a detention length of 4–5 days in Queens, only 13% had a defendant who was released on recognizance, compared to much larger percentages in the Bronx (42%) and Manhattan (30%) (not shown).

TABLE 3
Length Of Pretrial Detention In Days
Citywide And By Borough[10]
(Felony Cases Continued Past Arraignment)

Detention Length	Bronx	(cum.)	Brooklyn	(cum.)	Manhattan	(cum.)	Queens	(cum.)	Staten Island	(cum.)	Citywide	(cum.)
Released day of arraignment[11]	1,760 43%	43%	1,289 40%	40%	2,083 41%	41%	1,102 39%	39%	271 59%	59%	6,505 41%	41%
1 day	154 4%	47%	210 7%	47%	235 5%	45%	233 8%	47%	17 4%	63%	849 5%	47%
2-3 days	320 8%	55%	254 8%	55%	386 8%	53%	215 8%	55%	24 5%	68%	1,199 8%	54%
4-5 days	713 17%	72%	456 14%	69%	870 17%	70%	141 5%	59%	48 10%	79%	2,228 14%	69%
6-7 days	102 2%	74%	78 2%	72%	117 2%	72%	55 2%	61%	9 2%	81%	361 2%	71%
8-14 days	272 7%	81%	148 5%	76%	143 3%	75%	150 5%	67%	21 5%	85%	734 5%	76%
15-21 days	146 4%	85%	66 2%	78%	168 3%	78%	121 4%	71%	11 2%	88%	512 3%	79%
22-30 days	106 3%	87%	51 2%	80%	111 2%	80%	98 3%	74%	12 3%	90%	378 2%	81%
31-60 days	150 4%	91%	149 5%	84%	214 4%	85%	255 9%	83%	8 2%	92%	776 5%	86%
61-90 days	75 2%	93%	79 2%	87%	174 3%	88%	138 5%	88%	15 3%	95%	481 3%	89%
91-120 days	45 1%	94%	71 2%	89%	150 3%	91%	100 4%	92%	7 2%	97%	373 2%	92%
121-180 days	59 1%	95%	145 5%	94%	219 4%	95%	89 3%	95%	9 2%	99%	521 3%	95%
181-365 days	117 3%	98%	147 5%	98%	215 4%	99%	98 3%	98%	5 1%	100%	582 4%	99%
366 + days	74 2%	100%	55 2%	100%	29 1%	100%	49 2%	100%	1 <1%	100%	208 1%	100%
Total	4,093 100%		3,198 100%		5,114 100%		2,844 100%		458 100%		15,707 100%	

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

[10] Excluded from Table 3 were 7 cases with insufficient data to calculate length of detention.
[11] 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.

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. (This is not necessarily time to release. Pretrial detention often ended, not by release, but by disposition of the case, which could result in further incarceration.)

TABLE 4
Number Of Days To Release Or Case Disposition By Percentile
Citywide And By Borough[12]
(Felony Cases With A Defendant Held On Bail At Arraignment)

Percentile Released or Disposed	Bronx	Brooklyn	Manhattan	Queens	Staten Island	Citywide
25%	4	3	4	3	4	4
50%	5	6	5	17	6	7
66%	14	29	26	44	18	25
75%	23	63	64	67	28	52
90%	128	187	161	150	96	161
95%	265	297	222	262	155	249
99%	541	483	355	497	251	481
100%	1,114 (n=2,356)	1,024 (n=1,941)	844 (n=3,106)	821 (n=1,764)	732 (n=190)	1,114 (n=9,357)
Mean	45	59	49	58	34	51
Median	5	6	5	17	6	7
Maximum	1,114	1,024	844	821	732	1,114

As shown in Table 4, pretrial detention ended within 4 days for 25% of detainees; within 7 days for half of detainees; within 25 days for two thirds of detainees; within 52 days for three quarters of detainees; within 161 days for 90% of detainees; within 249 days for 95% of detainees; and within 481 days for 99% of detainees. It took 1,114 days to reach the end of pretrial detention for every person in the sample who had been held on bail at arraignment.

The average (mean) length of detention for felony defendants who were detained at arraignment citywide was 51 days, as shown at the bottom of Table 4. The longest average detention times were in Brooklyn and Queens (59 and 58 days, respectively) and the shortest was in Staten Island (34 days). Queens stood out with a median detention length that was triple the medians in other boroughs (or nearly so): 17 days in Queens, compared to 5 or 6 days elsewhere. This, too, is probably a reflection of the Queens SCI policy, under which a larger number of defendants than in other boroughs waived their right to mandatory release.

[12] Excluded from Table 4 were 7 cases with insufficient data to calculate length of detention. Included were 155 cases with a defendant who made bail at a DOC facility on the same day as the arraignment; they 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 pre-trial detention the more likely that the defendant was detained to disposition. **Table 5** shows that this is indeed the case. In only 3% of cases with one day of pretrial detention was the defendant held to disposition. Among cases with a detention length of 2-3 days, defendants who were jailed to disposition remained in the minority (25%). Among cases with over a week of pretrial detention, over half had a defendant who was still in custody at disposition. That proportion rose to over 70% for cases with detention lasting 22 days to two months; and 90% or more for cases with detention lasting longer than four months (121 days or more).

TABLE 5
Percent Detained To Disposition By Length Of Pretrial Detention
Citywide And By Borough[13]
(Felony 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	5% (N=154)	8% (N=210)	2% (N=235)	0% (N=233)	6% (N=17)	3% (N=849)
2-3 days	29% (N=320)	17% (N=254)	37% (N=386)	6% (N=215)	13% (N=24)	25% (N=1,199)
4-5 days	46% (N=713)	30% (N=456)	55% (N=870)	33% (N=141)	29% (N=48)	45% (N=2,228)
6-7 days	52% (N=102)	37% (N=78)	24% (N=117)	7% (N=55)	33% (N=9)	32% (N=361)
8-14 days	73% (N=272)	35% (N=148)	34% (N=143)	43% (N=150)	57% (N=21)	51% (N=734)
15-21 days	68% (N=146)	65% (N=66)	64% (N=168)	56% (N=121)	55% (N=11)	63% (N=512)
22-30 days	75% (N=106)	63% (N=51)	68% (N=111)	77% (N=98)	75% (N=12)	72% (N=378)
31-60 days	63% (N=150)	69% (N=149)	79% (N=214)	73% (N=255)	100% (N=8)	72% (N=776)
61-90 days	75% (N=75)	78% (N=79)	86% (N=174)	91% (N=138)	73% (N=15)	84% (N=481)
91-120 days	87% (N=45)	86% (N=71)	85% (N=150)	92% (N=100)	86% (N=7)	87% (N=373)
121-180 days	85% (N=59)	89% (N=145)	95% (N=219)	82% (N=89)	100% (N=9)	90% (N=521)
181-365 days	87% (N=117)	93% (N=147)	93% (N=215)	91% (N=98)	100% (N=5)	92% (N=582)
366+ days	85% (N=74)	95% (N=55)	100% (N=29)	94% (N=49)	100% (N=1)	92% (N=208)
Total	54% (N=2,333)	47% (N=1,909)	58% (N=3,031)	51% (N=1,742)	47% (N=187)	53% (N=9,202)

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

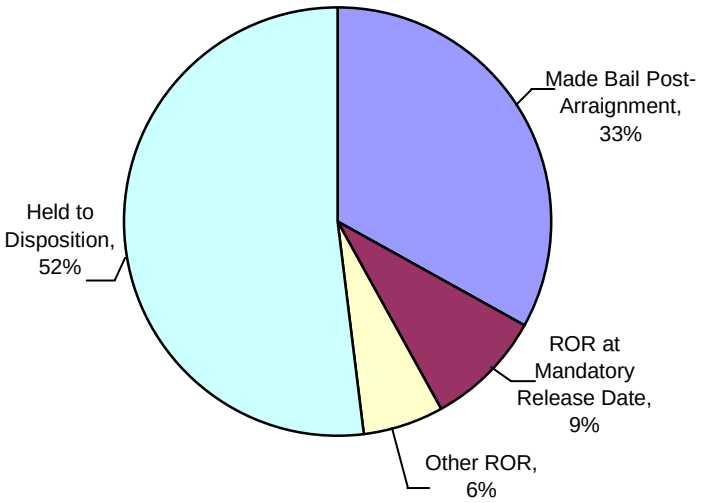
[13] Excluded from Table 5 were 7 cases with insufficient data to calculate length of detention, and 155 cases with a defendant who made bail at a DOC facility on the same day as the arraignment.

E. Detention Outcomes

Figure 1 shows how pretrial detention was concluded for all cases with a defendant held on bail at arraignment. In a third of these cases, the defendant eventually made bail prior to disposition (33%); in over half, the defendant was never released prior to disposition (52%). [14]

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 an indictment or a misdemeanor information.[15] RORs that occurred outside this time frame (6%) 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 Felony Cases With A Defendant Held On Bail At Arraignment[16]



N = 9,357

[14] The percent detained to disposition reported in Table 5 is slightly higher (53%) because Figure 1 includes all cases with a defendant held on bail at arraignment (thereby including cases with a defendant who posted bail at a DOC facility on the same day as arraignment), whereas Table 5 includes only defendants held on bail for at least one day.
[15] 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. The mandatory release figures are merely estimates, based on the type and timing of release, because there is no way to know from the data the judge's reasons for releasing a defendant. Some of these RORs may be been ordered for reasons other than CPL §170.70 or §180.80; and some RORs outside this time frame may have been granted because of mandatory release requirements.
[16] Excluded from Figure 1 were 7 cases with insufficient data to calculate release type.

[This page intentionally left blank.]

IV. EFFECT OF BAIL AMOUNT ON DETENTION

Bail was set at arraignment in 64% of the cases in the felony sample.[17] The amounts ranged from $200 to $750,000, with a mean of $13,661 and a median of $5,000 (Appendix B). (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 tiny fraction posted bail at arraignment (5% of all cases, shown in Table 1). For those who did not make bail at arraignment, half stayed in jail for a week 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 indictment (CPL §180.80) or replaced a misdemeanor complaint with formal charges (CPL §170.70) also play a role. 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 spent in pretrial detention by defendants in the research sample was 9 days for cases with bail set under $1,000, compared to 14 days for cases with bail between $1,000 and $1,499, up to 148 days for cases with bail over $25,000. The mean detention length increased with each increase in bail amount. The medians also rose with higher bail, from 3 days for the two lowest bail categories to 87 days for the highest category.

A judge setting bail under $1,000 could estimate a 21% probability that the defendant would be out within a day, assuming no knowledge of a particular defendant's financial resources, or taking into account other facts about the defendant or the case (which, of course, judges do consider to the extent that this information is available). The same defendant would have a 10% probability of release on recognizance at the mandatory release date, a 17% probability of remaining in jail for a week or more, and a 31% probability of remaining in custody until disposition of the case. In cases with bail set above $25,000, by contrast, defendants had an 83% probability of being detained for a week or longer, and a 73% probability of being in custody until case disposition.

[17] Extrapolated from Table 1: 743 cases with bail made at arraignment plus 9,364 cases with bail set and not made produces a total of 10,107 cases with bail set at arraignment, which is 64.3% of the total sample of 15,714 cases. The number of cases with bail set given in Appendix B (N=10,095: Table B) excludes a few cases missing the bail amount.

As expected, the proportion of cases in which the defendant was apparently released under the mandatory release laws did not vary much with bail amount. The proportion of felony cases with ROR on the mandatory release date was 8% overall, and it varied by only a few percentage points (from a low of 5% to a high of 10%) within different bail amount categories.

Table 6
Pretrial Detention By Bail Amount At Arraignment[18]
(Felony Cases With Bail Set At Arraignment)

Bail Amount	Number of cases	Mean detention length (in days)	Median detention length (in days)	Bail made at arraign-ment	Detained 1 day or less	Mandatory release[19]	Detained 7 days or longer	Detained to disposition
Less than $1,000	469 (100%)	9	3	85 (18%)	97 (21%)	47 (10%)	81 (17%)	147 (31%)
$1,000–$1,499	840 (100%)	14	3	160 (19%)	169 (20%)	58 (7%)	182 (22%)	230 (27%)
$1,500–$3,999	3,330 (100%)	23	5	324 (10%)	457 (14%)	294 (9%)	1,097 (33%)	1,334 (40%)
$4,000–$7,499	1,839 (100%)	36	5	86 (5%)	143 (8%)	171 (9%)	862 (47%)	917 (50%)
$7,500–$14,999	1,732 (100%)	61	16	51 (3%)	95 (6%)	120 (7%)	1,054 (61%)	1,004 (58%)
$15,000–$25,000	972 (100%)	88	36	17 (2%)	25 (3%)	77 (8%)	692 (71%)	589 (61%)
Above $25,000	808 (100%)	148	87	18 (2%)	15 (2%)	41 (5%)	674 (83%)	587 (73%)
Combined amounts	9,990 (100%)	47	5	741 (7%)	1,001 (10%)	808 (8%)	4,642 (47%)	4,808 (48%)

The five columns at right do not total 100% because the categories overlap and do not represent all possibilities.

B. Multivariate Analysis

A multivariate analysis confirmed that the bail amount set at arraignment was among the strongest predictors 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 increase of .5 days in pretrial detention time (standardized *beta* = .21), controlling for all the other variables in the model. This may not appear to be a large effect, but the enormous range in bail amounts means that predicted detention would increase by over a year for cases with the highest ($750,000), compared to the lowest ($200), bail amounts.

Also very important predictors of detention length were a prior felony conviction (standardized *beta* = .21) and offense type characterized as "harm to persons and property" (standardized *beta* = .20). Defendants with a prior felony conviction spent an average 38 days longer in detention than defendants with no adult criminal record. Defendants charged with "harm to per-

[18] Excluded from Table 6 were cases with bail set at $1, as well as cases with missing bail amount or insufficient data to calculate length of detention. The mean and median detention lengths given in the bottom row (combined amounts) are lower than the citywide mean and median detention lengths reported in Table 4 because Table 6, unlike Table 4, includes cases of defendants who made bail at arraignment.

[19] To reiterate the criteria used to estimate release under CPL §170.70 or CPL §180.80: (a) defendant was held on bail at arraignment; and (b) the first release was ROR occurring 5 to 6 days after arrest.

sons and property" spent an average 46 days longer in detention than defendants in drug cases. In fact, nearly every other charge type was also associated with significantly longer detention than drug cases, particularly the types categorized as "harm to persons" and "property crime." (For descriptions of offense type categories and the charges included in each, see Appendix B.)

TABLE 7
Ordinary Least Squares Regression Model Of Length Of Pretrial Detention[20]
(Felony Cases With Bail Set At Arraignment: N=9,154)

Independent Variables	Standardized ß	Unstandardized ß
Amount of bail set at arraignment (in dollars) divided by 1,000	.21***	0.50
Recommended by CJA	–.04***	–9.36
Defendant expects someone at arraignment	–.04***	–7.06
Defendant reports full-time employment	–.05***	–8.78
Number of felony arrest charges *(1- 4)*	.03**	2.88
Severity of arraignment charge	.14***	11.57
Offense type of top arraignment charge *(Reference category = drug charge)*		
Harm to persons	.15***	39.52
Harm to persons and property	.20***	46.09
Weapon	.07***	23.61
Property crime	.13***	40.32
Sex crime	.01	21.09
Theft intangible	.06***	26.24
Misconduct	.02	35.44
Obstruction of justice	.06***	37.14
Vehicle & Traffic Law	.02*	20.00
Charge reduced to nonfelony	–.14***	28.98
Borough *(Reference category = Bronx)*		
Brooklyn	.05***	10.84
Manhattan	.03*	5.06
Queens	.08***	19.02
Staten Island	–.01	–9.21
Criminal History *(Reference category =no adult criminal record)*		
Prior adult arrest	.06***	14.62
Misdemeanor conviction	.06***	15.44
Felony conviction	.21***	38.18
Sex *(male=1, female=2)*	–.01	–1.91
Age	.04***	0.37
Ethnicity *(Reference category = black)*		
White	–.04***	–12.66
Hispanic	–.01	–2.54
Other	–.02*	–11.64
Model R^2 = .16		

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

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

Other charge variables with a moderately strong effect on length of detention were the severity of the arraignment charge (more severe charges were associated with longer detention) and whether the felony charge at arraignment was reduced to a nonfelony (which shortened detention length). Charge reduction was most likely to be the product of a plea bargain, by which the defendant agreed to plead guilty, thereby ending pretrial detention, in exchange for the reduced charge.

Weaker, but statistically significant, relationships were found between detention length and some variables derived from information collected in the CJA interview, including whether the defendant expected someone at arraignment, full-time employment, and the release recommendation itself (which is based in part on the first two items). These relationships were negative, suggesting that a lack of family and community ties, and lack of income, led to longer detention. Other weak predictors of detention length were borough (compared to the Bronx, detention times in Queens, Brooklyn, and Manhattan were longer); age (older defendants were detained longer), and ethnicity (all other ethnic groups were detained for shorter periods than blacks, but the relationship was strongest for whites).

All together, the variables in the model accounted for only 16% 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

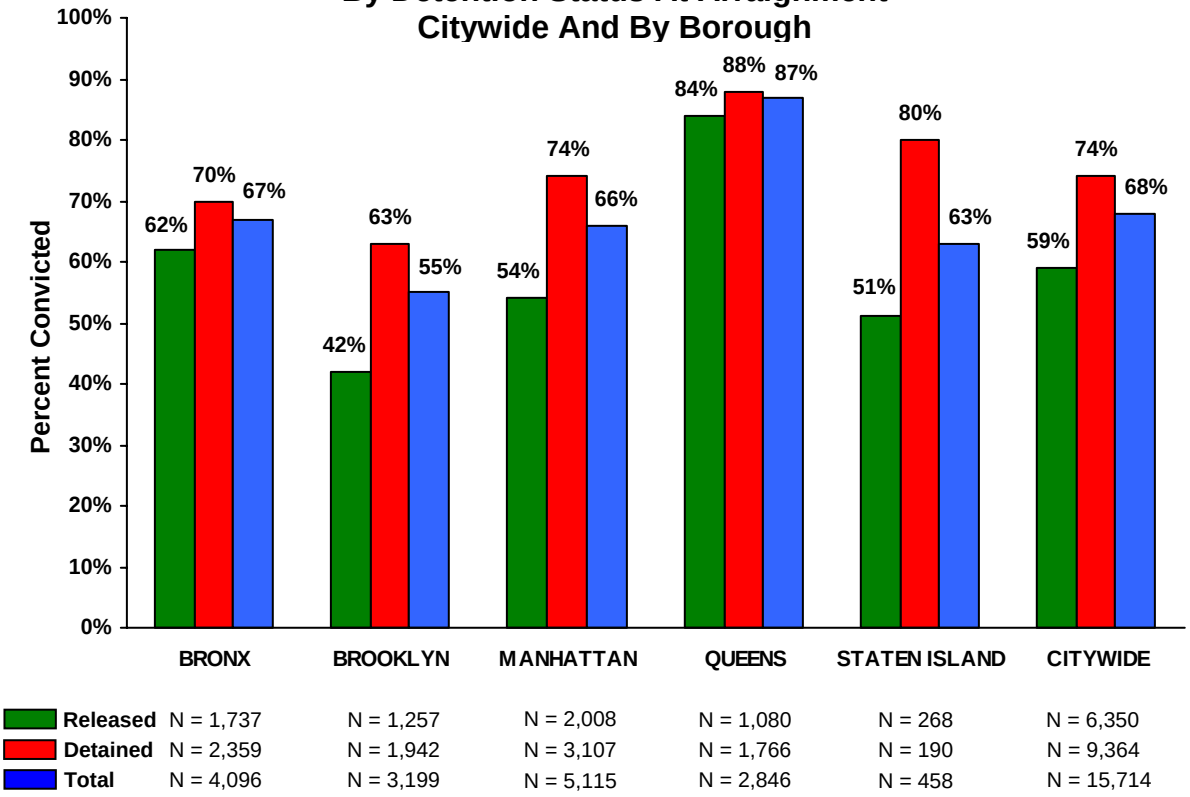
A. Bivariate Analysis

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 two thirds of felony cases citywide (68%), but there were wide borough variations, as shown in **Figure 2.** Conviction rates ranged from 55% in Brooklyn to 87% in Queens.

A conviction was more likely in cases with a defendant who was detained, as opposed to released, at arraignment. Citywide, 59% of cases with a released defendant ended in conviction, compared to 74% of cases with a detained defendant. The association between detention and conviction was statistically significant in all boroughs, but it was especially strong in Staten Island. The conviction rate for cases with a released defendant in Staten Island was 51%, compared to 80% for cases with a detained defendant. On the other hand, in Queens nearly everyone was convicted, regardless of detention status: cases of released defendants in Queens had a conviction rate of 84%, compared to 88% for cases of detained defendants. However, even this small difference was statistically significant because of the large sample size.

Figure 2
Conviction Rate For Felony 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. **Figure 3** shows that citywide conviction rates were lowest for cases with no overnight detention (59%; including cases with a defendant who made bail at a DOC facility on the same day as the arraignment) and highest for cases with detention lasting longer than a week (85%). This difference of 26 percentage points suggests that length of detention might have a stronger effect on likelihood of conviction than merely detention at arraignment (where the difference was 15 percentage points between conviction rates for cases of detained versus released defendants).

However, likelihood of conviction did not rise steadily with longer detention. Very long detention (more than two months) did not increase the likelihood of conviction over that associated with 8 to 60 days (85% for both groups). Nor did detention lasting 2 to 7 days increase likelihood of conviction compared to cases with one day detention: the conviction rate actually dropped slightly, from 67% for cases with one day detention to 62% for cases with 2 to 7 days detention. The overall relationship could be summarized by saying that defendants in detention for a week or less had a slightly elevated likelihood of conviction over those released on arraignment day, and defendants detained for more than a week had a much greater likelihood of conviction than either of the other groups.

Again the citywide generalizations did not apply to every borough. In Brooklyn the effect of detention length on likelihood of conviction was particularly strong (over 80% convicted among cases with longer than a week in detention, compared to 42% among cases with no overnight detention). In Queens, where the defendant was convicted in over 80% of cases in each detention-length group, including cases with no detention, the effect was again quite small (though still statistically significant).

Figure 3
Conviction Rate For Felony Cases
By Length Of Pretrial Detention
Citywide And By Borough

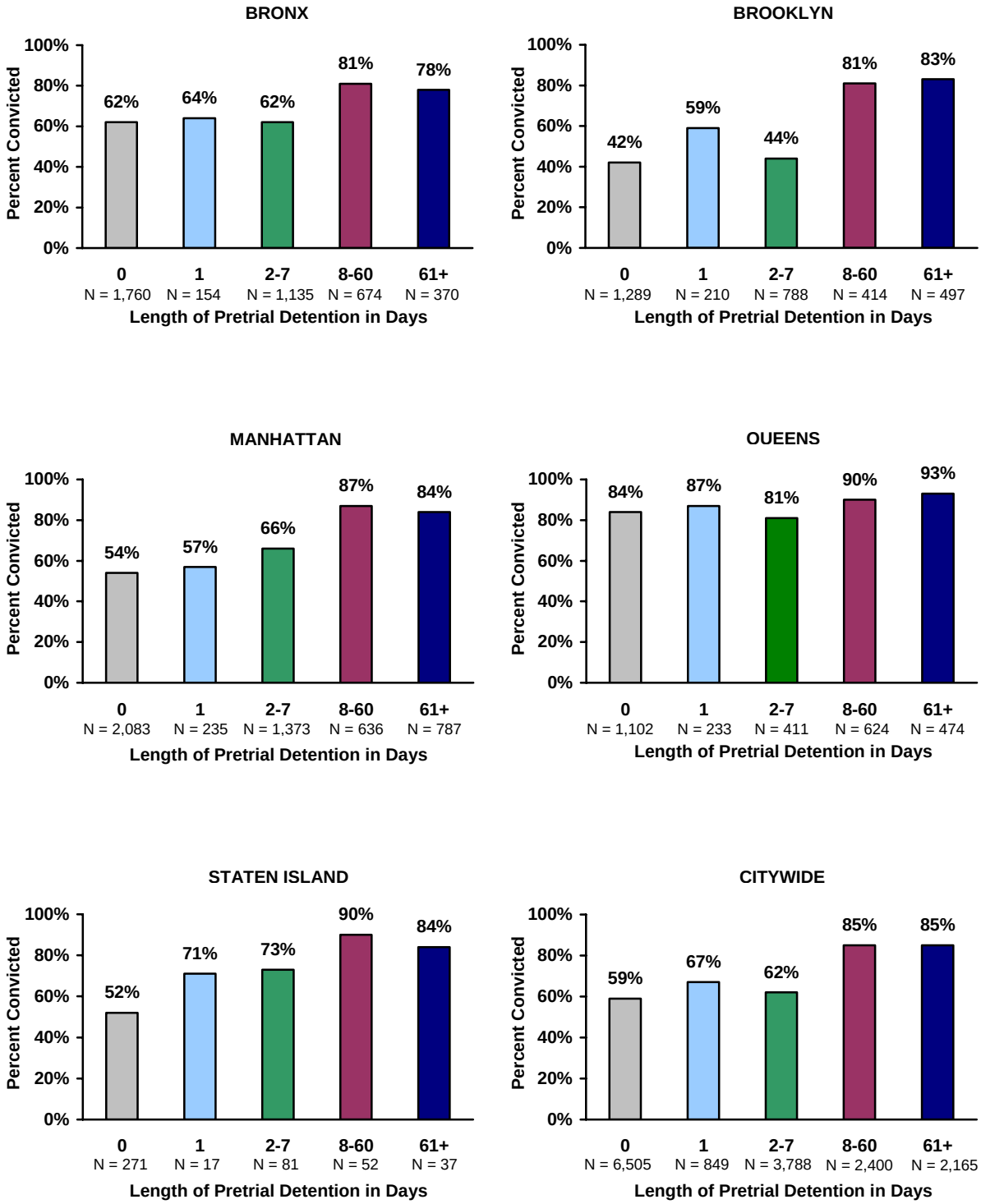


Figure 4 shows the effect on conviction of the third measure of detention: whether the defendant was in detention, or at liberty, throughout the pretrial period. Data were presented earlier showing that there was a strong likelihood that defendants held in detention for more than a week were never released 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 distinct, though closely related.

The citywide results show an increase in conviction rates from 57% for cases of defendants who remained at liberty throughout the case to 84% for cases of defendants who were detained from arraignment to disposition. This spread is very similar to the comparison between cases with no overnight detention and cases with more than a week in detention (59% and 85% respectively, Figure 3). Also similar to the results for length of detention is the fact that the intermediate detention categories did not differentiate well between cases with lesser and greater likelihood of conviction. Likelihood of conviction was only slightly greater for defendants who were initially detained and then released prior to disposition (62%), compared to those who were never detained (57%); and only slightly smaller for those who were initially released and then detained prior to disposition (80%), compared to those who were detained throughout case processing (84%).

In each borough the conviction rate was higher for cases of defendants detained to disposition than for cases of defendants who were released to disposition, and the difference was quite large in Brooklyn (37 percentage points), Manhattan (35 percentage points), and Staten Island (43 percentage points). The smallest difference was again found in Queens (10 percentage points), where conviction rates were high in every detention category.

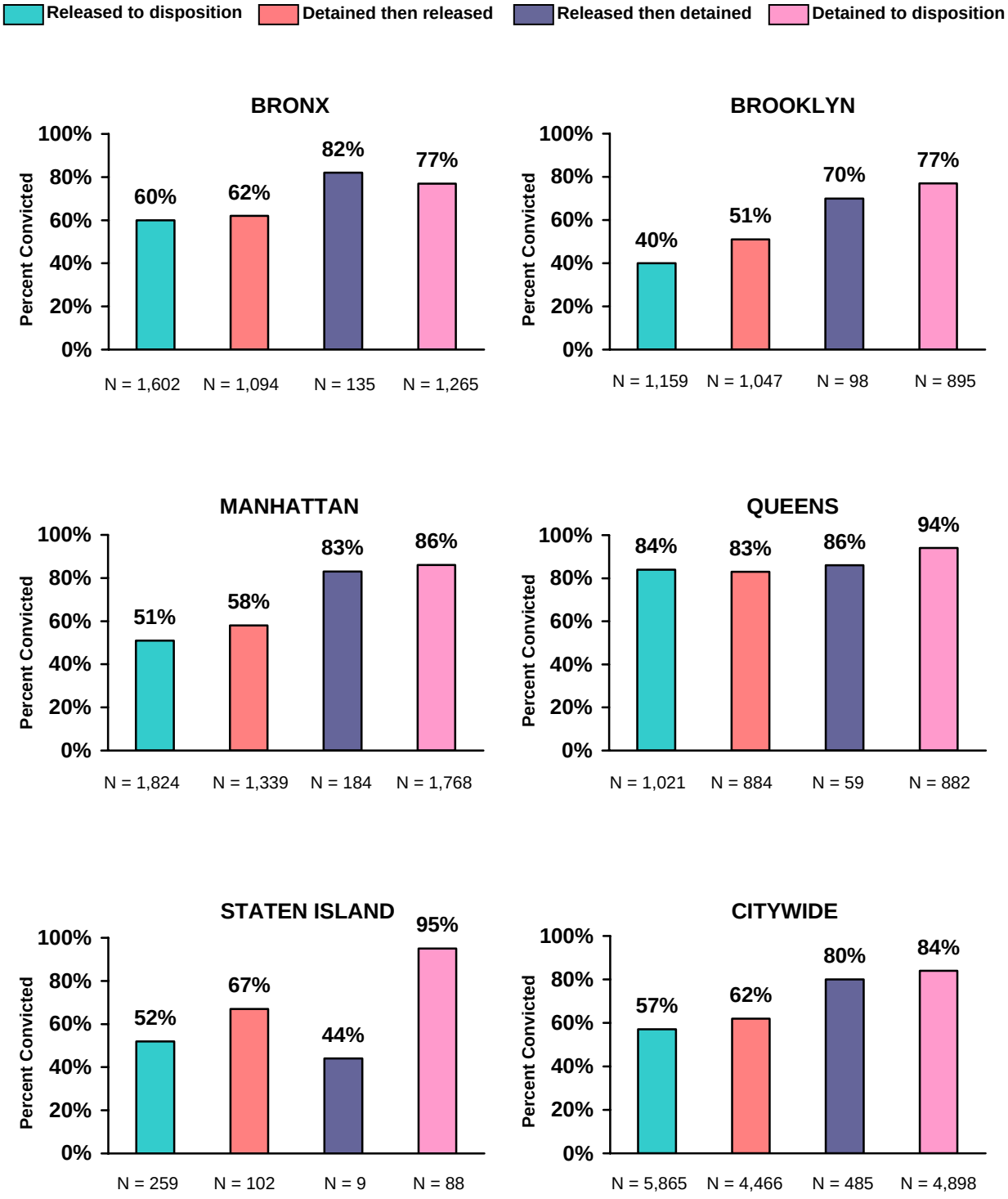
Pearson's Product Moment Correlations

The Pearson's product moment correlation is a statistic that provides an overall measure of the strength of the relationship between two variables. The correlation between conviction and each measure of detention is shown below for the cases in this felony sample. The strongest relationship with conviction was found for detention to disposition (.246). The correlations of conviction with detention at arraignment (.155) and with length of detention (.212) were weaker, but all three correlations were statistically significant. (Length of detention in this correlation was the variable with 5 categories used for Figure 3. The correlation of conviction with a continuous interval-level variable measuring detention length in days was weaker.)

Detention Measure	Correlation With Conviction
Detention at arraignment	.155***
Length of pretrial detention	.212***
Detention to disposition	.246***

***p < .001

Figure 4
Conviction Rate For Felony Cases
By Detention To Disposition
Citywide And By Borough



B. Multivariate Analysis

Each measure of detention had a moderately 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 analysis) that was explained by the variables in the model. Three models are presented in the table. The same control variables were used in all three models, but the models 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 .41 for all three models, which is interpreted to mean that roughly 41% 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. (See Appendix A for further explanations of the statistical procedures used in this research.)

In all three models, the addition of detention raised the proportion of variance explained by a statistically significant amount, but that amount varied considerably depending on the detention measure. Detention at arraignment (Model 1) was least effective in predicting likelihood of conviction; this variable added 4 percentage points to the proportion of variance explained by the control variables. Detention status to disposition (Model 3) was next in predictive power; it added 8 percentage points to the proportion of variance explained by the control variables. The strongest measure for predicting conviction in multivariate analyses was length of detention (Model 2), which added 10 percentage points to the block 1 R^2, bringing the model R^2 to 51%. The bivariate correlation with conviction was strongest for the third measure, detention to disposition, but controlling for other factors diminished the effect of that measure. We conclude that no matter how one measures detention it affects likelihood of conviction, but the strongest impact after accounting for other relevant factors was found by measuring detention in terms of the number of days a defendant was held.

This discussion focuses on Model 2 because it was most successful in predicting likelihood of conviction. Detention, especially detention lasting over two months, greatly increased the likelihood of conviction. The standardized *beta* for the detention category of "61+ days" was .45, which indicates that this was one of the most powerful predictors of conviction. Compared to cases with a defendant who was released on the day of arraignment, the odds of conviction were 18 times greater for cases with a defendant who was in detention for over two months, about 8 times greater for cases with a defendant in detention between 8 and 60 days, and approximately doubled for cases with a week or less in detention.

(Text continues on page 33.)

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

	Model 1 *Detention measured as:* Detention Status at Arraignment (N=14,887)		**Model 2** *Detention measured as:* Length of Detention in Days (N=14,882)		**Model 3** *Detention measured as:* Detention Status to Disposition (N=14,887)	
Control Variables	Standardized ß	Odds ratio	Standardized ß	Odds ratio	Standardized ß	Odds ratio
Number of arrest charges *(1- 4)*	.11***	1.22	.09***	1.21	.10***	1.22
Offense type of top arraignment charge: *(Reference category = drug charge)*	***		***		***	
Harm to persons	–.40***	0.11	–.40***	0.08	–.36***	0.11
Harm to persons & property	–.26***	0.26	–.30***	0.19	–.25***	0.25
Weapon	–.24***	0.14	–.21***	0.13	–.20***	0.15
Property crime	–.24*	0.25	–.24***	0.21	–.22***	0.25
Sex crime	–.03*	0.30	–.03**	0.27	–.03*	0.37
Theft intangible	–.19***	0.26	–.19***	0.23	–.16***	0.28
Misconduct	–.02	0.54	–.02	0.47	–.02	0.61
Obstruction of justice	–.23***	0.06	–.22***	0.05	–.21***	0.05
Vehicle & Traffic Law	–.03	0.59	–.02	0.70	–.01	0.78
Severity class of top disposition charge: *(Reference category = class A misdemeanor)*	***		***		***	
Class A or B Felony	–.78***	0.02	–.76***	0.01	–.73***	0.02
Class C Felony	–.35***	0.12	–.35***	0.10	–.33***	0.12
Class D Felony	–.36***	0.19	–.36***	0.15	–.34***	0.18
Class E Felony	–.19***	0.27	–.20***	0.22	–.18***	0.26
Class B or unclassified misdemeanor	.07***	2.39	.06***	2.35	.07***	2.51
Violation or infraction	.29***	10.23	.26***	9.78	.28***	11.34
Borough *(Reference category = Bronx)*	***		***		***	
Brooklyn	–.11***	0.57	–.12***	0.51	–.10***	0.58
Manhattan	–.02	0.92	–.04**	0.84	–.02	0.90
Queens	.17***	2.40	.11***	1.90	.16***	2.38
Staten Island	–.03**	0.67	–.03**	0.63	–.03*	0.70
Criminal history *(Reference category = first adult arrest)*	***		***		***	
Prior adult arrest	.05***	1.28	.04**	1.22	.03*	1.18
Misdemeanor conviction	.03*	1.20	.02	1.15	.00	1.02
Felony conviction	.01	1.05	–.05**	0.81	–.05**	0.80

(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	Standardized ß	Odds ratio	Standardized ß	Odds ratio
Sex *(male=1, female=2)*	.01	1.03	.00	1.03	.00	1.03
Age	–.03*	0.99	–.04**	0.99	–.03*	0.99
Ethnicity *(Reference category = black)*	*		**		**	
White	.03*	1.22	.03**	1.31	.04**	1.33
Hispanic	.02*	1.010	.02	1.08	.03*	1.12
Other	–.01	0.87	–.01	.92	–.01	0.93
Nagelkerke R^2 for Block 1	**.41**		**.41**		**.41**	
Detention Variables						
Detained at arraignment *(no=0, yes=1)*	.31***	3.51	[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			.08***	2.19		
2-7 days			.10***	1.67		
8-60 days			.34***	8.33		
61+ days			.45***	17.93		
Detention to disposition *(Reference category = no pretrial detention)*	[not entered in Model 1]		[not entered in Model 2]		***	
Detained at arraign-ment, released pretrial					.20***	2.55
Released at arraign-ment, detained pretrial					.15***	6.17
No pretrial release					.49***	9.61
Nagelkerke R^2 for Model	**.45**		**.51**		**.49**	
(contribution of detention)	**.04**		**.10**		**.08**	

* 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.

The only factor more important in predicting conviction than a long period of pretrial detention was the severity class of the top disposition charge. The less severe the disposition charge, the greater the likelihood of conviction. Compared to the odds of conviction for a defendant whose case was disposed on a class A misdemeanor, for example, the odds of conviction were about 10 times greater for a defendant whose case was disposed on a violation or infraction; and 100 times *less* for a defendant whose case was disposed on a class A or class B felony. This reflects the effect of plea bargaining: all cases in the sample started out with a felony charge at arraignment, so disposition on a nonfelony charge suggests that a reduced charge was offered in exchange for a guilty plea. For any sample of felony cases, a nonfelony disposition charge would be closely associated with conviction because the charge would be likely to be reduced only in conjunction with a guilty plea. We will return to this issue shortly.

Offense type was also important in explaining conviction rates. Compared to drug cases, cases with any other offense type (as the top charge at arraignment) were *less* likely to end in conviction, and this was a significant difference for most charge types.

Other significant, but weaker, predictors of conviction included:

- number of arrest charges (the more offenses the defendant was charged with at arrest, the greater the likelihood of conviction);
- borough (compared to the Bronx, Queens cases were significantly more likely, and Brooklyn, Manhattan, and Staten Island cases significantly less likely, to end with a conviction);
- criminal history (compared to defendants with no criminal record, defendants with a prior arrest—but no conviction—were significantly more likely, and those with a prior felony conviction were significantly less likely, to be convicted);
- age (a very weak effect, with older defendants marginally less likely to be convicted than younger defendants);
- ethnicity (whites were more likely than blacks to be convicted).

The defendant's sex was not a significant predictor of conviction.

Interactions

Interactions of detention with borough, offense type, disposition charge severity, criminal history, sex, age, and ethnicity were tested by recalculating Model 2 separately for each value of each variable. For example, to test the interaction between detention and borough, a separate regression model was estimated for each borough, to find out if detention affected likelihood of conviction more powerfully in some boroughs than in others. The results for each model are presented in summary form in Appendix C, Table C-1.

The interaction was particularly striking for the severity of the disposition charge. Likelihood of conviction was affected much more heavily by detention length in cases with the most severe disposition charges. For cases with a class A or B felony disposition charge, the control variables accounted for very little of the variance in conviction (9%), whereas detention length accounted for more than twice the amount accounted for by all the controls combined (22%). By

contrast, detention made little difference in likelihood of conviction for cases that were disposed on a nonfelony charge (1% of the variance was accounted for by detention length). This is closely related to the finding that disposition charge severity was a strong predictor of conviction: nearly all nonfelony dispositions were convictions (indicating that the defendant agreed to plead guilty in exchange for a reduced charge), so there was little variation for detention to influence. When the analysis was restricted to felony dispositions, detention was found to influence the outcome much more strongly. The implications of this relationship are examined in more detail below (see "The Effect of Detention on Plea Offers").

A strong interaction was also found between detention and offense type. Detention length had a much greater effect on likelihood of conviction in cases with a charge categorized as "harm to persons and property" (for example, robbery) than in cases with a charge of "theft intangible" (forgery or counterfeiting). The proportions of variance in conviction explained by detention were 18% and 2%, respectively, for cases with the top charge in one of these two categories.

The interaction analyses did not identify any subgroups for which detention did *not* have a statistically significant effect on likelihood of conviction, after accounting for the effects of all control variables. Even among cases with a nonfelony disposition charge or an offense type of theft intangible, the effect of detention length on likelihood of conviction was statistically significant even though it was very small.

Some of the other highlights of the interaction analyses include:

- Detention had a stronger effect on likelihood of conviction in Brooklyn, compared to the four other boroughs.
- Detention had a stronger effect on likelihood of conviction in cases of defendants with a criminal record, compared to those with no criminal record.
- Detention had a stronger effect on likelihood of conviction in cases with a male defendant, compared to a female defendant.
- Detention had a stronger effect on likelihood of conviction in cases with a defendant age 18 or younger, compared to a defendant age 40 or older.
- Detention had a stronger effect on likelihood of conviction in cases with a nonwhite, compared to a white, defendant.

The Effect Of Detention On Plea Offers

The strong interaction between detention and disposition charge severity led us to take a closer look at convictions on reduced charges. All nonfelony disposition charges for cases in this sample are by definition reduced because only cases with a felony charge entering arraignment were selected for the sample. However, a large number of additional cases with a felony disposition charge had also been reduced, from a more severe to a less severe felony class. If the relationship between detention and increased likelihood of conviction can be explained by pressure on detained defendants to accept plea offers, then detention should predict conviction on a reduced charge even more strongly than it predicts conviction in general. However, as Figure 2A shows, the opposite was found.

Figure 2A
Conviction Rate By Disposition Charge Severity
For Felony Cases
By Detention Status At Arraignment

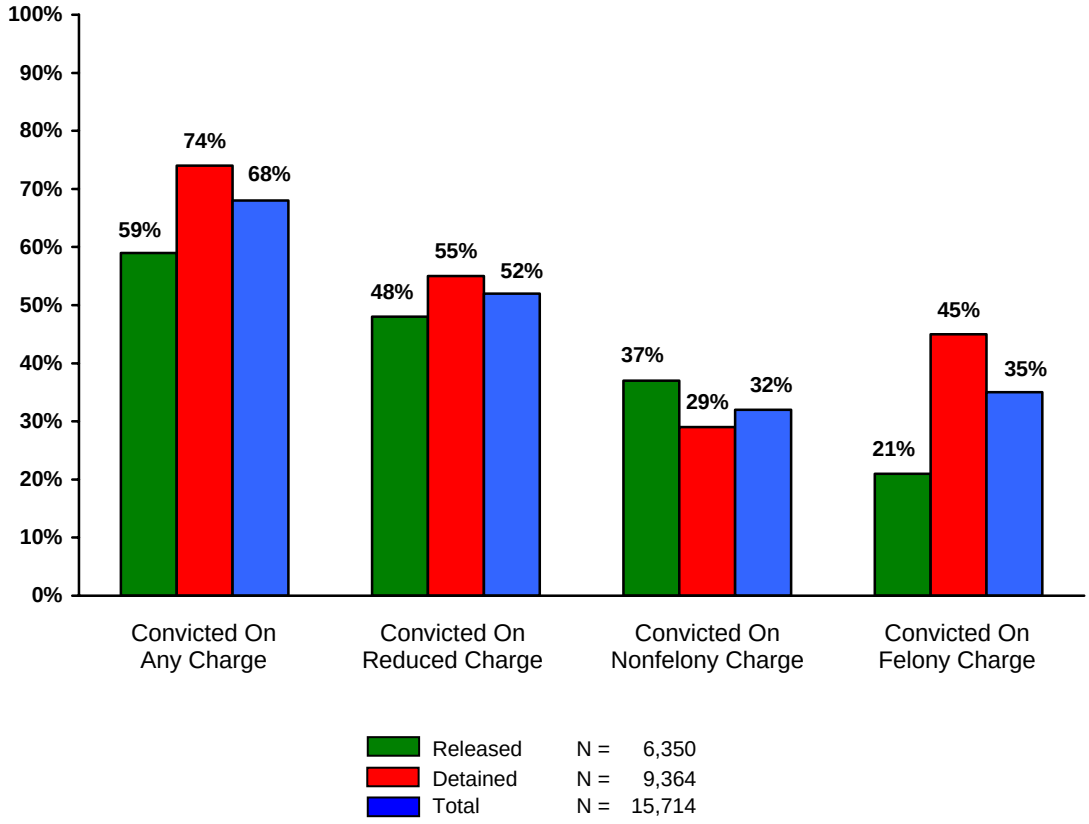


Figure 2A reproduces the conviction rates shown in Figure 2 for cases with a defendant who was detained versus released at arraignment, and compares them to the rates for conviction on a reduced charge, conviction on a nonfelony charge (a subset of reduced charges), and conviction on a felony charge. While detained defendants were substantially more likely than released defendants to be convicted at all (74% vs. 59%, a difference of 15 percentage points), detention did not make as much difference in conviction on a reduced charge (55% vs. 48%, a difference of only 7 percentage points). Detention actually led to *less* likelihood of conviction on a nonfelony charge (29% for detained defendants vs. 37% for released defendants). By contrast, detention increased the chances for conviction on a felony charge far more strongly than for conviction in general (45% vs. 21%, a difference of 24 percentage points).

This can be understood in terms of the prosecutor's leverage over detained defendants: it is highly plausible that prosecutors are more likely to offer a charge reduction—especially all the way down to a misdemeanor or lesser charge—to someone who is out of jail. According to this hypothesis, detention itself creates enough pressure on a detained defendant to plead guilty without the need for the additional inducement of a reduced charge. The data shown in Figure 2A

support this explanation. This suggests a revised view of the relationship between detention and conviction: *detention both increases the likelihood of conviction in felony cases and decreases the chances that the defendant will be offered the opportunity to plead guilty to a nonfelony charge.*

This more nuanced statement of the relationship between detention and conviction was tested in a series of multivariate analyses in which conviction on any charge was replaced as the outcome variable with (a) conviction on a reduced charge (including reductions to a less severe felony class); (b) conviction on a nonfelony charge; (c) conviction on a felony charge. Model 2 (with length of detention as the detention measure) was re-run, changing only the outcome variable, and dropping disposition charge severity as an independent variable. The results of those analyses (not shown) supported the revised conclusion suggested above. Specifically:

- Detention had almost no effect on likelihood of conviction on a reduced charge, adding only 1 percentage point to explained variance. (77% of convictions were on a reduced charge.)
- Detention was a slightly stronger predictor of conviction on a nonfelony charge, but the relationship was negative: detention lasting longer than a day significantly reduced the chances of conviction on a nonfelony charge, adding 4 percentage points to the explained variance. (47% of convictions were on a nonfelony charge.)
- Detention was a very strong predictor of conviction on a felony charge, adding 16 percentage points to the explained variance. (52% of convictions were on a felony charge, including some charge reductions to a lower felony severity class.)

VI. EFFECT OF DETENTION ON INCARCERATION

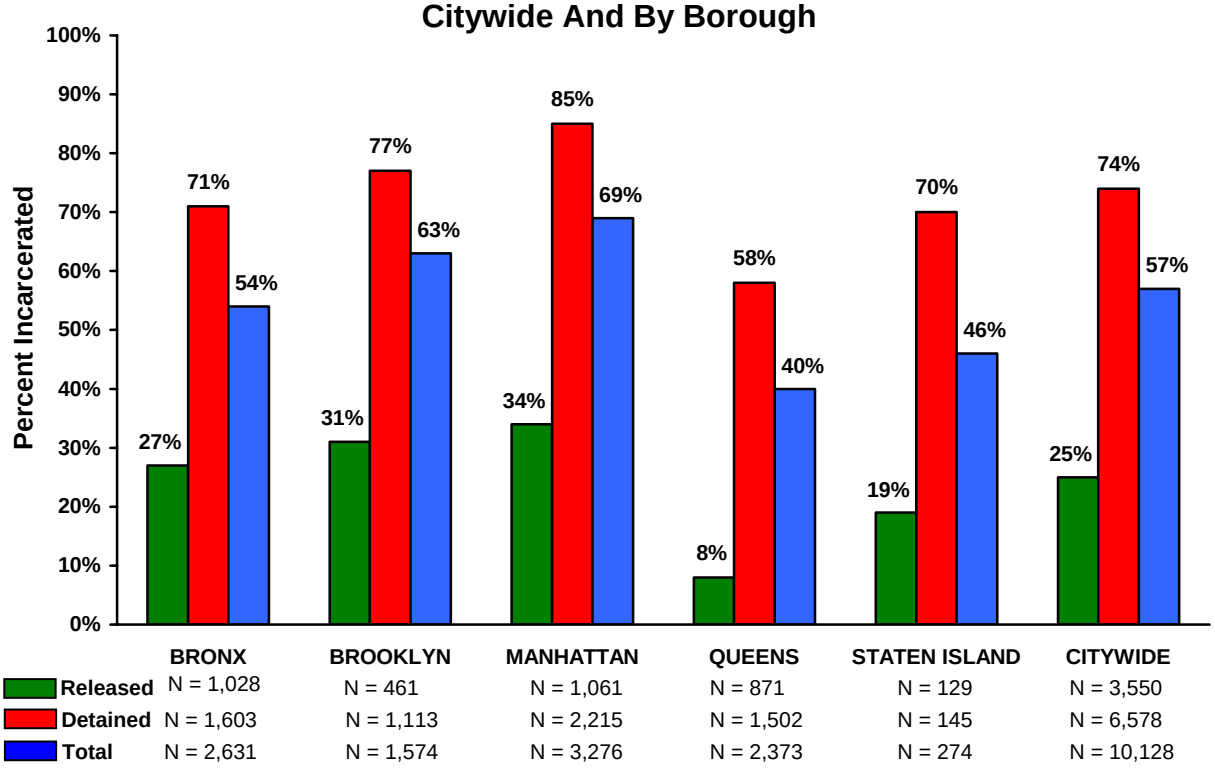
A. Bivariate Analysis

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.

An incarcerative sentence was imposed in over half of felony cases that ended with a conviction citywide (57%). Incarceration rates in convicted cases ranged from 40% in Queens to 69% in Manhattan, as shown in **Figure 5.** Although Queens had exceptionally high conviction rates (84% even for defendants released at arraignment, Figure 2), a convicted defendant was much less likely to be sentenced to incarceration in Queens than elsewhere in the City. Only 8% of convicted Queens defendants who had been released at arraignment were sent to jail.

The bivariate relationship between detention status at arraignment and incarceration is much stronger than the relationship with conviction. Citywide, defendants were sentenced to incarceration in 25% of cases with a defendant released at arraignment, compared to 74% of cases with a detained defendant. This is a difference of 49 percentage points—much larger than the difference in conviction rates between cases of released and detained defendants (59% and 74% respectively). In every borough, the likelihood of incarceration was between 45 and 50 percentage points lower for defendants who had been released at arraignment, compared to defendants who had been detained at arraignment.

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

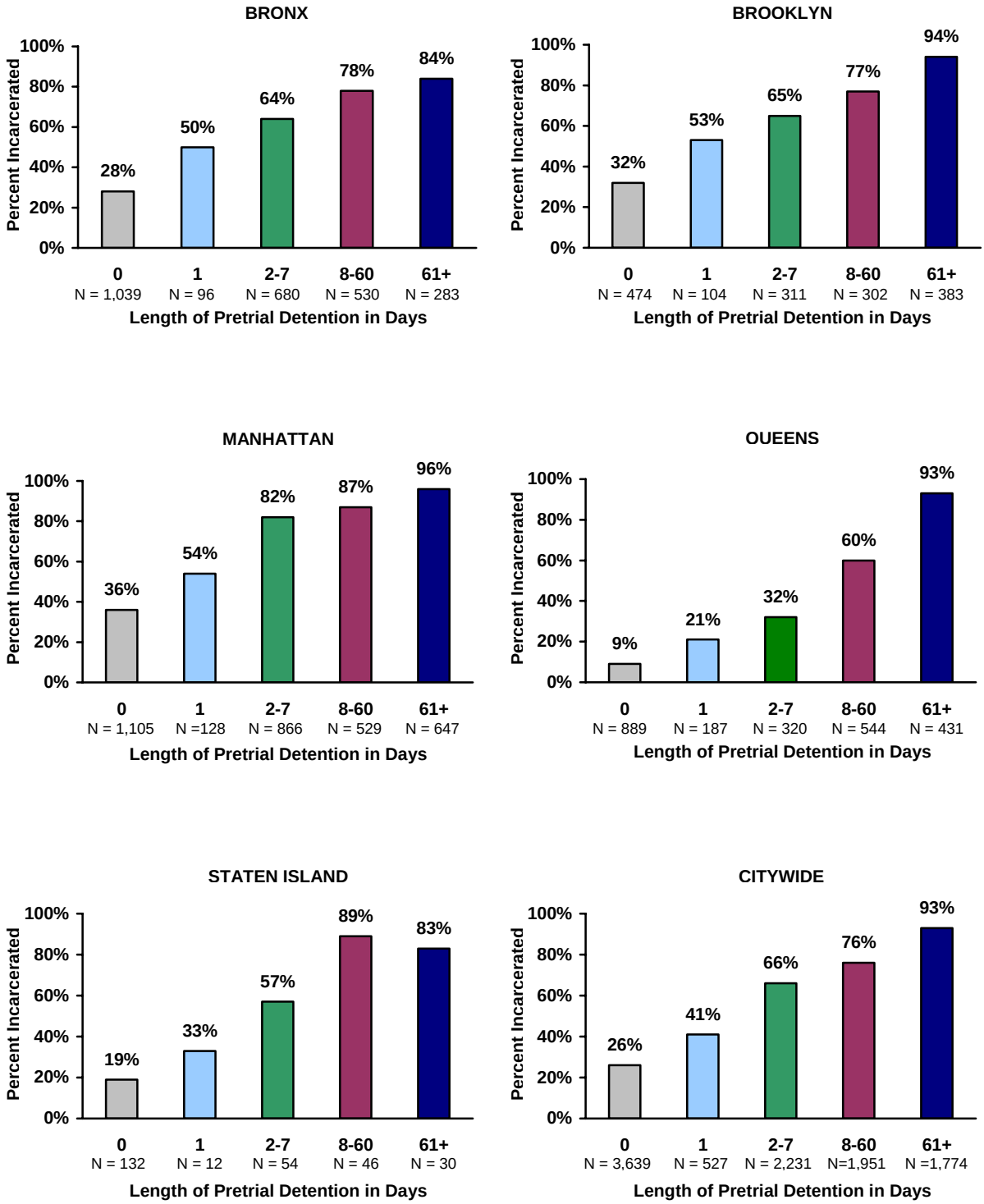


The relationship between incarceration and length of pretrial detention, citywide and by borough, is shown in **Figure 6.** For cases in which the defendant was convicted after spending more than two months in detention, likelihood of incarceration was 93% citywide. This presents a huge contrast with the incarceration rate for cases with a defendant who was not detained overnight (26%). Incarceration rates rose with the length of detention, to 41% for cases with a defendant detained for one day; to 66% for cases with a defendant detained for 2 to 7 days; to 76% for cases with a defendant detained for 8 to 60 days. Length of detention appears to be a better predictor of the likelihood of incarceration than merely knowing whether the defendant was detained at arraignment.

With one minor variation, the same pattern was found in each borough. Incarceration rates were lowest 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 exception was found in Staten Island, where detention longer than two months was not associated with a higher incarceration rate than was found for cases with 8 to 60 days of detention.)

The low incarceration rate for Queens shown in Figure 5 vanishes when cases with more than two months of detention are examined separately. For cases in this category of the longest detention times, the incarceration rate in Queens was 93%, which is the same as the citywide average and a little higher than in the Bronx and Staten Island (84% and 83% respectively). The difference between cases with a defendant who was released on same day as arraignment (9% incarceration rate) and cases with a defendant held for longer than two months (93%) was 84 percentage points, which was the greatest difference found in any borough, suggesting that pretrial detention had a stronger effect on the sentence in Queens than elsewhere.

Figure 6
Incarceration Rate For Felony 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 also quite strong. **Figure 7** shows that the incarceration rate for convicted defendants who were at liberty from arraignment to disposition was 20% citywide, rising to 55% 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 87% for cases with a defendant who was detained to disposition.

The same pattern was found in every borough, with the strongest relationship in Queens. Convicted defendants who had been released to disposition in Queens had an incarceration rate of only 5%, which was a much lower rate than for comparable defendants in other boroughs.

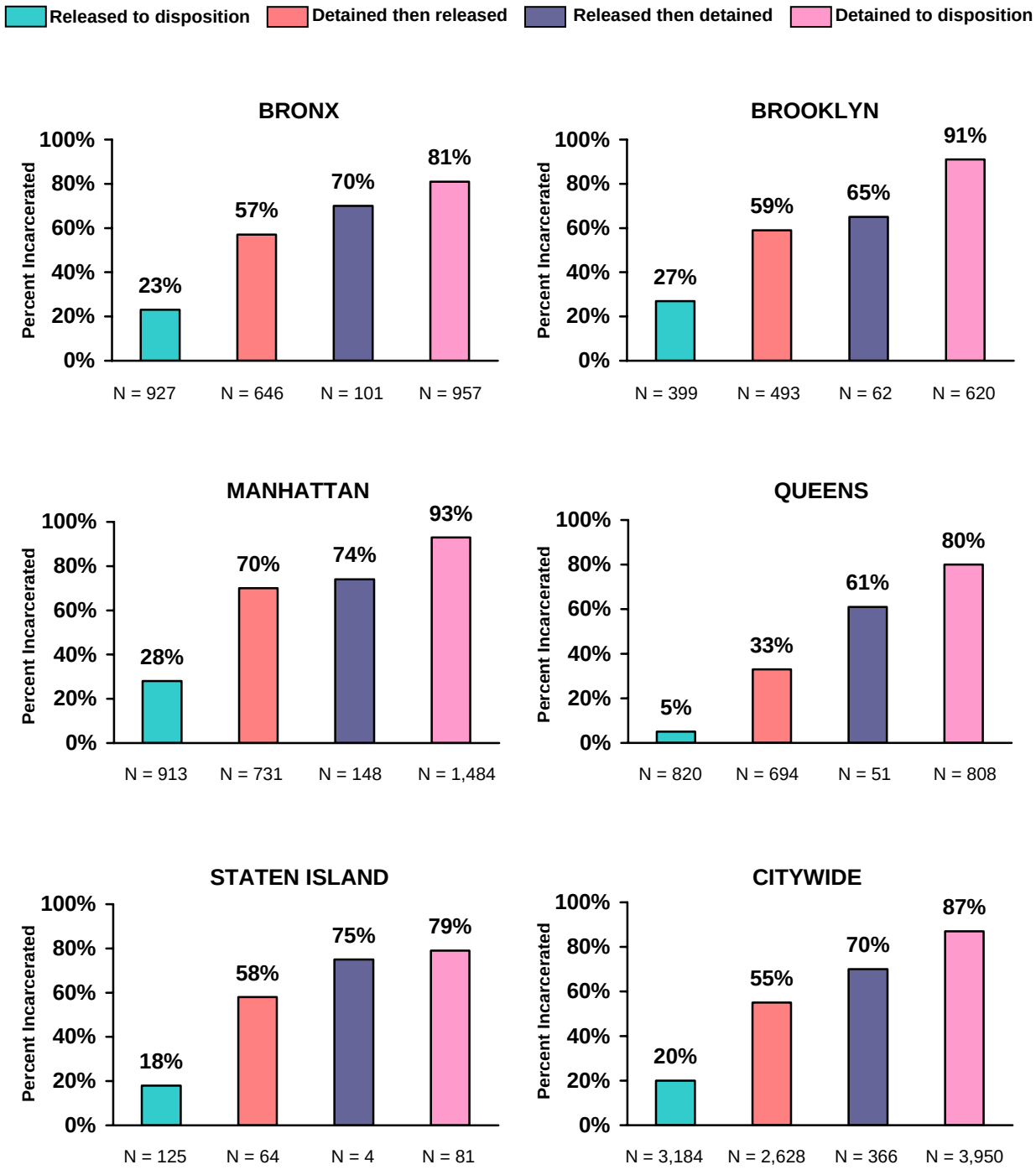
Pearson's Product Moment Correlations

The correlation between incarceration and each measure of detention is shown below for the cases in this felony sample (including only cases with a conviction). The strongest relationship with incarceration was found for detention to disposition (.554). The correlations of incarceration with detention at arraignment (.469) and with length of detention (.521) were only slightly less strong, and all three correlations were statistically significant. These correlations are much stronger than the correlations of detention with conviction (shown on page 28).

Detention Measure	**Correlation With Incarceration**
Detention at arraignment	.469***
Length of pretrial detention (coded as 5 categories)	.521***
Detention to disposition	.554***

***p < .001

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



B. Multivariate Analysis

In addition to the control variables that were entered into the multivariate analyses of conviction, an additional variable was added to the incarceration models to control statistically for possible sample selection bias introduced by restricting the analysis to convicted cases. (For an explanation of this type of bias and the procedure used to correct it, see Appendix A, under "Selection Bias.") 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, more of the variation in likelihood of an incarcerative sentence was accounted for by the control variables: the block 1 R^2 was .48 for the three models (compared to .41 for conviction shown in Table 8). The probability of conviction contributed significantly to the ability to predict likelihood of incarceration.

Adding the defendant's detention status to the analysis, after the effects of the control variables were accounted for, increased the model R^2 every model, but most of all in Model 3. Detention status to disposition added 6% to the proportion of variance in incarceration explained by the control variables, bringing the total explained variance to 54% for Model 3. This was a greater effect than was found for detention status at arraignment (which explained an additional 1%, Model 1), or the length of detention (which explained an additional 4%, Model 2). As a clue to likelihood of incarceration, therefore, knowing if the defendant had been at liberty or in detention throughout the pretrial period was more useful than knowing if the defendant had been detained at arraignment or the number of days spent in detention. The odds of incarceration, compared to cases with a defendant who was at liberty throughout case processing, were double for defendants who were initially detained and subsequently released (odds ratio = 2.07); more than 5 times greater for defendants who were initially released and later detained (odds ratio = 5.62); and 9 times greater for defendants who were held in detention throughout case processing (odds ratio = 9.04).

The remainder of this discussion focuses on Model 3, since this was the model that best explained the variation in incarceration. Strong predictors of incarceration, in addition to detention status, were the severity class of the top conviction (disposition) charge and the defendant's criminal history. This is what one would expect from the sentencing options set forth in Article 60 of New York's Penal Law, which takes into account both the charge and the defendant's criminal history in setting prescribed sentences. Compared to the likelihood of incarceration for a Class A misdemeanor (the category with the most cases), incarceration was more likely to be imposed when the charge was a felony, and less likely when the charge was less severe. In addition, defendants with any criminal history faced greater likelihood of incarceration than those with none. Most affected were defendants with a prior felony conviction, whose odds of incarceration were nearly 6 times greater than the odds faced by defendants with no criminal record (odds ratio = 5.99).

Although detention made a relatively small contribution to the proportion of variance in incarceration explained by the model as a whole (detention accounted for 6 out of 54 percentage points), its importance is underscored by the large standardized *betas* for detention-category variables. The single factor with the most weight in the analysis was "no pretrial release," with a standardized *beta* of .54. The only other single factor that even approached this in importance was a prior felony conviction, with a standardized *beta* of .44.

(Text continues on page 45.)

TABLE 9
Logistic Regression Models Of Incarceration
(Convicted Felony Cases)

	Model 1 *Detention measured as:* Detention Status at Arraignment (N=9,593)		**Model 2** *Detention measured as:* Length of Detention in Days (N=9,593)		**Model 3** *Detention measured as:* Detention Status to Disposition (N=9,593)	
Control Variables	Standardized ß	Odds ratio	Standardized ß	Odds ratio	Standardized ß	Odds ratio
Selection bias correction: *probability of conviction*	.38***	8.92	–.18***	0.33	.15***	2.54
Number of arrest charges *(1- 4)*	.02	1.04	.06***	1.11	.04*	1.07
Offense type of top arraignment charge: *(Reference category = drug charge)*	***		***		***	
Harm to persons	.01	1.04	–.18***	0.38	–.05*	0.78
Harm to persons & property	–.01	0.96	–.16***	0.47	–.07***	0.72
Weapon	.05*	1.41	–.05*	0.69	.03	1.31
Property crime	–.06***	0.72	–.16***	0.40	–.10***	0.58
Sex crime	–.02	0.58	–.03	0.38	–.01	0.63
Theft intangible	–.12***	0.47	–.18***	0.29	–.13***	0.41
Misconduct	–.05**	0.28	–.05**	0.23	–.04**	0.31
Obstruction of justice	.00	1.00	–.10***	0.29	–.05**	0.56
Vehicle & Traffic Law	–.06***	0.43	–.05***	0.46	–.04**	0.55
Severity class of top disposition charge: *(Reference category = class A misdemeanor)*	***		***		***	
Class A or B Felony	.36***	4.94	–.14**	0.52	.18***	2.36
Class C Felony	.24***	3.49	.04	1.25	.18***	2.73
Class D Felony	.30***	3.40	.07**	1.37	.22***	2.73
Class E Felony	.11***	2.00	.01	1.05	.08***	1.66
Class B or unclassified misdemeanor	–.08***	0.42	–.05***	0.54	–.06***	0.46
Violation or infraction	–.21***	0.23	–.15***	0.34	–.15***	0.31
Borough *(Reference category = Bronx)*	***		***		***	
Brooklyn	.14***	1.79	.05**	1.29	.11***	1.69
Manhattan	.17***	1.90	.15***	1.81	.14***	1.78
Queens	–.13***	0.54	–.12***	0.57	–.11***	0.58
Staten Island	.02	1.20	.00	1.00	.02	1.22

(continued on the following page)

TABLE 9 (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	Standardized ß	Odds ratio	Standardized ß	Odds ratio
Criminal history *(Reference category = first adult arrest)*	***		***		***	
Prior adult arrest	.12***	1.70	.12***	1.76	.11***	1.69
Misdemeanor conviction	.21***	2.94	.20***	2.96	.17***	2.61
Felony conviction	.53***	7.25	.44***	5.87	.44***	5.99
Sex *(male=1, female=2)*	–.06**	0.74	–.06***	0.71	–.06***	0.71
Age	–.03	>0.99	–.05**	0.99	–.04*	0.99
Ethnicity *(Reference category = black)*	*		ns		ns	
White	–.04*	0.78	–.02	0.90	–.02	0.90
Hispanic	–.01	0.98	.01	1.03	.00	1.01
Other	–.03	0.78	–.02	0.87	–.01	0.90
Nagelkerke R^2 for Block 1	**.48**		**.48**		**.48**	
Detention Variables						
Detained at arraignment *(no=0, yes=1)*	.27***	2.64	[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			.06***	1.61		
2-7 days			.25***	2.91		
8-60 days			.36***	6.53		
61+ days			.59***	25.75		
Detention to disposition *(Reference category = no pretrial detention)*	[not entered in Model 1]		[not entered in Model 2]		***	
Detained at arraignment, released pretrial					.17***	2.07
Released at arraignment, detained pretrial					.16***	5.62
No pretrial release					.54***	9.04
Nagelkerke R^2 for Model	**.49**		**.52**		**.54**	
(contribution of detention)	**.01**		**.04**		**.06**	

*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.

Other significant predictors of incarceration included:

- the number of arrest charges (more charges slightly increased the likelihood of incarceration);
- offense type of the arraignment charge (compared to drug charges, nearly every other type had a significantly lower likelihood of incarceration);
- borough (compared to the Bronx, Queens cases were significantly less likely, and Brooklyn and Manhattan cases significantly more likely, to receive an incarcerative sentence);
- sex (females were slightly less likely be incarcerated than males);
- age (a very weak effect, with older defendants marginally less likely to be incarcerated than younger defendants);
- the variable measuring selection bias (the higher the probability of conviction, the greater the likelihood of incarceration). This variable was significant and moderately strong, which indicates that some of the same factors that predict conviction also predict incarceration. Without controlling for this bias—an unavoidable consequence of restricting the analysis to convicted defendants—the effect of detention on likelihood of incarceration would appear stronger than it really is. By controlling for probability of conviction, the analysis subtracts the effect of detention on conviction, so that only the *additional* effect of detention on incarceration is measured. (See Appendix A.)

Interactions

Interactions between detention and the control variables were tested by recalculating Model 3 separately for each subgroup. The contributions of detention to the explanatory power of the various models were then compared, in order to determine if the influence of detention on whether a convicted defendant received an incarcerative sentence was particularly strong, or particularly weak, for some groups as compared to others.

Detention was a significant predictor of likelihood of incarceration in all of the separate models for each subgroup, but moderate interactions were found with borough, offense type, and charge severity (Appendix C, Table C-2). In none of the models did the effect of detention outweigh the combined effects of the control variables.

Among subgroups for which detention had an especially strong effect on likelihood of conviction (cases in Brooklyn, cases with a top charge type of "harm to persons and property," and cases disposed on a Class A or Class B felony), it did not have much of an effect on likelihood of incarceration.

On the other hand, a minimal effect on likelihood of conviction was sometimes found in conjunction with a strong effect on incarceration. The primary example was among cases disposed on a nonfelony charge (misdemeanor or lesser severity). For these cases, the effect of detention on likelihood of conviction was negligible (detention explained 1% of the variance) but its effect on likelihood of incarceration was moderately strong (detention explained 13% of the variance). Another example: among cases with a top charge of "theft intangible," only 2% of

the variance in likelihood of conviction—but 11% of the variance in likelihood of incarceration—was explained by detention alone.

The effect of detention on likelihood of incarceration was not much affected by differences in the defendant's criminal history. There was also little interaction between detention and sex, age, or ethnicity.

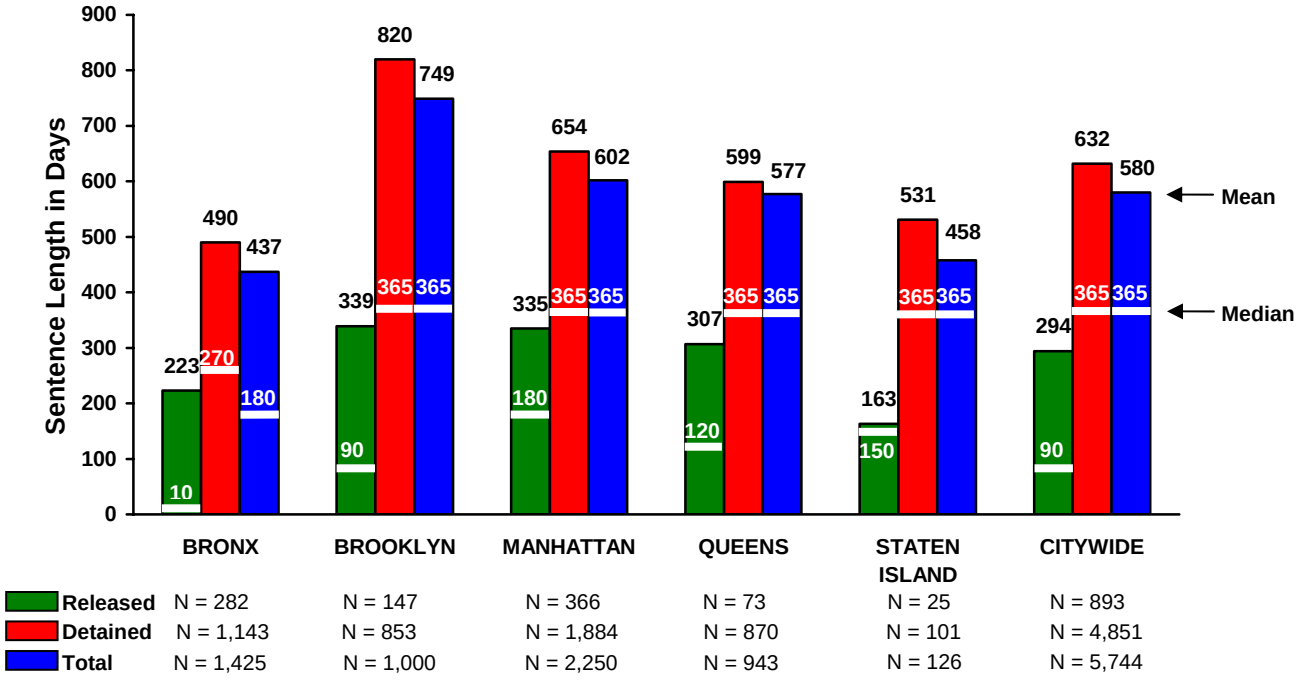
VII. EFFECT OF DETENTION ON SENTENCE LENGTH

A. Bivariate Analysis

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. Mean and median sentence lengths, given in days, are presented by the various categories of the three detention variables. The sentence length represents either a definite or determinate sentence, which is of a specified length, or the minimum term of an indefinite sentence. Sentences of time served are set equal to the length of pretrial detention. (Defendants sentenced to time served who were released at arraignment have a sentence length equal to zero because detention length is calculated from arraignment for this research; however, these defendants had spent some time in detention between arrest and arraignment.)

The mean sentence length for felony cases with a defendant who was sentenced to incarceration was 580 days (approximately one year and 7 months), as shown in **Figure 8.** The median sentence length was one year, coded as 365 days. However, both means and medians varied depending on the defendant's detention status at arraignment. For cases with a defendant who was detained at arraignment, the mean sentence length was 632 days, compared to 294 days for cases with a defendant who was released at arraignment. The difference in the medians was also striking: 365 days (detained) compared to 90 days (released).

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



The longest mean sentences were found in Brooklyn (749 days overall, and 820 days for defendants detained at arraignment); the shortest were in the Bronx (437 days overall, and 490 for defendants detained at arraignment). There was almost no borough variation in median sentence length, however, which was one year for cases of detained defendants and total cases everywhere except in the Bronx. The Bronx stands out with the lowest means and medians in both detention categories and overall.[21] In the Bronx as elsewhere, release at arraignment was associated with sentences about half the length of sentences associated with detention at arraignment.

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 299 days (median = 120 days) for cases with no detention, and 1,087 days (median = 730 days) for cases with more than two months detention.

A similar pattern was found in every borough, where sentence lengths for cases with no pretrial detention were a third or a fourth as long as sentences for cases with over two months detention. Any detention was associated with longer sentences than no detention, but in general one day of detention was associated with sentences as long or longer than sentences for cases with moderately longer detention. Only when detention lasted for more than two months was its effect on sentence length very strong.

[21] Although arrests in the sample covered October 2003 through January 2004, thereby pre-dating the Bronx court restructuring in November 2004, cases in Supreme Court were tracked to March 2007, which was more than a year following the restructuring. However, this has no effect on the sentencing outcomes reported here because all cases with a felony charge at arraignment were included for all boroughs, regardless of the court of disposition. Thus, the relatively short sentences found for Bronx cases cannot be attributed to the fact that Bronx Supreme Court cases could have included less serious cases than in other boroughs.

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

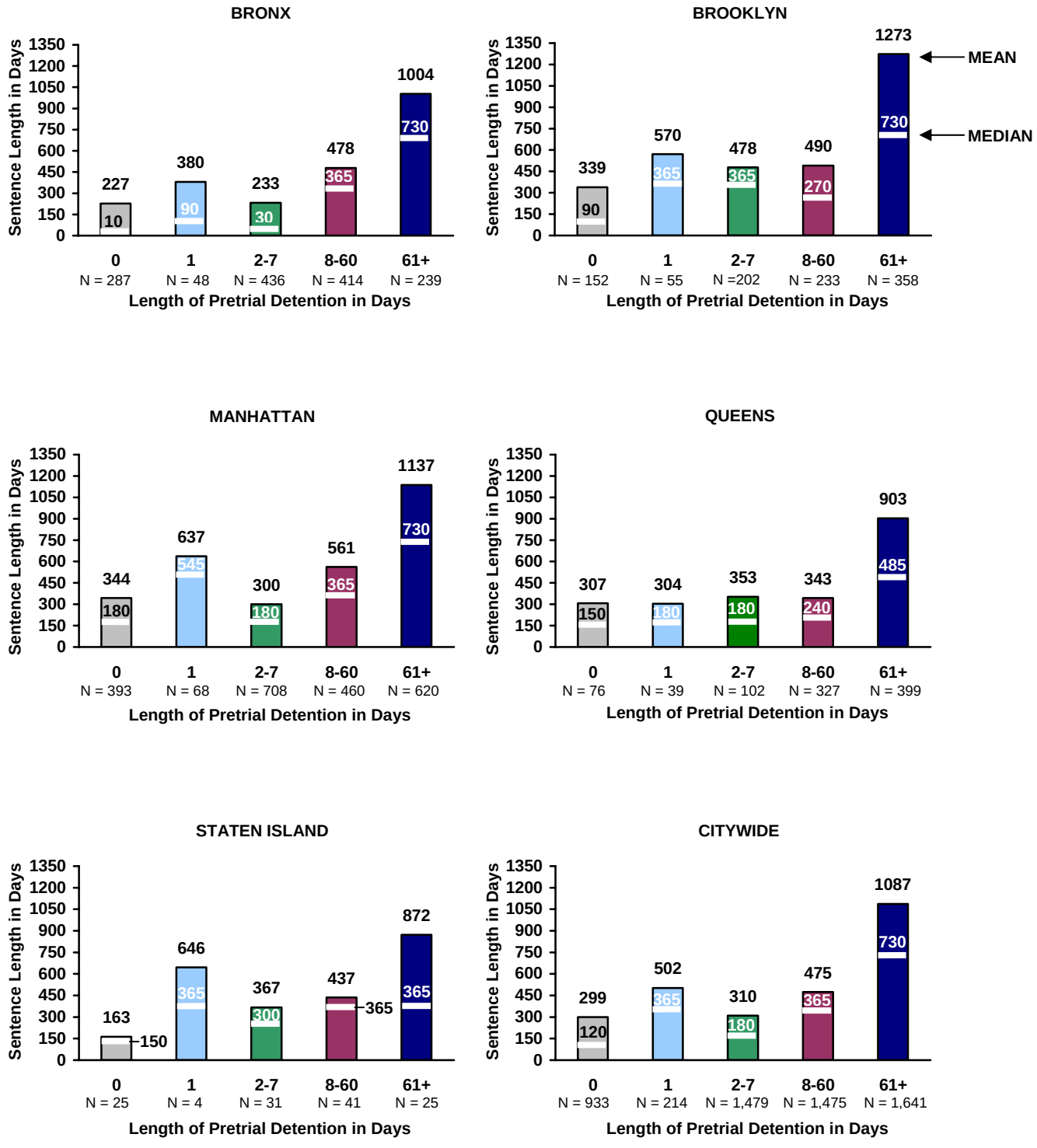


Figure 10 shows that detention to disposition was also related to sentence length, primarily in the contrast between cases with a defendant who was released to disposition and cases with a defendant who was detained to disposition. The shortest sentences were given in cases with a defendant who was at liberty from arraignment to disposition. The citywide mean sentence for this group was 196 days (median = 30). This is less than a third of the mean sentence length for cases with a defendant who was detained to disposition (652 days; median=365 days).

However, no clearcut sentencing pattern was found to differentiate cases with release following detention, detention following release, or detention all the way through 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 consistently from each other.

Defendants who were never detained received shorter sentences than defendants who were released at arraignment (mean=294 days, Figure 8) or defendants who were not detained overnight (mean=299 days, Figure 9), which suggests that being released to disposition is the aspect of detention that is most effective in differentiating cases with the shortest sentences. On the other hand, detention to disposition was *not* most effective in identifying cases with the longest sentences. Detention for over two months was more effective in predicting long sentences: cases with more than two months detention had a mean sentence length of 1,087 days (Fig. 9), compared to 652 days for cases with a defendant detained to disposition.

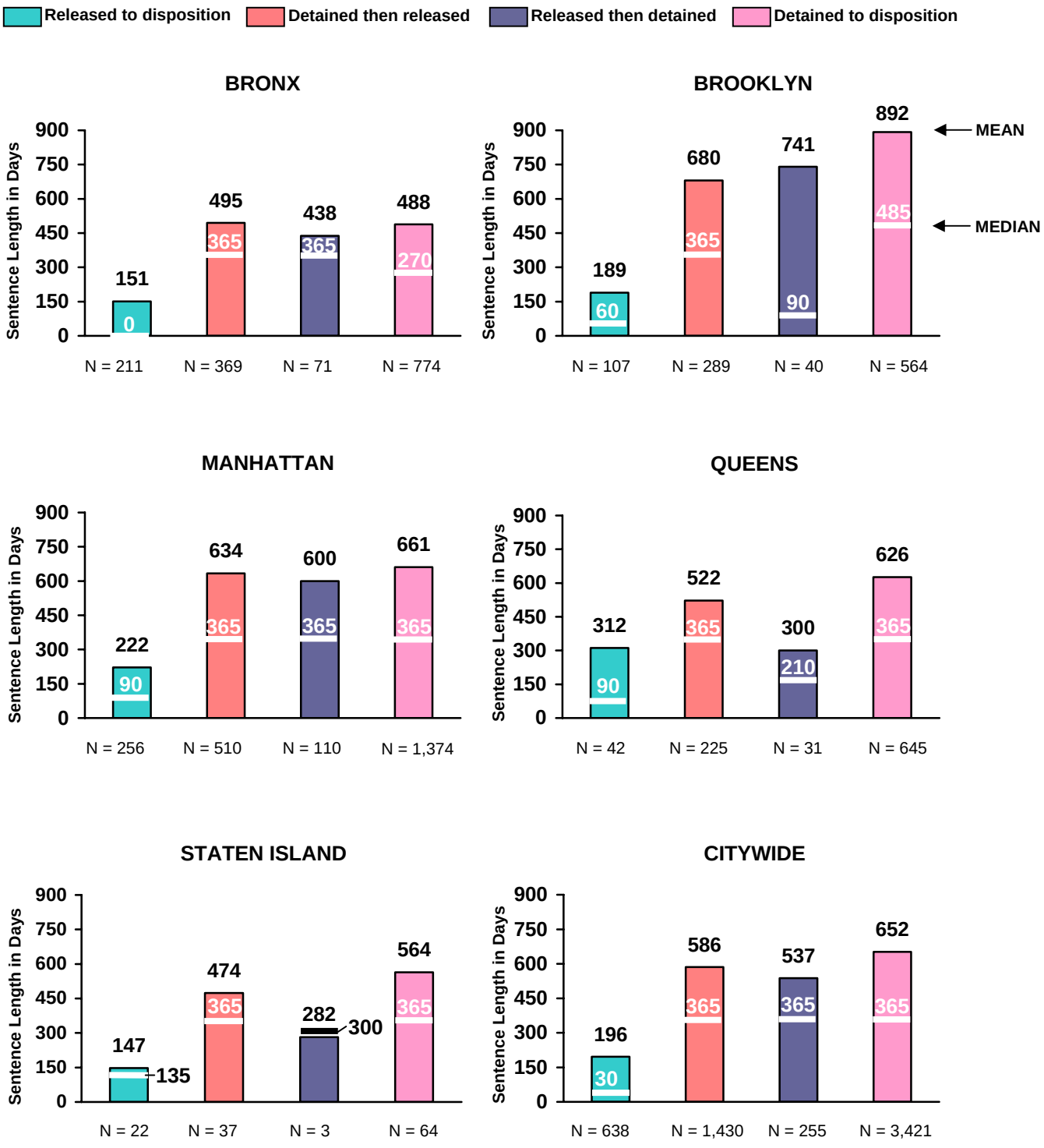
Pearson's Product Moment Correlations

The correlation between sentence length and each measure of detention is shown below for the cases in this felony sample (including only cases with an incarcerative sentence). The strongest relationship with sentence length was found for length of detention, especially when it was measured as a continuous, interval-level variable (.448). (When detention length was coded into 5 categories, as shown in Figure 9, the correlation was .295, still the strongest of the three detention measures.) The other two measures had weak relationships with sentence length, but all three correlations were statistically significant.

Detention Measure	**Correlation With Sentence Length**
Detention at arraignment	.139***
Length of pretrial detention (continuous, interval-level variable)	.448***
Detention to disposition	.127***

***p < .001

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



B. Multivariate Analysis

For the analysis of sentence length, we added an additional selection bias correction variable: the likelihood of incarceration. 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 are identical to those entered in the multivariate analyses of conviction and incarceration (Tables 8 and 9). The detention variables differ only in that the length of detention in days (Model 2) is a continuous, interval-level variable rather than coded into categories of ranges. This change resulted in better predictive power in the analysis of sentence length, which is also a continuous, interval-level variable.

The multivariate statistical procedure used for the analysis of sentence length was ordinary least squares (OLS) regression, which is more appropriate for an interval-level dependent variable than logistic regression. OLS regression 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 average sentences were longer for defendants in Brooklyn compared to the Bronx, after controlling for offense type and severity, criminal history, and all the other variables in the model. The exact coefficient depends on which detention variable was entered in the model: Model 1 shows that Brooklyn sentences were about 151 days longer than in the Bronx, controlling for detention status at arraignment; Model 2 shows that Brooklyn sentences were 66 days longer, controlling for the length of detention in days; Model 3 shows that Brooklyn sentences were 204 days longer, controlling for detention status to disposition.

The contribution of detention to the prediction of sentence length was either nonexistent or negligible for Models 1 and 3. Detention status at arraignment had no effect on sentence length after the effects of the other variables had been accounted for. Detention to disposition, while statistically significant, explained less than 1% of the variance in the outcome. In these models, the most powerful predictors of sentence length were the severity of the conviction charge, offense type, and a prior felony conviction. Conviction in the sample case for a class A or class B felony added over three years to the average sentence for a class A misdemeanor (1,546 days in Model 1; 1,013 days in Model 2; 1,601 days in Model 3). The standardized *beta* for conviction on a class A or class B felony charge was by far the largest of any variable in the model (.55, .36, and .57 in Models 1, 2, and 3 respectively). A prior felony conviction increased sentence length by more than a year in all three models, compared to the average sentence length for cases with a defendant who had no criminal record.

The length of detention in days, unlike the other two measures, was both statistically significant and added substantially to the explained variance of sentence length, even after taking into account all of the control variables. Length of detention explained an additional 5% of the variance (raising the R^2 from .38 to .43). The standardized *beta* for detention in Model 2 is .29, surpassed only by a class A/B, or a class C, felony disposition charge (.36 and .30 respectively). Each additional day of detention increased sentence length by about two and a half days.

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

	Model 1 *Detention measured as:* Detention Status at Arraignment (N=5,430)		**Model 2** *Detention measured as:* Length of Detention in Days (N=5,430)		**Model 3** *Detention measured as:* Detention Status to Disposition (N=5,430)	
Control Variables	Standardized ß	Unstandard-ized ß	Standardized ß	Unstandard-ized ß	Standardized ß	Unstandard-ized ß
Selection bias correction: *probability of conviction*	.06**	274.83	–.10***	–436.73	.06**	276.06
Selection bias correction: *probability of incarceration*	–.01	–32.11	–.04	–136.07	–.25***	–973.81
Number of arrest charges *(1- 4)*	.02	18.00	.04***	33.78	.04**	30.52
Offense type of top arraignment charge: *(Reference category = drug charge)*						
Harm to persons	.21***	636.65	.11***	324.09	.19***	578.40
Harm to persons & property	.29***	660.02	.20***	454.42	.26***	602.33
Weapon	.11***	436.67	.06***	229.77	.12***	455.07
Property crime	.09***	234.08	.03*	79.58	.06***	150.02
Sex crime	.01	304.80	.01	212.61	.01	228.02
Theft intangible	.05***	236.51	.02	91.32	.02	87.60
Misconduct	.01	233.26	.01	120.08	<.01	66.80
Obstruction of justice	.05***	336.34	.01	57.22	.03**	220.61
Vehicle & Traffic Law	.01	98.63	.01	53.83	<.01	29.47
Severity class of top disposition charge: *(Reference category = class A misdemeanor)*						
Class A or B Felony	.55***	1545.99	.36***	1013.13	.57***	1601.15
Class C Felony	.41***	1013.18	.30***	742.05	.46***	1116.36
Class D Felony	.28***	566.78	.19***	372.39	.33***	666.33
Class E Felony	.09***	261.55	.05***	136.88	.11***	318.76
Class B or unclassified misdemeanor	–.02	–147.54	–.02	–101.05	–.04**	–277.50
Violation or infraction	.02	112.68	.02	119.03	–.01*	–63.93
Borough *(Reference category = Bronx)*						
Brooklyn	.06***	150.72	.03*	66.28	.09***	203.68
Manhattan	.04*	68.54	.04**	80.85	.07***	130.90
Queens	.01	23.87	.01	16.42	–.02	–47.42
Staten Island	<.01	8.63	<.01	12.05	<.01	20.69

(continued on the following page)

TABLE 10 (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	Unstandardized ß	Standardized ß	Unstandardized ß	Standardized ß	Unstandardized ß
Criminal history *(Reference category = first adult arrest)*						
Prior adult arrest	.01	26.06	.03*	72.63	.06**	124.07
Misdemeanor conviction	.05**	107.75	.06***	154.61	.11***	262.86
Felony conviction	.28***	506.61	.28***	491.07	.42***	749.38
Sex *(male=1, female=2)*	–.03*	–88.37	–.03**	–102.23	–.04***	–135.10
Age	.06***	4.48	.03*	2.25	.04**	3.49
Ethnicity *(Reference category = black)*						
White	.01	37.23	.02	52.89	.01	30.64
Hispanic	.01	15.34	.02	37.48	.01	18.25
Other	–.01	–76.80	–.01	–59.77	–.02	–103.91
Nagelkerke R^2 for Block 1	**.38**		**.38**		**.38**	
Detention Variables						
Detained at arraignment *(no=0, yes=1)*	<–.01	–8.53	[not entered in Model 2]		[not entered in Model 3]	
Detention (in days)	[not entered in Model 1]		.29***	2.48	[not entered in Model 3]	
Detention to disposition *(Reference category = no pretrial detention)*	[not entered in Model 1]		[not entered in Model 2]			
Detained at arraignment, released pretrial					.08**	165.95
Released at arraignment, detained pretrial					.09***	387.85
No pretrial release					.24***	431.15
Nagelkerke R^2 for Model	**.38**		**.43**		**.38**	
(contribution of detention)	**0**		**.05**		**<.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.

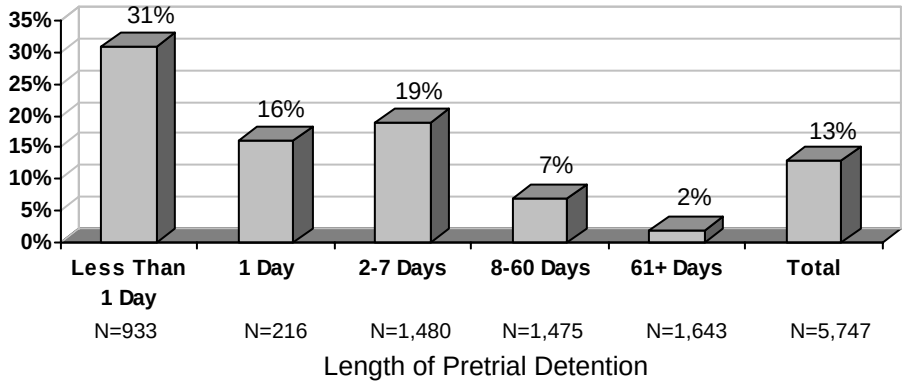
Other significant predictors of sentence length (as shown in Model 2) included:

- arraignment offense type (compared to cases with a drug charge, all other offenses were associated with substantially longer sentences; the differences were statistically significant except for charge types that were represented by a small number of cases);
- number of arrest charges (the more arrest charges, the longer the average sentence);
- borough (compared to the Bronx, sentences in Brooklyn and Manhattan were significantly longer);
- criminal history (in addition to a prior felony conviction, a prior adult arrest or a prior misdemeanor conviction also increased the predicted sentence length compared to cases with a defendant with no criminal record);
- sex (females received shorter sentences than males);
- age (older defendants received slightly longer sentences than younger ones).

Ethnicity was not a significant predictor of sentence length.

We considered the possibility that sentences of "time served" were partly responsible for the relationship between length of detention and sentence length. By definition, the sentence length for a defendant sentenced to time served equals the number of days in pretrial detention, so a large proportion of time served sentences would necessarily result in a close relationship between length of detention and length of sentence. However, only 13% of the sample cases with an incarcerative sentence were sentenced to time served, as shown in Figure 11, so this could not be a large factor. The proportion of cases with a sentence of time served was highest — 31% — among cases with less than one day of post-arraignment detention. (Time spent in custody between arrest and arraignment counts in the calculation of time served, making it possible for defendants who were released at arraignment to be sentenced to time served even though they were categorized as not detained in this research.) Very few of the defendants who were in detention for longer than 60 days were sentenced to time served (2%).

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



To determine if sentences of time served accounted for any part of the relationship between detention length and sentence length shown in Model 2 of Table 10, that analysis was repeated, excluding all cases with a sentence of time served (not shown). The proportion of the variance explained by number of days in detention did not change: it remained 5%, as shown in Table 10. We conclude that sentences of time served were not a factor in the effect of detention on sentence length.

Interactions

Because length of detention in days was the only detention variable to have any substantial effect on sentence length, interactions between that measure and the control variables were tested by recalculating Model 2 for each subgroup separately (Appendix C, Table C-3).

Moderate interactions were found, particularly with borough and disposition charge severity. The strength of the effect of detention on sentence length varied by borough (from no effect in Staten Island to the strongest effect in Queens) and the severity of the disposition charge (the strongest effect was found for cases disposed on the least severe charges).

The cases with the least severe charges were the ones most likely to have a sentence of time served (and also most likely to have the shortest detention times), so we expected that for this subgroup, at least, excluding cases with a sentence of time served would reduce the effect of detention. The percent of the variance explained by detention for cases with a nonfelony disposition charge was 7%, as shown in Table C-3 (Appendix C); when cases with a sentence of time served were excluded from that analysis, the percent of variance explained by detention dropped by one percentage point, to 6% (not shown) — still a little higher than for cases disposed on a felony. We conclude that the interaction between charge severity and detention length was weakened slightly, but not accounted for, by sentences of time served.

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

- charged with an offense classified as “harm to persons & property;”
- previously convicted of a misdemeanor (but not a felony);
- over 40 years of age.

The effect of detention on sentence length was about the same for males and females, and for various ethnic groups. Detention had little or no effect on sentence length in drug cases and cases in which the defendant was convicted on a Class E felony (predominantly property charges such as theft and larceny, with a large minority of drug charges).

VIII. SUMMARY AND DISCUSSION

A. Summary of Findings

Pretrial Detention For Felony Cases. The effects of detention on case outcomes fall disproportionately on defendants facing felony charges. Unlike defendants charged with less serious offenses, the defendants in the felony research sample were more likely than not to have some pretrial detention. Sixty percent of the cases in the felony sample (but only a quarter in the nonfelony sample) had a defendant who was held on bail at arraignment. Although the number of nonfelony cases in the research sample greatly outnumbered felony cases (28,766 and 15,714 respectively), the disparity in detention rates caused felony detainees to outnumber nonfelony (9,364 vs. 7,198). This means that in over half (57%) of cases with a defendant held on bail at arraignment, the charge was a felony.

Once detained at arraignment, a felony defendant was likely to remain in detention throughout the case to disposition: this happened in 52% of cases with a defendant held on bail at arraignment. Whether the defendant was released pre-disposition or not, detention tended to be lengthy. Among felony cases with a defendant held on bail at arraignment, half were still in detention after 7 days and a quarter were still in detention after 52 days. This, too, presents a contrast with nonfelony cases, among which half were still in detention after 5 days and a quarter after 18 days. Longer case-processing times and higher bail amounts in felony cases were among the factors that contributed to this difference.

Part 1 of this research established that the specific measure of detention used in the analyses is important in assessing the effect of detention on case outcomes, because the results differ depending on whether one is looking at release status at arraignment (the only measure used in much of the research literature), the length of pretrial detention in days, or whether the defendant was detained to disposition. The three measures are closely related, but detention at arraignment did not always lead to long detention and long detention did not always coincide with detention to disposition. Release status at arraignment turned out to be the least effective measure for predicting case outcomes in nonfelony cases, and the current research found the same for felony cases. The effects of detention on case outcomes—for minor offenses as well as more serious ones—were primarily a function of the length of time spent in detention and whether the defendant was ever released prior to disposition, rather than simply what happened at arraignment.

Effect of Bail Amount on Length of Detention. The amount of bail was an important factor in determining the length of detention. As would be expected, higher bail amounts were associated with a greater number of days in pretrial detention, and this finding was confirmed in a multivariate analysis that controlled for other likely predictors of detention length. Among the control factors, the defendant's criminal history and the offense type of the arraignment charge were other strong predictors of detention length, but none was more important than bail amount.

However, so many unmeasurable (or unavailable) factors also influence length of detention that the statistical model predicted very little of the variation. Mandatory release laws, the defendant's financial resources, the power of bail bondsmen to accept or reject clients—and especially the defendant's ability to terminate pretrial detention by pleading guilty—all combined to dilute the effect of bail amount on detention length. Fewer than 40% of defendants with bail

set gained their release by actually posting bail;[22] pretrial detention was more likely to end by disposition of the case or, in a small percentage of cases, by ROR.

Even low bail was out of reach for many defendants. In cases with bail set under $1,000 the median length of detention was 3 days, with nearly a third held to disposition, and 17% remaining in detention for a week or longer. In this respect, nonfelony cases resembled felony cases: although bail was set under $1,000 much more often in nonfelony cases (about half of the bail amounts in nonfelony cases were this low, compared to 5% in felony cases), detention was no shorter for them than for felony cases with comparable bail.

Effect of Detention on Conviction. The overall conviction rate for cases in the felony sample was 68%. Of the three detention measures, the one most strongly correlated with conviction was detention to disposition. Defendants who were detained continuously to disposition were much more likely to be convicted (84%) than defendants who were not detained at all between arraignment and disposition (57%). After controlling for the effects of a large number of case and defendant characteristics, however, detention length in days turned out to have a stronger effect on conviction than did detention to disposition, although all three detention variables were statistically significant in separate multivariate analyses. The longer the period of pretrial detention, the greater the likelihood of conviction, after taking into account all the other factors that also influenced likelihood of conviction.

That pretrial detention increases the likelihood of conviction is not a new discovery, but we have seen no previous mention in the literature of our additional finding that pretrial detention *decreases* the likelihood that the defendant will be offered a charge reduction to a nonfelony severity level. It is not unusual for a defendant arraigned on a felony charge to plead guilty to a nonfelony charge; almost half (47%) of convictions in the felony sample were on a misdemeanor or lesser severity charge. Yet pretrial detention did *not* predict *these* convictions. Just the opposite: defendants who were detained at arraignment were *less* likely to be convicted of a nonfelony charge (29%) than defendants who were released (37%), and the statistical significance of this negative relationship was confirmed in multivariate analyses. This suggests that pretrial detention actually has a stronger and more severe effect on probability of conviction than is apparent when the outcome variable is merely conviction on any charge. After differentiating between conviction on a felony versus a nonfelony charge, we concluded that detention not only increased the likelihood of conviction, but also lessened the likelihood that the defendant would be offered the opportunity to plead to a misdemeanor or lesser severity charge.

Effect of Detention on Incarceration. The incarceration rate for all convicted cases was 57%. Of the three detention measures, the one most strongly correlated with incarceration was detention to disposition, and this measure remained the one with the strongest effect on incarceration even after controlling for other factors. In cases with a defendant who was detained to disposition, 87% of sentences included incarceration, compared to 20% of sentences in cases with a defendant who had no pretrial detention. This bivariate relationship was stronger than the relationship between detention and conviction, but some of this effect could be accounted for by the fact that the analysis was restricted to convicted defendants. After discounting the effects of the con-

[22] Figure 1 showed that 33% of defendants who were *held* on bail at arraignment eventually posted bail prior to disposition (n=3,119). Adding to these the defendants who posted bail at arraignment (n=743, Table 1) results in 38% of all defendants with bail set who posted bail before disposition of the case (3,862 out of 10,107 with bail set).

trol variables, including probability of conviction, detention to disposition explained an additional 7% of the variance in incarceration. Being detained to disposition was the strongest single factor predicting likelihood of incarceration, even though it did not outweigh the combined effects of the controls in any of the subgroups examined.

Detention had more of an impact on incarceration among cases with a nonfelony disposition charge than among cases disposed on a felony charge—the reverse of the interactive effects on conviction. Detained defendants were less likely to be offered a nonfelony plea bargain, and when they were, the detention weighed more heavily in influencing the likelihood of incarceration. The other side of this coin was that detained defendants were more likely to be convicted on a felony charge, which in itself greatly increased the likelihood that the defendant would be incarcerated and reduced the independent effect of detention.

Effect of Detention on Sentence Length. The effect of detention on sentence length was weaker than on other case outcomes examined in this research, although this was not evident from the bivariate relationships. Of the three detention measures, the strongest bivariate relationship with sentence length was found for the length of detention in days. The mean sentence length in cases with an incarcerative sentence was 580 days; the median was one year. The mean sentence length rose to 1,087 days (median, 730) in cases with a defendant in pretrial detention for over 2 months, compared to a mean sentence of 299 days (median, 123) in cases with a defendant with no overnight detention. In the multivariate analyses, detention length added 5% to the proportion of variance in sentence length explained by the control variables. Neither of the other two detention measures added measurably to the explained variance.

Detention had more of an impact on sentence length among cases with a nonfelony disposition charge, as compared to those with a felony disposition charge. The sentence was more likely to be "time served" when the conviction charge was a nonfelony (29% of incarcerative sentences for nonfelony convictions were to time served, versus 4% for felony convictions), so detention—being directly equivalent to the length of a time served sentence—would be expected to have a greater effect on the sentence length for these cases. However, even when cases with a sentence of time served were excluded from the analysis, length of detention was still a stronger predictor of sentence length for cases with a nonfelony conviction charge. This brings us back to the same explanation suggested for likelihood of incarceration: there was more leeway for detention to exert a negative influence when the disposition charge did not virtually guarantee a harsh sentence.

B. Discussion

The current research reinforces the conclusions reached in Part 1 for nonfelony cases by replicating the results—more strongly—for felony cases. Detention had the greatest impact on likelihood of conviction, a moderate impact on likelihood of incarceration for convicted defendants, and a weak impact on sentence length for both nonfelony and felony cases. For each outcome examined, however, the effect of pretrial detention was more powerful in felony cases.

The explanation for this may lie in the greater prevalence and longer periods of detention among felony defendants, combined with higher conviction and incarceration rates and a greater range in sentence lengths. The infrequency of jail sentences for defendants convicted of nonfelony offenses, and the relatively narrow range of permissible jail terms for minor offenses, could make pretrial detention less of a factor in those outcomes. In felony cases there is more variation

in case outcomes, especially in incarceration and sentence length, allowing a larger opening for the influence of an extraneous factor such as pretrial detention.

The analyses of interactions between detention and the control variables were undertaken with the expectation that they would increase our confidence in these conclusions by demonstrating that detention affected case outcomes across subgroups. This expectation was upheld for both nonfelony and felony cases. Although some interactions identified subgroups for which detention had a particularly strong effect on one case outcome or another, virtually no population was identified for which at least one of the three detention measures had no effect on conviction, incarceration, or sentence length. Even for the cases in the felony sample that were disposed on a nonfelony charge (probable plea bargains), detention still had a small but statistically significant effect on likelihood of conviction. The only analysis in which detention was ***not*** a significant predictor was the analysis of sentence length in Staten Island, which had so few cases (N=97) that nothing beyond charge severity and offense type attained statistical significance. (With triple the number of cases in the analysis of conviction for Staten Island, detention was a significant and strong predictor.)

The current research provides strong evidence in support of the hypothesis that there is a causal connection between pretrial detention and unfavorable case outcomes. The evidence for a causal link between pretrial detention and likelihood of conviction without a charge reduction is particularly powerful for felony cases. However, the results should be interpreted with caution because—although we controlled for a large number of defendant and case characteristics—it is still possible that some unknown factor influenced both the independent variable and the outcomes. Case strength, which we had no way to measure, could be such a factor. Possibly, conviction and incarceration are more likely for detained defendants only because judges are more willing to set bail, and to set it higher, for defendants they think will be convicted and sentenced to jail or prison. Accordingly, prosecutors' plea offers are surely based on case strength as well as, or in conjunction with, the detention status of the defendant.

Case strength is a very difficult factor to measure statistically, and most researchers have not been able to control for it. Only three examples were found of prior research that claimed to control for case, or evidentiary, strength. These studies are dated, but all three found that detention was still a significant predictor of case outcomes after controlling for strength of evidence (Clarke and Koch 1976; Landes 1974; Legal Aid Society 1972).[23] Only one of the "case strength" measures used in prior research—bail amount—was available to us. Recent CJA research has shown that the bail amount bears a close relationship to the prosecutor's bail request (Phillips 2004a, 2004b), so it could be a reasonable proxy for case strength. Bail amount was not used in the multivariate analyses presented in this report because it so closely overlapped with detention, but supplementary analyses were done to explore the effect of controlling for it. The result of that exercise was that the statistical models changed very little: the contribution of detention was reduced by one percentage point (from .10 to .09) for conviction and not at all for the other two outcomes (not shown).

[23] 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.

Although the current study does not prove causality—no statistical study can—the findings are fully consistent with the argument that something about detention itself pushes case outcomes in a negative direction. This does not rule out a causal loop. In fact, recent CJA research on the factors influencing judges' bail and release decisions (Phillips 2004a, 2004b; Phillips and Revere 2004a, 2004b) suggests such a loop: case-related factors affect case outcomes, judges adjust bail in response to those same and other factors, and the resulting detention has an additional effect on the outcomes. This additional effect, attributable to detention alone, was found in the current research to be small for nonfelony cases, larger for felony cases, and of great magnitude in a few specific subgroups.

Some of the ways in which detention can affect outcomes have been suggested. Detention can increase the likelihood of conviction because a detained defendant is less able to participate in his or her defense, and by increasing the pressure on a defendant to plead guilty. Prosecutors may be reluctant to offer detained defendants plea bargains that would reduce the likelihood of incarceration or shorten the sentence. It is also plausible that a defendant's having been jailed prior to disposition might predispose a judge to impose a jail sentence instead of a noncustodial sentence such as conditional discharge. The knowledge that the days spent in pretrial detention will be counted towards the term could even influence judges to impose longer sentences for defendants who have already served a long period in pretrial detention. Most of all, pretrial detention robs a defendant of the chance to prove to the sentencing judge that he or she can hold a job and stay out of trouble, and thereby convince the judge to impose a conditional discharge or a fine rather than a jail sentence.[24]

That detention leads to greater likelihood of both conviction and incarceration is cause for concern, and yet the other side of the coin is troubling as well. More than a quarter (27%) of detainees in the felony sample were acquitted or had their cases dismissed. Added to those were another 19% who were sentenced to conditional discharge, probation, or some other noncustodial sentence. This brings the total to 46% who were not jailbound, from among felony defendants who were held on bail at arraignment. Among nonfelony, detained defendants the proportion who were not jailbound was very similar (48%). This finding is disturbing because it means that nearly half of defendants who are held on bail at arraignment serve time in jail only because they are unable to post bail. Some of them undoubtedly are flight risks, but many are not. In the felony sample, 28% of the nonjailbound defendants who were detained at arraignment had been recommended by CJA for release on the basis of their low risk of flight; another 17% had been assigned to the moderate-risk category.

Tens of thousands of defendants in cases at all levels of severity are held on bail annually in New York City. The latest figures available from the CJA *Annual Report* series indicate that in 2006, some 55,000 defendants were held on bail at their arraignment.[25] This is a very large number of defendants who may suffer either because their case outcomes are adversely affected by their detention, or because they are jailed—in spite of an eventual dismissal or nonjail sentence—only because they could not post bail.

[24] Thanks to Alan Rosenthal of the Center For Community Alternatives (Syracuse, NY) for bringing this point to my attention in an address to the Subcommittee on Supervision in the Community of the New York State Commission on Sentencing Reform, August 9, 2007.

[25] This number is extrapolated from Exhibit 14 of *Annual Report 2006*, which shows that of 61,085 defendants with bail set in amounts greater than one dollar, 10% made bail at arraignment (NYC Criminal Justice Agency, 2007).

[This page intentionally left blank.]

REFERENCES

Ares, Charles, and Herbert Sturz. 1962. "Bail and the Indigent Accused." *Crime and Delinquency* (January):12-20.

Ares, Charles E., Anne Rankin, and Herbert Sturz. 1963. "The Manhattan Bail Project: An Interim Report on the Use of Pre-Trial Parole." *New York University Law Review* 38:67-95.

Belsley, David A., Edwin Kuh, and Roy E. Welsch. 2004. *Regression Diagnostics: Identifying Influential Data and Sources of Collinearity.* New York: John Wiley.

Bibas, Stephanos. 2004. "Plea Bargaining Outside the Shadow of Trial." *Harvard Law Review* 117(8):2463-2547.

Brockett, William. 1973. "Presumed Guilty: The Pretrial Detainee." *Yale Review of Law and Social Action* 1:10.

Chiricos, Theodore G., and William D. Bales. 1991. "Unemployment and Punishment: An Empirical Assessment." *Criminology* 29(4):701-724.

Clarke, Stevens H., and Gary G. Koch. 1976. "The Influence of Income and Other Factors On Whether Criminal Defendants Go To Prison." *Law & Society Review* 11(1):57-92.

Cohen, Jacob, and Patricia Cohen. 1975. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Cohen, Thomas H., and Brian A. Reaves. 2006. "Felony Defendants In Large Urban Counties, 2002." NCJ210818, Washington, DC: United States Department of Justice, Bureau of Justice Statistics.

Cohen, Thomas H., and Brian A. Reaves. 2007. "Pretrial Release Of Felony Defendants In State Courts." NCJ214994, Washington, DC: United States Department of Justice, Bureau of Justice Statistics.

Crew, B. Keith. 1991. "Race Differences in Felony Charging and Sentencing: Toward An Integration of Decision-Making and Negotiation Models." *Journal of Crime & Justice* XIV(1):99-122.

Eisenstein, James, and Herbert Jacob. 1977. *Felony Justice. An Organizational Analysis of Criminal Courts.* Boston: Little, Brown and Company.

Frazier, Charles E., and Donna M. Bishop. 1985. "The Pretrial Detention of Juveniles and Its Impact On Case Dispositions." *The Journal of Criminal Law & Criminology* 76(4):1132-1152.

Free, Marvin D., Jr. 2005. "Prosecutorial Decision Making and Minority Group-Threat Theory." *Criminal Justice Studies* 18(1):7-28.

Goldkamp, John S. 1979. *Two Classes of Accused: A Study of Bail and Detention in American Justice.* Cambridge, MA: Ballinger Publishing Company.

Goldkamp, John S. 1980. "The Effects of Detention on Judicial Decisions: A Closer Look." *Justice System Journal* 5:234-257.

Goldkamp, John S., and Michael R. Gottfredson. 1985. *Policy Guidelines For Bail: An Experiment in Court Reform.* Philadelphia: Temple University Press.

Guevara, Lori, Cassia Spohn, and Denise Herz. 2004. "Race, Legal Representation, and Juvenile Justice: Issues and Concerns." *Crime & Delinquency* 50(3):344-371.

Holmes, M., and H. Daudistel. 1984. "Ethnicity and Justice in the Southwest: The Sentencing of Anglo, Black, and Mexican Origin Defendants." *Social Science Quarterly* 65:265-277.

Humphrey, J., and T. Fogarty. 1987. "Race and Plea Bargained Outcomes: A Research Note." *Social Forces* 66:176-182.

Kellough, Gail, and Scot Wortley. 2002. "Remand For Plea: Bail Decisions and Plea Bargaining as Commensurate Decisions." *British Journal of Criminology* 42:186-210.

Kennedy, Spurgeon, and D. Alan Henry. 1997. "Commercial Surety Bail: Assessing Its Role In the Pretrial Release and Detention Decision." Washington, DC: Pretrial Services Resource Center.

Koza, Pamela, and Anthony N. Doob. 1975. "The Relationship of Pre-Trial Custody to the Outcome of a Trial." *Criminal Law Quarterly* 17:391-400.

Kruttschnitt, Candace, and Donald E. Green. 1984. "The Sex-Sanctioning Issue: Is It History?" *American Sociological Review* 49:541-551.

Landes, William M. 1974. "Legality and Reality: Some Evidence On Criminal Procedure." *Journal of Legal Studies* 3:287-337.

Legal Aid Society of the City of New York. 1972. "The Unconstitutional Administration of Bail: Bellamy v. The Judges of New York City." *Criminal Law Bulletin* 8:459-506.

Leiber, Michael J., and Kristan C. Fox. 2005. "Race and the Impact of Detention on Juvenile Justice Decision Making." *Crime & Delinquency* 51(4):470-497.

Lizotte, Alan. 1978. "Extra-Legal Factors In Chicago's Criminal Courts: Testing The Conflict Model Of Criminal Justice." *Social Problems* 25:564-580.

Nagel, I., J. Cardascia, and C. Ross. 1982. "Sex Differences in the Processing of Criminal Defendants," in D. K. Weisberg (Ed.), *Women and the Law: A Social Historical Perspective* (vol. 1), pp. 259-282. Cambridge, MA: Schenkman.

New York City Criminal Justice Agency, Inc. 2007. *Annual Report 2006.* New York: New York City Criminal Justice Agency, Inc.

Nie, Norman H., C. Hadlai Hull, Jean G. Jenkins, Karin Steinbrener, and Dale H. Bent. 1975. *Statistical Package for the Social Sciences,* 2nd ed. New York: McGraw-Hill Book Company.

Peterson, Richard R. 2004. *The Impact of Manhattan's Specialized Domestic Violence Court.* New York: New York City Criminal Justice Agency, Inc.

Phillips, Mary T. 2004a. "Factors Influencing Release and Bail Decisions in New York City. Part 3, Cross-Borough Analysis." New York: New York City Criminal Justice Agency, Inc.

Phillips, Mary T. 2004b. "Release and Bail Decisions in New York City." *Research Brief* series, no. 6. New York: New York City Criminal Justice Agency, Inc.

Phillips, Mary T. 2007a. "Bail, Detention, & Nonfelony Case Outcomes." *Research Brief* series, no. 14. New York: New York City Criminal Justice Agency, Inc.

Phillips, Mary T. 2007b. *Pretrial Detention and Case Outcomes, Part 1: Nonfelony Cases.* New York: New York City Criminal Justice Agency, Inc.

Phillips, Mary T., and Elyse J. Revere. 2004a. "Factors Influencing Release and Bail Decisions in New York City. Part 1, Manhattan." New York: New York City Criminal Justice Agency, Inc.

Phillips, Mary T, and Elyse J. Revere. 2004b. "Factors Influencing Release and Bail Decisions in New York City. Part 2, Brooklyn." New York: New York City Criminal Justice Agency, Inc.

Rankin, Anne. 1964. "The Effect of Pretrial Detention." *New York University Law Review* 39:641-655.

Reaves, Brian A., and Jacob Perez. 1994. *Pretrial Release of Felony Defendants.* NCJ148818 Washington, DC: United States Department of Justice, Bureau of Justice Statistics.

Spohn, Cassia C. 2000. "Thirty Years of Sentencing Reform: The Quest for a Racially Neutral Sentencing Process." Pp. 427-501 in *Criminal Justice 2000*, v. 3, *Policies, Processes, and Decisions of the Criminal Justice System*, Julie Horney, ed. NCJ182410 Washington, DC: National Institute of Justice.

Spohn, Cassia C., and D. Holleran. 2000. "The Imprisonment Penalty Paid By Young, Unemployed Black and Hispanic Male Offenders." *Criminology* 38:281-306.

Unnever, J. 1982. "Direct and Organizational Discrimination in the Sentencing of Drug Offenders." *Social Problems* 30:212-225.

Wheeler, Gerald R., and Carol L. Wheeler. 1981. "Two Faces of Bail Reform: An Analysis of the Impact of Pretrial Status on Disposition, Pretrial Flight and Crime in Houston." *Review of Policy Research* 1(1):168-182.

Williams, Marian R. 2003. "The Effect of Pretrial Detention on Imprisonment Decisions." *Criminal Justice Review* 28(2):299-316.

[This page intentionally left blank.]

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 15,000 for the conviction models, nearly 10,000 for the incarceration models, and more than 5,000 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. Dummy variables with only two values (yes or no) are usually coded so that "yes" is given the higher numeric value (0=no, 1=yes), with the result that a positive standardized *beta* indicates a greater likelihood of the outcome for those with the characteristic encoded by the variable.

To illustrate from Table 8, Model 2 (the strongest conviction model): the largest standardized *beta* was –.76 (class A or B felony disposition charge), indicating that this variable was the most powerful predictor of conviction. Cases disposed on a class A or B felony were much less likely (negative association) to be convicted than cases disposed on other severity charges.

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 Table 8, Model 2: the odds ratio for the number of arrest charges was 1.21. This means that the odds of conviction for a defendant with two arrest charges were 1.21 times the odds of conviction for a defendant with one arrest charge; and the odds rose by 1.21 times for each additional arrest charge up to the maximum of four.

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 specified as the reference category for the borough variable. In Model 2 of Table 8, the odds ratio for Queens was 1.90, meaning that the odds of conviction in Queens (controlling for all the other variables in the model) were almost double the odds of conviction in the Bronx.

Odds ratios less than 0 indicate reduced odds. The same model shows that Brooklyn had an odds ratio of 0.51, which means that the odds of conviction in Brooklyn were about half the odds in the Bronx. Sometimes reduced odds are better understood when the inverse of the odds ratio is taken (1 divided by .51, in this example, which equals 1.96). This transformation yields the interpretation that the odds *against* conviction in Brooklyn were about double the odds against conviction in the Bronx. (Or, the odds of conviction in the Bronx were about double the odds of conviction in Brooklyn.)

Unstandardized *Beta* (OLS regression only)

Odds ratios cannot be calculated when the outcome being predicted is continuous, rather than an event that either did or did not happen. For continuous dependent variables, OLS rather than logistic regression was used, and odds ratios were not generated. Replacing odds ratios in Tables 7 (length of pretrial detention) and Table 10 (sentence length) are 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 (Table 7), for example, the unstandardized *beta* for the bail amount was 0.50. 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 half a day (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 (no variance is explained by the variables) to 1 (100% of the variance is explained). 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 models (adjusted R^2), the interpretation is the same. The low R^2 for the length of detention model (.16, 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 case outcome models (Tables 8, 9, and 10) were much higher (above .40 for the strongest model in each analysis). A comparison of the model R^2 statistics suggests that the analyses were best able to explain variations in incarceration: the largest model R^2 for incarceration (Table 9) was .54, compared to .43 for sentence length (Table 10) and .51 for conviction (Table 8).

In this research, a two-step procedure was used in the case outcome analyses: 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 (block); 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 had to consider 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. For example, the models predicting incarceration included only cases in which the defendant was convicted. Selection bias could occur if the variables that influenced conviction also influenced likelihood of incarceration. The same issue arises for the models of sentence length, because they included only cases in which the defendant was convicted and, further, sentenced to a jail or

[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, and borrowed heavily from the Technical Appendix in Peterson (2004).

prison term. Without a correction for selection bias, the estimates of the effects of the independent variables could 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 sample had been convicted. To this end, a control variable was included in the incarceration and sentence length models that estimated the predicted probability of conviction. The predicted probability of conviction was created using Model 2 presented in Table 8, because it was the best of the three models in predicting conviction.

The selection bias control variable, probability of conviction, was a significant predictor of incarceration in all three models presented in Table 9. In Model 3, the strongest of the incarceration models, the standardized *beta* for the bias control variable was moderately strong (.15). This suggests that had it not been included in the analysis, the effect of detention on incarceration would have exaggerated the importance of detention in influencing whether an incarcerative sentence was imposed by conflating this effect with the effect on conviction. We confirmed this by re-calculating Model 3 without including the selection bias variable. As expected, the result was that detention appeared to have a greater impact on likelihood of incarceration: detention alone contributed 10 percentage points to the proportion of variance explained by the model when the selection bias variable was omitted, compared to 6 percentage points after accounting for the effect of selection bias.

The same procedure was followed for the models of sentence length (Table 10). From Model 3 (Table 9), the probability of incarceration was saved as a new variable, which was then used as a second selection bias control (along with probability of conviction) in each sentence length model. In Model 2 of the sentence length analyses—the only model in which detention added anything to the explanation of sentence length—the selection bias variable for probability of conviction was significant, but the probability of incarceration was not. The coefficient was negative, which is counter-intuitive because it suggests that the factors leading to greater likelihood of conviction were the same factors that led to a *shorter*, and not a longer, sentence. The reason for the negative association is unclear; it is possibly a fluke caused by the unreliability of the coefficient resulting from its high correlation with another independent variable in the model (see below). When we re-ran the model omitting the selection bias controls, we found that the coefficients for detention were very similar in the models with and without bias controls, and the contribution of detention to the proportion of variance explained by the model did not change. This suggests that controlling for sample selection bias was not as important for the sentence length models as it was for the incarceration models.

MULTICOLLINEARITY

Multicollinearity occurs when two or more independent variables in a multivariate analysis are highly correlated with each other. It is a problem because two independent variables that are highly correlated with each other are to some extent measuring the same thing, making it difficult to separate out the unique effect of each on the outcome. The greater the correlations, the less reliable are the coefficients for highly correlated variables, and the more difficult it is to weigh their relative importance (Nie et al. 1975).

High correlations were found between the correction variables for sample selection bias and some of the independent variables, but the problem was not as extensive as it had been for the nonfelony analyses reported in Part 1. Appendix A, Part 1, included a detailed description of the diagnostics that were done to identify high correlations among independent variables and the steps that were taken to address these problems in the nonfelony sample. We can be briefer here. The reader is referred to Appendix A, Part 1, for a fuller exposition of the diagnostics and possible remedies for multicollinearity.

No multicollinearity was found in the conviction models for either felony or nonfelony cases. In the felony incarceration and sentence length models, however, high correlations were found between the probability of conviction and disposition on a class A or class B felony charge ($r = -.49$); and between the probability of incarceration (sentence length models only) and a prior felony conviction ($r = .50$). Fortunately, this does not compromise our conclusions about the independent impact of detention in either set of models because multicollinearity does not affect R-squares. Entering variables hierarchically can therefore produce a reliable assessment of the impact of each additional variable through an examination of additional variance explained at each step, even in the presence of multicollinearity. That was the procedure used to assess the independent effect of detention on the outcomes. It is only when variables are entered simultaneously, and interpretation depends on a comparison of coefficients, that the importance of highly interrelated independent variables may be distorted because of multicollinearity (Cohen and Cohen 1975).

Nonetheless, we did check further using collinearity diagnostics generated by the SPSS multiple regression program to confirm that multicollinearity existed in the sentence length analyses. (Comparable diagnostics are not available in the logistic regression program that was used for the conviction and incarceration analyses.) The variance inflation factor (VIF) was above a generally accepted limit of 4.0 for the variable measuring prior felony conviction (4.589); and an examination of condition indexes (CI values) in conjunction with variance proportions showed that one dimension of the information encompassed by the independent variables contributed strongly (greater than .5) to the variance of two variables: the probability of conviction (variance proportion = .53) and disposition on a class A or B felony charge (variance proportion = .70). These are further indications that the coefficients for the affected variables maybe be unreliable estimates of their relative importance. (For more information about these diagnostics, see Part 1, Appendix A, and Belsley 2004.)

A comparison between the models run with and without bias controls—which served to demonstrate that the effect of detention on conviction would have been exaggerated had no correction for sample selection bias been included—is also useful in assessing the effect of multicollinearity. Without the bias control variables, there was no multicollinearity. Adding the bias controls also introduced the multicollinearity problem, so any inexplicable shifts in the signs or coefficients of affected variables would suggest instability attributable to the multicollinearity. The coefficients for the two affected independent variables changed only trivially when bias controls were added to the models, so that concern was alleviated for those two variables. However, the bias control variable itself (probability of conviction) had coefficients that shifted from positive in Models 1 and 3 to negative in Model 2 (Tables 9 and 10), possibly as a result of multicollinearity. A warning is therefore in order regarding the stability of the coefficients for the variable measuring probability of conviction, but the warning pertains only to this one variable.

[This page intentionally left blank.]

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, which was the true arraignment.	Interval (number of days). 0 = made bail at arraignment or post-arraignment on the same day as arraignment. (This variable was not calculated for cases with ROR at arraignment.)	mean = 51 days median = 7 days range = 0 to 1,114 days N = 9,357 cases (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. Convicted = 1 Not convicted = 0.	1 10,638 (68%) 0 5,094 (32%) Total 15,732 (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. Incarcerated = 1 Not incarcerated = 0.	1 5,759 (57%) 0 4,378 (43%) Total 10,137 (100%)
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 = 582 days median = 365 days range = 0 to 18,250 days N = 5,752 cases (sentenced to incarceration)

(continued on the following page)

Percentages may not sum to 100% because of rounding.

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 only in Table 7 (length of detention). Interval (dollar amount divided by 1,000 used in statistical model).	$1 109 (1%) $200 – $999 468 (5%) $1,000 – $1,499 840 (8%) $1,500 – $3,999 3,333 (33%) $4,000 – $7,499 1,837 (18%) $7,500 – $14,999 1,731 (17%) $15,000 – $25,000 971 (10%) over $25,000 806 (8%) Total 10,095 (100%) [excluding $1] mean = $13,661 median = $5,000 range = $200 to $750,000 N = 9,986
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 the defendant's return to court, which was the true arraignment.	Used as an independent variable in multivariate analyses for Model 1 in Tables 8, 9, and 10 (case outcomes). Dichotomy. Detained=1 Not detained=0.	1 9,364 (60%) 0 6,350 (40%) Total 15,714 (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). *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 Interval (Table 10)	0 6,505 (41%) 1 849 (5%) 2 3,788 (24%) 3 2,400 (15%) 4 2,165 (14%) Total 15,707 (100%) mean = 31 days median = 2 days minimum = 0 days maximum = 1,114 days

(continued on the following page)

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 = 5,865 (37%) 1 = 4,466 (28%) 2 = 485 (3%) 3 = 4,898 (31%) Total 15,714 (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. Recommended = 1 Not recommended = 0	1 = 5,016 (33%) 0 = 10,157 (67%) Total = 15,173 (100%)
Defendant expects someone at arraignment The defendant told the CJA interviewer that he or she expected a family member or friend at arraignment. A response of "don't know" was coded *No*.	Used as a control variable in multivariate analyses only in Table 7 (length of detention). Dichotomy. Yes = 1 No = 0	1 = 5,205 (36%) 0 = 9,429 (64%) Total = 14,634 (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. Yes = 1 No = 0	1 = 6,608 (45%) 0 = 8,087 (55%) Total = 14,695 (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 = 4,676 (30%) 2 = 5,110 (32) 3 = 3,308 (21%) 4 = 2,631 (17%) Total 15,725 (100%)
Number of felony arrest charges Number of arrest charges of felony level severity.	Used as a control variable in multivariate analyses only in Table 7 (length of detention). Interval.	0 = 602 (4%) 1 = 8,527 (54%) 2 = 4,625 (29%) 3 = 1,429 (9%) 4 = 542 (3%) Total 15,725 (100%)

(continued on the following page)

Table B Description, Coding, and Distributions of Variables (continued)

Control Variables	Coding	Distributions		
Severity of the top arraignment charge Severity class of the most severe charge entering Criminal Court arraignment.	Used as a control variable in multivariate analyses only in Table 7 (length of detention). Ordinal (from least to most severe). 1 = E felony 2 = D felony 3 = C felony 4 = B felony 5 = A felony	1 = 2 = 3 = 4 = 5 = Total	2,030 4,929 2,188 6,278 307 15,732	(13%) (31%) (14%) (40%) (2%) (100%)
Severity of the 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 = Class A or B felony 2 = Class C felony 3 = Class D felony 4 = Class E felony 5 = Class B or unclassified misdemeanor 6 = Violation or infraction	0 = 1 = 2 = 3 = 4 = 5 = 6 = Total	4,154 2,977 1,985 3,695 1,461 395 1,032 15,732	(26%) (19%) (13%) (24%) (9%) (3%) (7%) (100%)
Charge reduction Flags cases with a felony charge at arraignment that was reduced to a nonfelony prior to disposition.	Used as a control variable in multivariate analyses in Tables 7 & 8 (length of detention and conviction). Dichotomy. Yes = 1 No = 0	1 = 0 = Total =	5,581 10,118 15,699	(36%) (64%) (100%)

(continued on the following page)

Table B Description, Coding, and Distributions of Variables (continued)

Control Variables	Coding	Distributions		
Offense type of top arraignment charge *Harm to persons*: assault; manslaughter; rape and other sex offenses. *Harm to persons and property*: Robbery; burglary involving a weapon or injury. *Weapon*: possession charges. *Property crime*: larceny; theft-related crimes (such as possession of stolen property); burglary not involving a weapon or injury; criminal mischief. *Drug*: drug possession or sale, including marijuana. *Sex crime*: promoting prostitution; obscenity. *Theft intangible*: Forgery; trademark counterfeiting; false written statements; insurance fraud. *Misconduct*: gambling; unauthorized use of a vehicle; false reporting of an incident. *Obstruction of justice*: criminal contempt; witness/evidence tampering; promoting prison contraband. *Vehicle &* Traffic *Law*: unlicensed operation of a motor vehicle; driving under the influence of alcohol or drugs.	Used as a control variable in all multivariate analyses presented in Tables 8, 9, and 10 (case outcomes). Categorical. *Reference category:* 0 = Drug 1 = Harm to persons 2 = Harm to persons and property 3 = Weapon 4 = Property crime 5 = Sex crime 6 = Theft intangible 7 = Misconduct 8 = Obstruction of justice 9 = Vehicle & Traffic Law	0 =	5,528	(35%)
		1 =	2,322	(15%)
		2 =	2,853	(18%)
		3 =	900	(6%)
		4 =	2,069	(13%)
		5 =	46	(<1%)
		6 =	1,310	(8%)
		7 =	76	(1%)
		8 =	413	(3%)
		9 =	215	(1%)
		Total	15,732	(100%)
Borough Borough of prosecution.	Used as a control variable in all multivariate analyses presented in Tables 7, 8, 9, and 10 (length of detention and case outcomes). Categorical. *Reference category:* 0 = Bronx 1 = Brooklyn 2 = Manhattan 3 = Queens 4 = Staten Island	0 =	4,096	(26%)
		1 =	3,210	(20%)
		2 =	5,122	(33%)
		3 =	2,846	(18%)
		4 =	458	(3%)
		Total	15,732	(100%)

(continued on the following page)

Table B Description, Coding, and Distributions of Variables (continued)

Control Variables	Coding	Distributions
Criminal history Defendant's adult criminal record at the time of the sample arrest.	Used as a control variable in all multivariate analyses presented in Tables 7, 8, 9, and 10 (length of detention and case outcomes). Categorical. *Reference category:* 0 = No criminal record (may have prior sealed case) 1 = Prior adult arrest (including open case) 2 = Prior misdemeanor conviction (no felony conviction) 3 = Prior felony conviction (with or without misdemeanor conviction)	0 = 4,997 (33%) 1 = 3,215 (21%) 2 = 2,045 (13%) 3 = 4,898 (32%) Total 15,155 (100%)
Sex Defendant's gender identity as recorded by the CJA interviewer or by the NYPD.	Used as a control variable in all multivariate analyses presented in Tables 7, 8, 9, and 10 (length of detention and case outcomes). Dichotomy. Male = 1 Female = 2.	1 = 13,756 (87%) 0 = 1,972 (13%) Total = 15,728 (100%)
Age Defendant's age at the time of arrest.	Used as a control variable in all multivariate analyses presented in Tables 7, 8, 9, and 10 (length of detention and case outcomes). Interval.	mean = 30 median = 27 range = 14 to 80 N = 15,732
Ethnicity Defendant's ethnicity, as recorded in the CJA interview or by the NYPD.	Used as a control variable in all multivariate analyses presented in Tables 7, 8, 9, and 10 (length of detention and case outcomes). Categorical. *Reference category:* 0 = Black 1 = White 2 = Hispanic 3 = Other	0 = 7,748 (50%) 1 = 1,432 (9%) 2 = 5,535 (36%) 3 = 676 (4%) Total 15,391 (100%)
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.	Used as a control variable in multivariate analyses in Tables 9 & 10 (incarceration and sentence length). Interval (theoretically 0.00 to 1.00)	mean = .78 median = .88 range = .08 to .999 N = 10,063 (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.	Used as a control variable in multivariate analyses in Table 10 (sentence length). Interval (theoretically 0.00 to 1.00)	mean = .75 median = .83 range = .02 to .992 N = 5,435 (incarcerated cases)

APPENDIX C

Interaction Effects

Possible interactions between detention and other factors were examined and summarized briefly in the body of the text, after the discussions of the multivariate models for conviction, incarceration, and sentence length. 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. Almost without exception, for every subgroup pretrial detention was associated with a statistically significant increase in likelihood of conviction and incarceration, and with longer sentences. The one exception was that in Staten Island detention had no significant effect on sentence length.

Interactions were analyzed by estimating a separate statistical model for each value of the control variables (for each subgroup), using the detention measure that contributed the greatest amount to the explanation of the outcome. For example, to analyze the way that detention interacts with borough in its effect on conviction, Model 2 from Table 8 was recalculated separately for each borough, 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 number of cases in the analysis, the block 1 R^2, the model R^2, the proportion of variance explained by detention (the difference between the two), and the significance levels for values of the detention variable.

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

					Significance level of the effect of the length of pretrial detention on CONVICTION[1] controlling for all other variables in the model				
Model *(Each row represents a separate model.)*	N	Block 1 R^2	Model R^2	% of variance explained by detention	Variable as a whole	1 day	2-7 days	8-60 days	61+ days
Borough									
Bronx	3,887	.46	.54	.08	***	**	ns	***	***
Brooklyn	3,061	.36	.52	.16	***	***	***	***	***
Manhattan	4,839	.44	.56	.12	***	**	***	***	***
Queens	2,728	.26	.32	.06	***	***	ns	***	***
Staten Island	367	.65	.73	.08	***	*	**	***	***
Offense Type at Arraignment									
Harm to persons	2,150	.47	.59	.12	***	**	***	***	***
Harm to persons & property	2,705	.38	.56	.18	***	***	***	***	***
Property	1,933	.35	.41	.06	***	ns	ns	***	***
Drug	5,338	.50	.56	.06	***	*	***	***	***
Theft intangible	1,223	.53	.55	.02	**	ns	ns	**	**
Severity Class of Disposition Charge									
Class A or B felony	2,859	.09	.31	.22	***	*	ns	***	***
Class C felony	1,886	.47	.60	.13	***	***	**	***	***
Class D felony	3,481	.40	.52	.12	***	***	***	***	***
Class E felony	1,362	.37	.49	.12	***	***	ns	***	***
Misdemeanor/lesser	5,294	.27	.28	.01	***	ns	**	***	***
Criminal History									
No criminal record	4,917	.43	.50	.07	***	***	***	***	***
Prior arrest, no conviction	3,161	.36	.49	.13	***	**	***	***	***
Misdemeanor conviction only	2,006	.44	.57	.13	***	ns	*	***	***
Felony conviction	4,798	.45	.55	.10	***	**	ns	***	***
Sex									
Male	13,042	.40	.50	.10	***	***	***	***	***
Female	1,840	.52	.58	.06	***	ns	ns	***	***
Age									
Age 13 to 18	2,423	.32	.45	.13	***	***	***	***	***
Age 19 to 39	9,422	.44	.54	.10	***	***	***	***	***
Age 40+	3,037	.47	.55	.08	***	**	*	***	***
Ethnicity									
Black	7,514	.41	.52	.11	***	***	***	***	***
White	1,329	.42	.47	.05	***	***	ns	***	***
Hispanic	5,376	.41	.51	.10	***	***	***	***	***

*statistically significant at $p < .05$; **statistically significant at $p < .01$; ***statistically significant at $p < .001$; ns (not significant)

[1] The four right-hand columns present the statistical significance of the increase in likelihood of conviction associated with the given value of length of detention, compared to no pretrial detention past the day of arraignment (see Table 8 in the body of the report).

Table C-2
Interaction Of Detention With Selected Control Variables
Effects On Likelihood Of Incarceration For Felony Cases
(Convicted Cases Only)

					Significance level of the effect of pretrial detention on likelihood of INCARCERATION[2]			
Model *(Each row represents a separate model.)*	N	Block 1 R^2	Model R^2	% of variance explained by detention	Variable as a whole	Detained at arraignment, then released	Released at arraignment, then detained	No pretrial release
Borough								
Bronx	2,506	.39	.45	.06	***	***	***	***
Brooklyn	1,503	.50	.55	.05	***	ns	***	***
Manhattan	3,095	.48	.55	.07	***	***	***	***
Queens	2,273	.54	.63	.09	***	***	***	***
Staten Island	216	.52	.55	.03	*	*	ns	**
Offense Type at Arraignment								
Harm to persons	1,901	.58	.66	.08	***	ns	***	***
Harm to persons & property	1,615	.52	.55	.03	***	ns	***	***
Property	1,464	.57	.65	.08	***	***	***	***
Drug	3,525	.27	.34	.07	***	***	***	***
Theft intangible	971	.53	.64	.11	***	***	***	***
Severity Class of Disposition Charge								
Class A or B felony	861	.34	.38	.04	***	*	***	**
Class C felony	1,134	.36	.38	.02	***	ns	*	*
Class D felony	1,956	.39	.43	.04	***	***	***	***
Class E felony	914	.55	.59	.04	***	*	***	***
Misdemeanor/lesser	4,728	.44	.57	.13	***	***	***	***
Criminal History								
No criminal record	2,863	.36	.43	.07	***	**	***	***
Prior arrest, no conviction	2,013	.34	.42	.08	***	***	***	***
Misdemeanor conviction only	1,429	.28	.39	.11	***	***	***	***
Felony conviction	3,288	.29	.38	.09	***	***	***	***
Sex								
Male	8,450	.46	.53	.07	***	***	***	***
Female	1,143	.56	.61	.05	***	***	***	***
Age								
Age 13 to 18	1,525	.41	.46	.05	***	**	***	***
Age 19 to 39	5,993	.51	.58	.07	***	***	***	***
Age 40+	2,075	.46	.54	.08	***	***	***	***
Ethnicity								
Black	4,744	.45	.52	.07	***	***	***	***
White	897	.47	.54	.07	***	**	*	***
Hispanic	3,512	.46	.54	.08	***	***	***	***

*statistically significant at $p < .05$; **statistically significant at $p < .01$; ***statistically significant at $p < .001$; ns (not significant)

[2] The three right-hand columns present the statistical significance of the increase in likelihood of incarceration associated with the given value of detention to disposition, compared to no pretrial detention, controlling for all other variables in the model (see Table 9 in the body of the report).

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

Model *(Each row represents a separate model.)*	N	Block 1 R^2	Model R^2	% of variance explained by detention	Significance level of the effect of the length of pretrial detention on SENTENCE LENGTH,[3] controlling for all other variables in the model
Borough					
Bronx	1,348	.45	.50	.05	***
Brooklyn	954	.33	.39	.06	***
Manhattan	2,135	.44	.46	.02	***
Queens	896	.44	.53	.09	***
Staten Island	97	.38	.37	.00	ns
Offense Type at Arraignment					
Harm to persons	538	.44	.45	.01	**
Harm to persons & property	1,010	.43	.48	.05	***
Weapon	307	.35	.38	.03	***
Property	681	.54	.56	.02	***
Drug	2,488	.52	.53	.01	***
Disposition Charge Severity					
Class A or B felony	609	.39	.43	.04	***
Class C felony	850	.42	.45	.03	***
Class D felony	1,450	.30	.33	.03	***
Class E felony	558	.38	.38	<.01	*
Misdemeanor/lesser	1,963	.18	.25	.07	***
Criminal History					
No criminal record	759	.24	.27	.03	***
Prior arrest, no conviction	1,045	.27	.33	.06	***
Misdemeanor conviction only	900	.40	.48	.08	***
Felony conviction	2,726	.47	.51	.04	***
Sex					
Male	4,972	.38	.43	.05	***
Female	458	.50	.54	.04	***
Age					
Age 13 to 18	688	.17	.19	.02	***
Age 19 to 39	3,498	.43	.48	.05	***
Age 40+	1,244	.44	.50	.06	***
Ethnicity					
Black	2,951	.37	.42	.05	***
White	383	.46	.52	.06	***
Hispanic	1,969	.38	.43	.05	***

*statistically significant at $p < .05$; **statistically significant at $p < .01$; ***statistically significant at $p < .001$
ns (not significant)

[3] The right-hand column presents the statistical significance of the increase in sentence length associated with an increase in length of pretrial detention (see Table 10 in the body of the report).