



Investigating the Impact of Pretrial Detention on Sentencing Outcomes

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EXECUTIVE SUMMARY

In the criminal justice system, the time between arrest and case disposition is known as the pretrial stage. Each time a person is arrested and accused of a crime, a decision must be made as to whether the accused person, known as the defendant, will be detained in jail awaiting trial or will be released back into the community. But pretrial detention is not simply an either-or proposition; many defendants are held for a number of days before being released at some point before their trial.

The release-and-detention decision takes into account a number of different concerns, including protecting the community, the need for defendants to appear in court, and upholding the legal and constitutional rights afforded to accused persons awaiting trial. It carries enormous consequences not only for the defendant but also for the safety of the community.

Little is known about the impact of pretrial detention on sentencing outcomes. The limited research indicates that pretrial detention is related to the type and length of sentence received. While little is known about the impact of pretrial detention on felony sentence length, even less is known about the impact on the sentencing of misdemeanants.

Data on 153,407 defendants booked into a jail in Kentucky between July 1, 2009, and June 30, 2010, were used to answer one broad research objective: Investigate the relationship between pretrial detention and sentencing. Depending on the associated research question, subsamples of cases were drawn from this larger dataset of 153,407 defendants.

Multivariate models were generated that controlled for relevant factors including risk level, supervision status, offense type, offense level, time at risk in the community, demographics, and other factors. Two critical findings related to the impact of pretrial detention were revealed.

REPORT HIGHLIGHTS:

- Compared to defendants released at some point pending trial, defendants detained for the entire pretrial period are more likely to be sentenced to jail or prison – and for longer periods of time.
- Detained defendants are over four times more likely to be sentenced to jail and over three times more likely to be sentenced to prison than defendants who are released at some point pending trial.
- Sentences for detained defendants are also significantly longer: Jail sentences are nearly three times as long, and prison sentences are more than twice as long.

1. **Pretrial Detention and Sentence to Jail and Prison** — Defendants who are detained for the entire pretrial period are much more likely to be sentenced to jail and prison. Low-risk defendants who are detained for the entire pretrial period are 5.41 times more likely to be sentenced to jail and 3.76 times more likely to be sentenced to prison when compared to low-risk defendants who are released at some point before trial or case disposition. Moderate and high-risk defendants who are detained for the entire pretrial period are approximately 3 times more likely to be incarcerated than similar defendants who are released at some point.
2. **Pretrial Detention and Length of Sentence to Jail and Prison** — Defendants who are detained for the entire pretrial period receive longer jail and prison sentences. While the effects for all risk levels are substantial and significant, the largest effects are seen for low-risk defendants.¹

¹ As a caveat, the empirical strategy here cannot definitively prove causation – after all, it is possible that defendants who are detained for the entire pretrial period are different in significant and unmeasured ways from other defendants. Still, the findings here are striking and show the need for more empirical research to determine exactly which defendants actually need to be detained.

INTRODUCTION

In the criminal justice system, the time between arrest and case disposition is known as the pretrial stage. Each time a person is arrested and accused of a crime, a decision must be made as to whether the accused, known as the defendant, will be detained in jail pending trial or released back into the community. But pretrial detention is not simply an either-or proposition; many defendants are held for a number of days before being released at some point before their trial.

The decision to detain or release is a crucial one in which courts must take into account public safety, the need for defendants to appear in court, and the legal and constitutional rights afforded to accused persons awaiting trial. Protecting these interests in a just manner has been the subject of research for most of the previous century (see, for example, Beeley, 1927; Foote, 1954 & 1958; and Ares, Rankin, & Sturz, 1963; Wice, 1974).

Deciding whether to release a defendant pending trial has obvious implications for public safety. It also impacts certain legal and constitutional rights of defendants, including their right to defend themselves (Leipold, 2005). One underdeveloped area of research is the impact of pretrial detention on sentencing. The limited research indicates that detention for the entire pretrial period is related to the type and length of sentence received (Freed and Wald, 1964; Schlesinger, 2005 & 2007; Wooldredge 2012). Ulmer (2012), in a recent and thorough review of research on sentencing, notes the long-time call for research to take into account the impact of earlier decisions on sentence severity. Ulmer also reviews only two studies that explicitly consider the impact of pretrial detention on sentence length. Both of these studies, and the previously cited studies, focus exclusively on defendants charged with felony offenses. While little is known about the impact of pretrial detention on felony sentence length, even less is known about the impact of pretrial detention on the sentencing of misdemeanants (Frase, 2009).

The current study is a necessary addition to the extant research, as it seeks to better understand the link between pretrial detention and the likelihood of sentence to incarceration, as well as sentence length for both felons and misdemeanants.

Study Description

The current study investigates the impact of pretrial detention on sentencing outcomes for both misdemeanors and felonies.

Research Objectives and Questions

The study includes one research objective: Investigate the relationship between pretrial detention and sentencing. There are eight related research questions as shown below.

1. Is pretrial detention related to the likelihood of being sentenced to incarceration in jail?
2. Do the observed effects of pretrial detention related to being sentenced to jail differ for sub-populations of defendants?
3. Is pretrial detention related to length of jail incarceration ordered at sentencing?
4. Do the observed effects of pretrial detention related to the length of sentence to jail differ for sub-populations of defendants?
5. Is pretrial detention related to the likelihood of being sentenced to incarceration in prison?
6. Do the observed effects of pretrial detention related to being sentenced to prison differ for sub-populations of defendants?
7. Is pretrial detention related to length of prison incarceration ordered at sentencing?
8. Do the observed effects of pretrial detention related to the length of sentence to prison differ for sub-populations of defendants?

Dataset

The sample used for the current study includes all defendants arrested and booked into a Kentucky jail between July 1, 2009, and June 30, 2010. This led to a working sample size of 153,407. The dataset does not represent unique individuals, but rather includes all bookings within the study period. (Some individuals were booked multiple times within the timeframe; calculating a unique count of individuals could not be performed reliably, as unique identifiers were missing in almost 10% of the cases.) All cases in the sample reached final case disposition. These data served as the sample of defendants used to respond to the research objective. Depending on the associated research question, subsamples of cases were drawn from this larger dataset of 153,407 defendants.

The measures in this study included the following:

- defendant demographics;
- defendant risk;
- offense characteristics including offense level (e.g., felony or misdemeanor) as well as felony offense class (A, B, C, D) for some analyses;
- details of pretrial status (released or detained, and length of detention);
- sentence imposed (if the defendant was found or pled guilty).

Methodology

Bivariate and multivariate models were used to complete the analysis. Most commonly used was logistic regression modeling, a procedure designed for what is generally referred to as a dichotomous or binary outcome variable. (Recidivism, for example, is typically considered either a “yes” or “no” outcome, regardless of measurement procedure.) Logistic regression, like many types of regression, allows for several variables to be entered into a model while statistically controlling for the effects of other variables. Generally, when a multivariate model is conducted, the variable of interest is highlighted (e.g., the effect of pretrial detention, or the length of pretrial detention) while controlling for the effects of other variables (such as age, race, gender, risk level, and the like).

Also incorporated in the analysis are Poisson regression models, which are typically used when the outcome variable is a discrete count (e.g., the number of months someone is sentenced to prison or jail, or the number of times someone is arrested). Counts tend to be distributed in such a way that the assumptions of linear regression are violated; therefore, an adjustment in modeling is required. Poisson regression, like logistic regression and other types of regression, allows for several variables to be entered into a model while statistically controlling for the effects of other variables. This allows for the examination of the effect of one or more variables of interest (e.g., pretrial detention and/or the length of pretrial detention).

The county of case origin, although not shown in any of the multivariate tables published here, was included in every multivariate model constructed and estimated. Robust standard error estimates were developed with clustering at the county level and were used in all multivariate analyses.

SAMPLE DESCRIPTION

The dataset described above, including 153,407 records representing all defendants arrested and booked into a Kentucky jail between July 1, 2009, and June 30, 2010, was used for the analysis.

There are 120 counties and 84 local jails in Kentucky. Table A-1 (see Appendix A) provides a jail-by-jail breakdown, identified by county location, and the number of cases originating from each jail. The number of cases is presented (N), as well as the percentage of the total that each jail comprises. The vast majority of jails contributed 3% or less of the total sample, with the noted exception of Jefferson County (approximately 19%) and Fayette County (approximately 7%).

Demographics

Table 1 presents descriptive information for the entire state sample, grouped in two categories, or models (Felony and Misdemeanor). Taken as a whole, the sample is approximately 26% female, 74% male, 79% white, 17% black, and 4% hispanic. The average age is approximately 33, and approximately 20% reported being married. With few exceptions, the different samples used to answer the different research questions tend to be very similar.

Offense Information

Table 1 also presents the original offense types¹ for the entire sample and each sub-sample used for the different research questions. Generally, drug, traffic, theft, and driving under the influence appear to be the most frequent offense types across the two samples. The Felony model had a higher percentage of violent offenses (9%) than the Misdemeanor model (3%).

Risk Level

Kentucky currently uses a research-based and validated assessment tool (Kentucky Pretrial Risk Assessment [KPRA]) to assess the risk of pretrial failure (FTA and NCA). The KPRA consists of 12 risk factors, including measures of offense class, criminal justice status, criminal history, failure to appear, and community stability, with each risk factor having a corresponding weight (or points). The weights are summed for a total risk score. The risk scores are categorized into three levels of risk — low, moderate, and high. For the sample, the largest risk category was low risk, with 53% to 67% falling into that level across the five models. The moderate risk level ranged between 29% and 40%, and the high risk level ranged between 3% and 7%. The sample of cases that make up the felony sentencing models are, relative to the other samples, higher risk.

¹ It is important to note that defendants could contribute more than one offense to the offense type categorizations.

Days in Pretrial Detention

Table 1 also presents information across the two models regarding days spent in pretrial detention. Cases in the Felony model had an average of 35 days in pretrial detention, while cases in the Misdemeanor model had just 7 days. Both models included defendants who were released as well as those who were detained for the entire pretrial period.

Outcomes

The outcome is the sentence received (in months) for the Felony and Misdemeanor models (10.19 months and 0.49 months, respectively).

Table 1. Descriptive Statistics for Two Models

	FELONY MODEL		MISDEMEANOR MODEL	
	N	% OR \bar{X}	N	% OR \bar{X}
Age	47563	33.17	98165	33.59
Female	47514	24.77	98168	26.51
White	47360	78.07	97293	80.61
Black	47360	20.73	97293	16.57
Hispanic	40713	2.69	88557	6.31
Married	46931	19.33	95345	20.58
Risk Level				
Low	37249	53.48	65501	65.37
Moderate	37249	39.54	65501	30.57
High	37249	6.98	65501	4.05
Offense Type				
Drugs	47637	17.56	98460	17.56
Violent	47637	9.28	98460	2.72
Domestic Violence	47637	3.14	98460	9.03
Sex Offense	47637	1.82	98460	0.92
Firearm	47637	4.39	98460	1.05
Theft	47637	33.58	98460	13.97
Traffic	47637	11.77	98460	35.24
Driving Under the Influence	47637	6.77	98460	26.86
Felony	47637	100.00	98460	0.00
Days Spent In Detention				
1 Day	46943	13.74	97522	40.32
2 to 3 Days	46943	22.13	97522	37.34
4 to 7 Days	46943	11.58	97522	9.19
8 to 14 Days	46943	18.20	97522	5.92
15 to 30 Days	46943	8.96	97522	3.60
31+ Days	46943	25.38	97522	3/63
Mean Days	46943	35.07	97522	7.01
Detained Pretrial Yes/No	47637	33.75	98460	22.08
Sentence in Months	47637	10.19	98460	0.49

RESEARCH OBJECTIVE:

► Investigate the relations between pretrial detention and sentencing

Research Questions

1. Is pretrial detention related to the likelihood of being sentenced to incarceration in jail?
2. Do the observed effects of pretrial detention related to being sentenced to jail differ for sub-populations of defendants?
3. Is pretrial detention related to length of jail incarceration ordered at sentencing?
4. Do the observed effects of pretrial detention related to the length of sentence to jail differ for sub-populations of defendants?
5. Is pretrial detention related to the likelihood of being sentenced to incarceration in prison?
6. Do the observed effects of pretrial detention related to being sentenced to prison differ for sub-populations of defendants?
7. Is pretrial detention related to length of prison incarceration ordered at sentencing?
8. Do the observed effects of pretrial detention related to the length of sentence to prison differ for sub-populations of defendants?

Primary Findings

Being detained for the entire pretrial period is related to the likelihood of being sentenced to jail and prison, as well as the length of the sentence. When other relevant statistical controls are considered, defendants detained until trial or case disposition are 4.44 times more likely to be sentenced to jail and 3.32 times more likely to be sentenced to prison than defendants who are released at some point pending trial. The jail sentence is 2.78 times longer for defendants who are detained for the entire pretrial period, and the prison sentence is 2.36 times longer.²

When examining sub-populations, the relationship between pretrial detention and sentence to jail and prison, and the length of the sentence, is significant for all risk levels of defendants but even more pronounced for low-risk defendants.

2 The IRR, in technical terms, captures the ratio of the rate of the dependent variable given a change in the independent variable

- Low-risk defendants detained for the entire pretrial period are 5.41 times more likely to be sentenced to jail when compared to low-risk defendants who are released at some point pending trial. Moderate- and high-risk defendants detained for the entire pretrial period are approximately 4 and 3 times (respectively) more likely to be sentenced to jail than their released counterparts.
- The effect of pretrial detention on jail sentence length is also significant. Jail sentences are 2 to 3.5 times longer for those who are detained until trial or disposition, depending on the risk level of the defendant.
- Low-risk defendants who are detained for the entire pretrial period are 3.76 times more likely to be sentenced to prison when compared to low-risk defendants who are released; moderate- and high-risk defendants are roughly 3 times as likely.
- The effect of pretrial detention on prison sentence length was most significant for low-risk defendants. Prison sentences were 2.84 times longer for low-risk defendants who were detained for the entire pretrial period. For detained moderate- and high-risk defendants, prison sentences were roughly 2 times longer.

Methods and Analysis Results

Descriptive statistics, bivariate models, and multivariate models (e.g., logistic regression and Poisson regression models) were constructed to investigate these questions. Control variables included pretrial release and detention, supervision status, defendant risk level, offense type, offense class, and demographics. The analysis was repeated for sub-populations of defendants (i.e., gender, race, and risk level).

RESEARCH QUESTION 1A

Is pretrial detention related to the likelihood of being sentenced to incarceration in jail?

Table 2 presents a logistic regression model that was calculated to predict whether misdemeanor defendants were sentenced to jail. Whether a defendant was detained for the entire pretrial period was the primary variable of interest while control variables included age, gender, race, ethnicity, marital status, supervision status, risk level, offense type, and offense class. According to the odds ratio for pretrial detention, being detained until trial or case disposition was a significant and strong predictor of the likelihood of being sentenced to jail while controlling for the effects of all other variables in the model. Specifically, when other relevant statistical controls are considered, defendants detained for the entire pretrial period were 4.44 times more likely to be sentenced to jail when compared to defendants who were released at some point pending trial.

Table 2. Logistic Regression Model Predicting Jail Sentence (Yes/No)

	ODDS RATIO	P	LOWER 95% CI	UPPER 95% CI
Age	1.00	0.00	1.00	1.00
Female	0.81	0.00	0.78	0.85
White	1.12	0.25	0.93	1.35
Black	1.14	0.19	0.94	1.39
Hispanic	0.90	0.12	0.79	1.03
Married	0.86	0.00	0.82	0.91
On Probation or Parole	1.27	0.00	1.20	1.35
Risk Level (Reference = Low Risk)				
Moderate	1.54	0.00	1.47	1.61
High	1.70	0.00	1.54	1.87
Offense Type				
Drugs	0.92	0.01	0.87	0.98
Violent	0.82	0.00	0.72	0.93
Domestic Violence	0.83	0.00	0.76	0.89
Sex Offense	1.93	0.03	1.07	3.48
Firearm	1.47	0.00	1.23	1.76
Theft	1.32	0.00	1.23	1.41
Traffic	0.70	0.00	0.66	0.73
Driving Under the Influence	2.48	0.00	2.35	2.62
Offense Class A	1.27	0.00	1.21	1.34
Detained Pretrial	4.44	0.00	4.23	4.67
Constant	0.08	0.00	0.06	0.12
N = 55,712; Pseudo-R ² = 0.13				

RESEARCH QUESTION 1B

Do the observed effects of pretrial detention related to being sentenced to jail differ for sub-populations of defendants?

Table 3 presents the results of logistic regression models that predicted a sentence to jail for misdemeanants using pretrial detention until trial or case disposition as the main predictor of interest while controlling for all other aforementioned variables' effects. Several models were calculated based on sub-group (i.e., white, black, male, female, low risk, moderate risk, and high risk). For each model, being detained for the entire pretrial period was a statistically significant and strong predictor of being sentenced to jail. The effect was strongest for low-risk defendants but still significant and substantial for high-risk defendants. The effects for all other subgroups fell between the two. Low-risk defendants detained for the entire pretrial period were 5.41 times more likely to be sentenced to jail when compared to low-risk defendants who were released at some point pending trial.

Table 3. Odds Ratios for Pretrial Detention Predicting Jail for Subgroups

SUBGROUP	ODDS RATIO	P	LOWER 95% CI	UPPER 95% CI
White	4.44	0.00	4.21	4.69
Black	4.50	0.00	4.02	5.02
Male	4.38	0.00	4.14	4.63
Female	4.66	0.00	4.21	5.16
Risk Level				
Low	5.41	0.00	5.04	5.80
Moderate	3.77	0.00	3.50	4.06
High	3.11	0.00	2.57	3.76

RESEARCH QUESTION 1C

Is pretrial detention related to length of jail incarceration ordered at sentencing?

Table 4 presents the results of a Poisson regression model designed to determine the effects of being detained for the entire pretrial period on the length of the jail sentence received for misdemeanor defendants. The model controlled for age, gender, race, ethnicity, marital status, supervision status, risk level, offense type, and offense class. While controlling for the effects of all other predictors in the model, defendants detained for the entire pretrial period received jail sentences that were 2.78 times longer than sentences received by defendants who were released at some point.

**Table 4. Poisson Model with Correction for Overdispersion
Predicting Jail Sentence Length**

	IRR	P	LOWER 95% CI	UPPER 95% CI
Age	1.00	0.54	1.00	1.00
Female	0.79	0.00	0.75	0.84
White	1.13	0.22	0.93	1.39
Black	1.18	0.06	0.99	1.40
Hispanic	0.91	0.26	0.78	1.07
Married	0.92	0.00	0.88	0.97
On Probation or Parole	1.28	0.00	1.20	1.37
Risk Level (Reference = Low Risk)				
Moderate	1.48	0.00	1.38	1.60
High	1.73	0.00	1.51	1.99
Offense Type				
Drugs	0.88	0.15	0.74	1.05
Violent	0.82	0.02	0.70	0.97
Domestic Violence	0.89	0.24	0.73	1.08
Sex Offense	2.91	0.00	1.81	4.68
Firearm	1.08	0.42	0.89	1.32
Theft	1.30	0.00	1.18	1.43
Traffic	0.77	0.00	0.72	0.81
Driving Under the Influence	1.68	0.00	1.38	2.06
Offense Class A	1.72	0.00	1.58	1.87
Detained Pretrial	2.78	0.00	2.46	3.13
Constant	0.11	0.00	0.09	0.15
N = 55,712; $\alpha=1.45$				

RESEARCH QUESTION 1D

Do the observed effects of pretrial detention related to the length of sentence to jail differ for sub-populations of defendants?

Table 5 presents Poisson models³ where the effects of pretrial detention on jail sentence length for pretrial defendants are isolated for several subgroups of defendants (white, black, male, female, low risk, moderate risk, and high risk). For all subgroups, being detained for the entire pretrial period resulted in a significantly longer sentence to jail when compared to defendants released at some point pretrial. While significant and substantial for all three categories of risk, the effect of pretrial detention on sentence length appeared to be strongest for low-risk defendants. (The jail sentence was 3.49 times longer for low-risk defendants who were detained for the entire pretrial period.)

**Table 5. Incidence Rate Ratios for Pretrial Detention
Predicting Jail Sentence Length by Subgroup**

	IRR	P	LOWER 95% CI	UPPER 95% CI
White	2.84	0.00	2.56	3.14
Black	2.56	0.00	1.95	3.34
Male	2.77	0.00	2.42	3.16
Female	2.77	0.00	2.46	3.13
Risk Level				
Low	3.49	0.00	2.96	4.10
Moderate	2.26	0.00	2.01	2.55
High	2.22	0.00	1.88	2.63

³ Poisson models with corrections for over dispersion.

RESEARCH QUESTION 1E

Is pretrial detention related to the likelihood of being sentenced to incarceration in prison?

Table 6 presents a logistic regression model that was calculated to predict whether felony defendants were sentenced to prison. Whether a defendant was detained for the entire pretrial period was the primary variable of interest while control variables included age, gender, race, ethnicity, marital status, supervision status, risk level, offense type, and offense class. Being detained until trial or case disposition revealed a statistically significant and strong relationship with being sentenced to prison. Specifically, when other relevant statistical controls are considered, defendants detained for the entire pretrial period are 3.32 times more likely to be sentenced to prison than defendants who are released at some point.

Table 6. Logistic Regression Model Predicting Prison Sentence (Yes/No)

	ODDS RATIO	P	LOWER 95% CI	UPPER 95% CI
Age	1.00	0.17	0.99	1.00
Female	0.79	0.00	0.71	0.88
White	1.11	0.47	0.84	1.47
Black	1.10	0.52	0.83	1.46
Hispanic	0.76	0.05	0.58	1.00
Married	0.84	0.00	0.77	0.91
On Probation or Parole	1.30	0.00	1.20	1.40
Risk Level (Reference = Low Risk)				
Moderate	1.32	0.00	1.19	1.46
High	1.59	0.00	1.31	1.94
Offense Type				
Drugs	1.36	0.00	1.12	1.66
Violent	1.46	0.00	1.32	1.61
Domestic Violence	1.78	0.00	1.32	2.39
Sex Offense	1.64	0.00	1.34	2.00
Firearm	1.17	0.01	1.04	1.31
Theft	1.37	0.00	1.24	1.51
Traffic	1.02	0.67	0.94	1.11
Driving Under the Influence	1.78	0.00	1.49	2.12
Offense Class				
C	1.10	0.26	0.94	1.29
B	0.94	0.52	0.78	1.13
A	1.45	0.01	1.08	1.96
Detained Pretrial	3.32	0.00	3.04	3.63
Constant	0.20	0.00	0.15	0.27

N = 32,258; Pseudo-R² = 0.11

RESEARCH QUESTION 1F

Do the observed effects of pretrial detention related to being sentenced to prison differ for sub-populations of defendants?

The analysis discussed in Research Question 2 was replicated using sentence to prison for felony defendants as the dependent variable. The models used to address this question once again controlled for the effects of other predictors, but this time separate models were created for each of the subgroups of interest. As displayed in Table 7, those detained for the entire pretrial period were significantly more likely to be sentenced to prison. The effect of pretrial detention was strongest for low-risk defendants, but the impact was significant and large for defendants at all risk levels. Low-risk defendants who were detained until trial or case disposition were 3.76 times more likely to be sentenced to prison than low-risk defendants who were released at some point pending trial. Detained moderate- and high-risk defendants were about 3 times more likely to be sentenced to prison than similar defendants who were released at some point pretrial.

Table 7. Odds Ratios for Pretrial Detention Predicting Prison for Subgroups

SUBGROUP	ODDS RATIO	P	LOWER 95% CI	UPPER 95% CI
White	3.37	0.00	3.05	3.71
Black	3.11	0.00	2.83	3.42
Male	3.29	0.00	2.99	3.62
Female	3.50	0.00	3.09	3.95
Risk Level				
Low	3.76	0.00	3.32	4.27
Moderate	3.20	0.00	2.91	3.53
High	2.90	0.00	2.50	3.36

RESEARCH QUESTION 1G

Is pretrial detention related to length of prison incarceration ordered at sentencing?

The analysis discussed in Research Question 3 was replicated using prison sentence length for felony defendants as the dependent variable. As can be seen in Table 8, being detained for the entire pretrial period was a statistically significant predictor of increased prison sentences while controlling for all other predictors in the model.

Table 8. Poisson Model with Overdispersion Predicting Prison Sentence Length

	IRR	P	LOWER 95% CI	UPPER 95% CI
Age	1.00	0.54	1.00	1.01
Female	0.68	0.00	0.58	0.79
White	1.50	0.05	1.00	2.26
Black	1.74	0.01	1.13	2.68
Hispanic	0.59	0.02	0.38	0.92
Married	0.95	0.48	0.84	1.09
On Probation or Parole	1.57	0.00	1.45	1.71
Risk Level (Reference = Low Risk)				
Moderate	1.78	0.00	1.60	1.99
High	2.35	0.00	1.88	2.95
Offense Type				
Drugs	1.29	0.01	1.07	1.56
Violent	1.09	0.19	0.96	1.23
Domestic Violence	0.69	0.00	0.56	0.86
Sex Offense	2.31	0.00	1.80	2.96
Firearm	1.13	0.35	0.87	1.47
Theft	1.36	0.00	1.23	1.51
Traffic	0.82	0.13	0.63	1.06
Driving Under the Influence	0.97	0.83	0.74	1.28
Offense Class				
C	2.26	0.00	1.95	2.63
B	3.75	0.00	3.31	4.25
A	6.73	0.00	5.63	8.04
Detained Pretrial	2.36	0.00	2.10	2.65
Constant	2.20	0.00	1.39	3.49

N = 32,258

RESEARCH QUESTION 1H

Do the observed effects of pretrial detention related to the length of sentence to prison differ for sub-populations of defendants?

The analyses discussed in Research Question 4 were replicated for felony defendants with the effects of pretrial detention on prison sentence length isolated for each of several subgroups of defendants (white, black, male, female, low risk, moderate risk, and high risk). As can be seen in Table 9, detention for the entire pretrial period appears to result in statistically longer sentences to prison while controlling for all other variables in the model. The effects appear to be strongest for detained low-risk defendants, whose prison sentences in months were 2.84 times longer than their released counterparts. The effects appear to be weakest for black defendants, with the effects for all other subgroups falling between.

Table 9. Incidence Rate Ratios for Pretrial Detention Predicting Prison Sentence Length by Subgroup

	IRR	P	LOWER 95% CI	UPPER 95% CI
White	2.44	0.00	2.17	2.74
Black	1.99	0.00	1.66	2.40
Male	2.39	0.00	2.11	2.69
Female	2.45	0.00	2.02	2.98
Risk Level				
Low	2.84	0.00	2.41	3.33
Moderate	2.15	0.00	1.91	2.43
High	2.32	0.00	1.75	3.06

APPENDIX

Appendix A: Table A-1

JAIL BY COUNTY	N	%
ADAIR	721	0.47
ALLEN	586	0.38
BALLARD	392	0.26
BARREN	1,879	1.22
BELL	1,480	0.96
BOONE	3,823	2.49
BOURBON	736	0.48
BOYD	2,318	1.51
BOYLE	1,592	1.04
BRECKINRIDGE	561	0.37
BULLITT	1,964	1.28
BUTLER	296	0.19
CALDWELL	526	0.34
CALLOWAY	803	0.52
CAMPBELL	2,997	1.95
CARROLL	1,753	1.14
CARTER	1,094	0.71
CASEY	527	0.34
CHRISTIAN	3,672	2.39
CLARK	1,277	0.83
CLAY	1,080	0.7
CLINTON	250	0.16
CRITTENDEN	291	0.19
DAVISS	3,541	2.31
ESTILL	431	0.28
FAYETTE	11,595	7.56
FLOYD	1,621	1.06
FRANKLIN	2,212	1.44
FULTON	472	0.31

JAIL BY COUNTY	N	%
GRANT	1,034	0.67
GRAVES	1,513	0.99
GRAYSON	985	0.64
GREENUP	847	0.55
HARDIN	3,072	2
HARLAN	1,757	1.15
HART	556	0.36
HENDERSON	2,187	1.43
HICKMAN	158	0.1
HOPKINS	2,045	1.33
JACKSON	405	0.26
JEFFERSON	28,578	18.63
JESSAMINE	2,087	1.36
JOHNSON	3,461	2.26
KENTON	6,942	4.53
KNOX	1,358	0.89
LARUE	328	0.21
LAUREL	2,455	1.6
LEE	1,342	0.87
LESLIE	388	0.25
LETCHER	869	0.57
LEWIS	295	0.19
LINCOLN	924	0.6
LOGAN	866	0.56
MADISON	2,521	1.64
MARION	925	0.6
MARSHALL	755	0.49
MASON	1,319	0.86
MCCRACKEN	2,979	1.94

JAIL BY COUNTY	N	%
MCCREARY	674	0.44
MEADE	570	0.37
MONROE	276	0.18
MONTGOMERY	1,519	0.99
MUHLENBERG	908	0.59
NELSON	1,044	0.68
OHIO	793	0.52
OLDHAM	920	0.6
PERRY	1,596	1.04
PIKE	2,814	1.83
POWELL	726	0.47
PULASKI	2,246	1.46
ROCKCASTLE	846	0.55
ROWAN	1,387	0.9
RUSSELL	449	0.29
SCOTT	1,013	0.66
SHELBY	1,762	1.15
SIMPSON	685	0.45
TAYLOR	1,013	0.66
TODD	320	0.21
UNION	531	0.35
WARREN	4,804	3.13
WAYNE	474	0.31
WEBSTER	422	0.28
WHITLEY	1,690	1.1
WOODFORD	484	0.32

Appendix B: References

- Ares, C.E., Rankin, A. & Sturz, H. (1963). *The Manhattan Bail Project: An interim report on the use of pre-trial parole*. 38 *New York University Law Review*. 67-92.
- Beeley, A. (1927). *The Bail System in Chicago*. Chicago: University of Chicago Press. (Reprinted, 1966).
- Cadigan, T. P., & Lowenkamp, C. T. (2011). Implementing risk assessment in the federal pretrial services system. *Federal Probation*, 75 (2), 30-34.
- Foote, C. (1954). Compelling appearance in court: Administration of bail in Philadelphia. 102 *University of Pennsylvania Law Review* 1031-1079.
- Foote, C. (1958). A study of the administration of bail in New York City. 106 *University of Pennsylvania Law Review*.
- Freed, D.J. & Wald, P.M. (1964). *Bail in the United States*. Working paper for the National Conference on Bail and Criminal Justice.
- Frase, R. (2009) What explains persistent racial disproportionality in Minnesota's prison and jail populations? *Crime and Justice: A Review of Research*, 38:201-280.
- Leipold, A.D. (2005). How the pretrial process contributes to wrongful convictions. *The American Criminal Law Review*, 42(4):1123-1165.
- Schlesinger, T. (2005). Racial and ethnic disparity in pretrial criminal processing. *Justice Quarterly*, 22(2):170-192.
- Schlesinger, T. (2007). The cumulative effects of racial disparities in criminal processing. *Journal of the Institute of Justice & International Studies*, 7:261-278.
- Ulmer, J. T. 2012 Recent Developments and New Directions in Sentencing Research. *Justice Quarterly*, 29(1):1-40.
- Wice, P.B. (1974). *Freedom for Sale: A national study of pretrial release*. Lanham, MD: Lexington Books.
- Wooldredge, J. (2012). Distinguishing race effects on pre-trial release and sentencing decisions. *Justice Quarterly*, 29(1):41-75.