

SENTENCING PRACTICES UNDER THE ARKANSAS SENTENCING GUIDELINE STRUCTURE

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ABSTRACT: Research on differential sentencing practices has become one of the dominant thrusts of academic interest in criminal justice studies. This is mainly because in the last thirty years several reforms have been added to the various sentencing structures in the United States, one of which has been the adoption of guideline based sentencing systems. Although several studies have been conducted regarding the impact of these guidelines, these have come from a limited number of sources. For instance, the majority of this research has been conducted on data collected by the U.S. Sentencing Commission and data collected by the Pennsylvania Sentencing Commission. This study attempts to further the discussion on sentencing practices by examining data from a new source, the Arkansas Office of Courts. First, examinations of the judge's decision to imprison and jail the defendant were conducted using logistic regression. Second, for the individuals who were incarcerated, OLS and negative binomial regression analyses were conducted to explore potential disparities in the length of prison and jail sentences given to offenders respectively. The results of this analysis in Arkansas illustrate striking comparisons to studies that have been conducted on other guideline structures. The legally relevant variables were the greatest predictors of whether or not an offender was sentenced to prison. Extra-legal variables, on the other hand, had negligible effects. Implications for policy are discussed.

INTRODUCTION

Discretion in the various components of the criminal justice system in the United States has become a chief concern in the study of criminology. Nowhere is this more true than in the decisions reached by judges when sentencing criminal offenders. Although there has been a great deal of research on sentencing outcomes, since 1987, when the Federal Sentencing Guidelines were adopted by the federal court system, the focus on judicial sentencing practices has shifted to specifically studying sentencing disparities under sentencing guidelines. Disparities in sentencing are usually examined under the context of whether or not an offender received a prison sentence, and if so, the length of the sentence. More recently, several studies have focused on downward departures as causes of disparities in sentencing.

Following the federal government's lead, a number of states began adopting their own set of determinate sentencing policies. With this promulgation of guidelines at the state level, studies conducted at the federal level began to be replicated with state level data. Most state level examinations of sentencing guidelines have been conducted in Pennsylvania (see for instance, Kramer and Lubitz 1985; Pennsylvania Commission on Sentencing 1985, 1987, 1988) and Minnesota (D'Allessio & Stolzenburg 1995; Minnesota Sentencing Guidelines Commission 2001; Miethe & Moore 1989). Some studies have also been conducted in Washington State (Boerner 1993; Engen & Steen 2000). This is primarily due to these states taking the lead in establishing sentencing guidelines.

Even with these extensive studies, research on sentencing guidelines at the state level are scant. The primary reason for this is the lack of data available from state

sentencing sources. At the federal level, the United States Sentencing Commission has collected and compiled data on cases in federal district courts since the implementation of the guidelines in 1987. This data has been refined and been made available for study. State Sentencing Commissions, on the other hand, either have not collected data to this degree or have not made it available to researchers.

This research attempts to further the literature by examining sentencing practices in Arkansas. Specifically this project will examine criminal sentences in the various jurisdictions in Arkansas by analyzing similarities or differences in patterns of sentencing. Finally, this project proposes to examine the usage of sentencing guidelines in Arkansas with regard to judicial decisions about incarceration in both prisons and jails and differential prison and jail lengths. Variables to be included are those that are legally relevant predictors of sentence length, as well as extralegal variables such as age, race, and gender will be utilized as control variables.

PREVIOUS LITERATURE AND RESEARCH

Three decades ago, every state in the U.S. had an indeterminate sentencing structure. Frankel (1972) argued this sentencing strategy led to disparate sentences for offenders convicted of similar crimes because judges were often not adhering to the essential principles of sentencing (proportionality, equity, and social debt). Proportionality represents the requirement that the severity of sentence and the seriousness of the crime should be linked; equity ensures that similar crimes committed by similar offenders result in similar sentences; and social debt is the principle that the greater an offender's social debt (prior criminal history), the more severe the sentence

should be. At least partly as a result of these sentencing disparities, a handful of states and the federal system abolished indeterminate sentencing in the 1980s and adopted a structured, determinate, sentencing scheme utilizing sentencing guidelines.

Under an indeterminate system, a judge would mete out a minimum and a maximum sentence then the offender's release date was left to the parole board (Spohn 2002). Calls for reform arose because of the arbitrariness of this type of system, and the disparities and discriminations in sentencing occurring under them. Sentencing reforms were backed by both liberal and conservative politicians, and sentencing guidelines in particular were developed and implemented for two basic but different reasons. The Liberals were unsatisfied with indeterminate sentencing practices, and challenged that this type of sentencing coupled with judicial discretion led to disparity and discrimination. They also believed sentencing ranges were so broad that it was unfair for all offenders. The cries of dissatisfaction were affirmed by Judge Frankel (1972:7) when he declared that sentencing was in a "state of lawlessness, and...that essentially similar people in large numbers receive widely divergent sentences for essentially similar or identical crimes."

The second call for reform came from crime control advocates, who asserted sentences were too lenient (Tonry 1996). Conservatives claimed sentences were too soft and they were neither tied to the seriousness of offense nor the culpability of the offender. Succinctly, "liberals worried that judges will be arbitrary or prejudiced, conservatives that judges will be soft-hearted and lenient" (Tonry 1996:v). Both however, argued discrimination and disparity needed to be reduced and it could be accomplished by structuring the sentencing process.

The purpose of the guidelines was to reduce judicial discretion in sentencing, thereby providing uniformity and proportionality to sentencing while at the same time ameliorating unwarranted disparities that were present regarding legally irrelevant factors such as gender, race, ethnicity, and age. The guidelines, particularly at the Federal level, were not well received by those in the criminal justice system. Judges lost discretion in sentencing, defense attorneys worried about obtaining favorable sentences for their clientele, and prosecutors believed plea bargaining would be affected (Stith & Cabranes, 1998). Soon after the federal guidelines went into effect they encountered almost 300 lawsuits questioning their constitutionality (Nagel 1997). Nonetheless, in *Mistretta v. U.S.*, 488 U.S. 361 (1989), the Court upheld the sentencing reform act of 1984 and the constitutionality of the commission and the guidelines (Tonry 1993).

The Arkansas Sentencing Guidelines were adopted in 1993 through Acts 532 and 550, which also created the Arkansas Sentencing Commission. These guidelines were promulgated to provide equity in sentencing in Arkansas, and are applicable to crimes occurring after January 1, 1994 (Arkansas Sentencing Commission 2001). Under the Arkansas guidelines, an offender's sentence is determined on a two-dimensional grid, with criminal history score on the horizontal axis and offense seriousness on the vertical axis. The Arkansas Sentencing Commission states,

offense seriousness is determined by reference to a table adopted by the commission which lists all felony crimes in one of ten levels of seriousness... offender history is determined by reference to the statute, A.C.A 16-90-803 which allocates points for different levels of felonies, misdemeanors, certain juvenile adjudications, and custody status at the time that a crime was committed. (Arkansas Sentencing Commission 2001)

The point at which these two variables intersect provides the presumptive sentence for that offender.

The Federal Sentencing Guidelines, and guidelines adopted by states such as Washington, Pennsylvania, and Minnesota are prescriptive. The Arkansas Sentencing Guidelines are voluntary. That is, in Arkansas, judges' compliance is not obligatory. Evaluations of early voluntary guidelines show the outcomes anticipated in implementing this type of sentencing structure have not been realized, largely because of their voluntary nature. Under the Arkansas system, the guideline sentence is not the intended sentence in a case unless it represents a typical case based on the experience and knowledge of the judges, prosecutor, and defense attorney. If it is deemed a non-typical case, the judge may depart from the presumptive sentence (Arkansas Sentencing Commission 2001). Discussions with staff at Arkansas Office of Courts and the Arkansas Sentencing Commission assured the research team that while the guidelines in Arkansas were officially "voluntary," all of the different courts in Arkansas are in compliance with guideline requirements.

Empirical and Evidentiary Results of Guidelines

At least 20 states have adopted or are considering adopting sentencing guidelines since the Federal sentencing guidelines went into effect in 1987 (Spohn, 2002). A major criticism of determinate sentencing has been that guidelines have only displaced discretion to the prosecutor, and the result has been that many more people are receiving prison time and for much longer periods (Frase 1997:12). Indeed the purpose of guidelines was to reduce judicial discretion in sentencing, in the belief that this would provide uniformity and proportionality in sentencing as well as ameliorate unwarranted disparity regarding legally irrelevant factors. Has this amelioration of unwarranted disparities been realized?

Some research has tried to gauge guideline effectiveness. (see Minnesota Guidelines Sentencing Commission 2001; Pennsylvania Commission on Sentencing 1985, 1987, 1988; United States Sentencing Commission 1991; GAO 1991; D'Alessio and Stolzenburg 1995; Frase 1993; Engen and Steen 2000; Kramer and Lubitz 1985; Miethe and Moore 1985; and Marvel and Moody 1995). Results from this research on state sentencing guidelines have been positive in the sense there is evidence of decreased disparity; however, research on guideline sentencing is complex. As Tonry (1996) points out, guidelines are sure to reduce disparity and uniformity because nothing prior existed in their place.

Research in Minnesota, Pennsylvania, Washington, and Oregon, revealed adoption of guidelines in these states led to reduced disparity and increased uniformity and consistency (Miethe & Moore 1985; Stolzenburg & D'Allesio 1994; Pennsylvania Commission on Sentencing 1984; Washington State Sentencing Guidelines Commission 1992; Ashford & Mosbaek 1991). However, research also indicated severity in sentencing increased after guideline implementation in both Minnesota and Washington (Stolzenburg and D'Allesio 1994), and the guidelines have led to increased inmate populations and overcrowding in both prisons and jails (Spohn 2002). For Narcotics cases specifically, punishment has increased significantly. An analysis of sentencing in Washington state revealed the percentage of first time offenders receiving prison increased "from 24% in 1986 to 88% in 1989, leveling off at about 93% . . . from 1991 to 1995" (Engen and Steen 2000:1373). Lengths of sentences have also increased. Engen and Steen (2000) in the same study report the average length of sentence doubled

from 6 months to 13 months from 1986 to 1989, then soared to 23 months in 1990, and leveled off at roughly 29 months in 1992.

Extra Legal Factors and Sentencing

Most research to date finds that the two main determinants of decisions about sentencing are the legally relevant factors surrounding the seriousness of one's offense as well as one's prior criminal record. However, under certain circumstances, for certain offenders, and in combinations with certain other factors, extra-legal variables can and do have an influence.

Literature on age and sentencing has been scant, and generally shows minor effects (Steffensmeier et al. 1995). It is clear however that younger offenders are disproportionately represented in current prison populations. There has been much debate about the age-crime relationship recently. It is generally thought that the effect of age is curvilinear, or that those youngest and oldest receive the shortest sentences (Steffensmeier et al. 1998). However, Spohn and Holleran (2000) did not find this same relationship over three major urban jurisdictions, and Steffensmeier and Motivans (2000) report that older offenders are less likely than younger offenders to be incarcerated, and that if incarcerated, they receive sentences that are shorter. Their results however, did not hold true in narcotics cases, and were more prominent for males than females.

Gender and sentencing has always been a controversial topic. Females are generally sentenced to prison at a lower rate, and if sent to prison generally receive sentences that are shorter than their male counterparts. Consequently, they account for roughly one-fifteenth of state and federal prison populations (Harrison & Beck, 2001). Several theories have been proffered as to why females are given preferential treatment

by the criminal justice system. Some of which allude to a chivalry or paternalism hypothesis that females are not suited for imprisonment and that they are less culpable (Nagel & Johnson, 1994).

Another theory proposes that because females are different and issues of special concern may arise (examples include pregnancy and that females are the primary care givers), alternatives to incarceration are warranted. This is in line with Daly (1987) and her idea of familial paternalism, or that paternalism on the part of judiciary is not due to sex but child-rearing responsibilities. If a defendant has family obligations, then he or she will receive a more lenient sentence regardless of sex. Other theories advocate the differences are warranted because males commit crime at a higher rate than females, males have lengthier prior records, and engage in offenses that have higher severity scores, therefore requiring they receive more severe punishments (Steffensmeier et al. 1993).

With the inception of the sentencing guidelines in the late 1980's, however, it seems females are no longer given preferential treatment, especially in narcotics cases. Although some studies have found evidence of gender having only small or moderate effects on the decision to imprison and no effects on sentence length (Steffensmeier et al. 1993), it seems the differences may have been masked by aggregating the data in different jurisdictions. When data are disaggregated, other studies confirm that males face greater odds of incarceration than females (Spohn & Beichner 2000); and that even under sentencing guidelines, females receive more departures, and also receive sentences that are in the first quartile of the sentencing ranges (Nagel & Johnson 1994).

Findings from studies concerning race and sentencing have been inconsistent at best (Steffensmeier, Ulmer and Kramer 1998), and main effects findings have diminished with various states, and the federal system adopting some form of determinate sentencing structure or guidelines. Consequently, more recent studies have gone beyond main effects that minorities, males, young people, and the poor are disproportionately discriminated against and have focused instead on more complex additive and interactive models, comparing outcomes across these variables. These models have found that when including other racial-ethnic categories (not just black vs. white), “Hispanic defendants are most at risk to receive the harshest penalty for both the in/out and term length decisions and for both drug and non-drug cases” (Steffensmeier & Demuth 2001:170). Regarding age, gender, and race, main effects are small (blacks are sentenced more harshly than whites, young offenders more harshly than older, males more harshly than females), but interactively these variables produce the harshest sentences for young, black, males (Steffensmeier et al. 1998; Spohn & Holleran 2001). Steffensmeier and Demuth (2000:705) however, using federal court data, find that “ethnicity has a small to moderate effect on sentencing outcomes that favors white defendants and penalizes Hispanic defendants” and that “black defendants are in an intermediate position.”

Spohn & Holleran (2000) further explored the mediating effects of race and other factors by disaggregating the data into different jurisdictions and including employment status in interactive tests. Findings from this study reveal that no interaction effects combined to affect length of sentence, but regarding in/out decisions, tests for interaction “revealed significant effects that were masked in the additive models” (Spohn and

Holleran 2000:301). Young, unemployed, black and Hispanic males faced the greatest odds of incarceration.

As was illustrated in this review of the research, sentencing is a complex field of study in criminology. While many advances have been made in this field, there is still a need for further studies in this area. Research at the state level is lacking in general, and in Arkansas specifically. At present, there has been very little research on sentencing outcomes in Arkansas; this research is an attempt to fill this void in the literature. This project then, will examine criminal sentences in Arkansas from January 1, 2000 to January 1, 2002. These data will be analyzed to establish the influence of Arkansas' voluntary sentencing guidelines on criminal offenders. The next section will explore the methodological design incorporated by this research.

RESEARCH METHODS

This project proposes to examine the nature and scope of sentencing practices in the State of Arkansas. The goal of this research is to further the knowledge of state level sentencing by determining if there is any disparity in offender sentences in the different regions of Arkansas. The primary question of this research is: What is the effect of the implementation of voluntary sentencing guidelines in Arkansas upon the sentencing structure? To answer this question, data was collected from the Arkansas Administrative Office of the Courts (AOC) and the Arkansas Sentencing Commission (ASC). Data was collected on cases processed from 2000 through 2002. It was expected that sentencing decisions would have little variance over this time period as sentencing guidelines in Arkansas have been in effect since 1994. Further, data collected in this time frame

should be fairly reliable since the data collection process would have become streamlined during the time period leading up to 2000.

The unit of analysis will be the individual case. While this analysis will provide an overall picture of sentencing practices in the State of Arkansas, conclusions drawn from this study will only be generalizable to Arkansas. Methods incorporated however may be used in other states with similar sentencing guidelines. This would allow the examination of sentencing practices across states.

Dependent Variables

Based on the research conducted by Holleran and Spohn (2004), which suggests that receipt of jail and prison sentences involve different dynamics, there are four primary analytic models examined in this research, thus there are four dependent variables the study will focus on. The first is the decision to imprison the defendant. This is a dichotomous dependent variable, coded as 0 for no prison, and 1 for Prison. The second is the decision to jail the defendant. This is a dichotomous dependent variable, coded as 0 for no jail time, and 1 for jail time. The third dependent variable is the length of the prison term in months. This is a continuous, interval level variable. The fourth dependent variable is the length of jail term in months. This is a count variable with limited degrees of freedom. Table 1 provides the descriptive statistics for the dependent variables used in this analysis (whether or not the offender received a prison/jail sentence and, if so, the number of months received).

Table 1. Dependent Variable Descriptive Statistics

Dependent Variables	Coding	Percent	Mean
Prison Sentence	0 = No 1 = Yes	81.4 18.6	
N = 147,118			
Jail Sentence	0 = No 1 = Yes	96.4 3.6	
N = 147,118			
Number of Prison Months Sentenced			118.77
N = 26,103			
Number of Jail Months Sentenced			7.95
N = 5,042			

Table 1 illustrates that 147,118 defendants were sentenced from 2000 to 2002. Of the sentenced cases, 26,103 (18.4%) resulted in a prison sentence while 5,042 (3.6%) resulted in a jail sentence. From these statistics, the predominant way of dealing with defendants in Arkansas is with a probationary sentence. From 2000 to 2002, approximately 31,145 defendants were sentenced to either prison or jail. The average number of months received in prison was 101.49 months whereas the average number of months received in jail time was almost eight months.

Independent Variables

Since the sentencing literature has rich empirical tradition, this research controls for a number of variables known to influence sentencing outcomes. The legally relevant variables (legal characteristics) that will be added to this analysis include: the offender's criminal history, whether or not the offender was charged with a felony, the charge classification (offense seriousness), the number of counts leveled against the defendant, if the offense was a violent crime, if the offense was a drug crime, if there was a warrant issued for the defendant, and, if the offender was under some type of community

supervision at the time of the current offense (probation/parole). The extra legal factors (social characteristics) examined in this analysis are: case disposition (whether or not an offender plead guilty), region, (Delta versus Non-Delta), race, age, and sex.

Walker et al. (2002) found that there was a difference in crime patterns in the Mississippi Delta region in southeast Arkansas and the rest of the state. As such, this research controls for case processing in different regions of Arkansas. While some variables common to this study have been left out of this analysis, this is due to their absence in the data, not by choice of the research team. The analytic model suggested here has the majority of variables that traditionally account for a much of the variance in the outcome measures. All of these variables will be controlled for in the statistical analyses, which will be discussed below.

Descriptive statistics for the independent variables in this analysis are presented in Table 2.

Table 2. Independent Variable Descriptive Statistics

Variable	Coding	Percent	Mean
Criminal History			1.32
Charge Type	0 = Other Offenses	32.2	
	1 = Felony	67.8	
Charge Class			4.12
Type of Trial	0 = No Trial	88.5	
	1 = Trial	11.5	
Violent Offense	0 = Other Offenses	89.9	
	1 = Violent Offenses	10.1	
Drug Offense	0 = Other Offenses	78	
	1 = Drug Offenses	22	
Number of Counts			1.24
Warrant Status	0 = No Warrant	89.5	
	1 = Warrant Issued	10.5	
Under Court Supervision	0 = Not Under Supervision	98.7	
	1 = On Parole/Probation	1.3	
Race	0 = White	61.9	
	1 = Non-White	38.1	
Sex	0 = Male	77.3	
	1 = Female	22.7	
Age			34.65
Region	0 = Other Regions	91.4	
	1 = Mississippi Delta	8.6	

N = 147,118

From 2000 to 2002, the average criminal history score of offenders being processed through the courts is low, indicating most offenders did not have extensive criminal histories. Most defendants were being charged with roughly a “C” classification of crime. The majority of defendants (88.5%) chose not to go to trial. Violent offenses made up only 10.1% of the population of cases, while drug crimes represented only 22% of the overall population of cases; the bulk of offenses were comprised of theft crime. A defendant on average was charged with one crime, did not have a warrant issued for his or her arrest (89.5%), and was not under community supervision (probation/parole). The demographics of the sample were as follows: The majority of the sample was white (61.9%), male (77.3%), and had an average age of 34 years. The final variable shows

that the majority of case processing occurred outside of the Mississippi Delta region as defined by Walker et al. (2002).

Analytic Strategy

Data obtained from the different agencies in Arkansas will represent all of the criminal sentences received from 2000 to 2002. As such, the majority of the data will be at the interval/ratio level of measurement (i.e. age, number of months received, number of former crimes committed, etc.). Some of the data will be dichotomous (i.e. race, sex, etc.) but will still be used at the interval/ratio level. The level of measurement of a variable dictates the type of analysis to be conducted.

There were three primary statistical techniques used to examine sentencing outcomes for this study. First, logistic regression is used to test the effects of the independent variables on the decision to imprison or jail a defendant. Second, our proposed model is tested against the length of the sentence in prison, or how many months of imprisonment the offender was sentenced to. In line with current research on sentencing, an OLS regression technique is used to test the effects the analytic model with the number of months a defendant received. The offenders who did not receive a prison sentence are omitted from this analysis. The third analytic technique employed here is a negative binomial regression on the number of months a defendant received in jail. A negative binomial regression is needed because the number of months received in jail is a count variable with a limited range. The next section presents the findings from the statistical analyses performed in this research.

ANALYSIS FINDINGS

This section is broken up into two parts. First a presentation of the analysis on the judge’s decision to imprison or jail and offender is provided. Second, this section concludes with an exploration of the number of months a defendant was sentenced to if given a prison or jail sentence.

The Judicial Decision to Imprison or Jail

The first part of this analysis focused on the judge’s decision to impose a prison or jail sentence. The findings from the logit regression on whether or not an offender was detained in a state prison are shown in Table 3:

Table 3. Logit Regression for Decision to Imprison

Variable	b	SE	Wald	Odds
Criminal History	1.895*	0.033	3305.26	6.665
Charge Type (1=Felony)	0.166*	0.019	72.88	1.181
Charge Class	0.064*	0.006	127.84	0.938
Type of Trial (1=Trial)	-0.036	0.023	2.45	0.965
Violent Offense (1=Violent)	0.301*	0.024	162.82	1.351
Drug Offense (1=Drug)	0.174*	0.019	81.16	1.19
Number of Counts	0.087*	0.006	242.46	1.091
Warrant Status (1=Warrant Issued)	-0.128*	0.029	19.75	0.88
Court Supervision (1=On Parole/Probation)	2.561*	0.063	1672.09	12.947
Race (1=Non-White)	0.171*	0.015	122.32	1.186
Sex (1=Female)	-0.71*	0.021	1176.12	0.492
Age	-0.006*	0.001	58.38	0.994
Region (1=Delta Region)	-0.914*	0.032	812.259	0.401
Constant	-1.284*	0.043	852.016	0.287
-2 Log Likelihood			117129.772	
χ ²			12240.258*	
Nagelkerke R ²				0.144

*p<.05

Colinearity diagnostics (VIF and Condition index test) indicated no problems with multicollinearity in this model. For analyses that involve a large universe of cases (such as the one used here), the overall predictive power of the model (R²) is seldom examined.

Rather, the focus is shifted to an examination of the variables in the model. In a logit regression, the key column to examine is the odds that an offender was sentenced to prison or jail. In this model, according to Table 3, all of the variables were statistically significant predictors of sentencing outcomes, with the exception of whether or not the defendant chose to plead.

Legally relevant factors had the greatest predictive power of whether a defendant was sentenced to prison or jail. An offender who was already under the supervision of the court (either on parole or probation) was almost 13 times as likely to receive a prison or jail sentence. An offender who had a more extensive criminal history score was almost seven times as likely to be sentenced to prison time. The rest of the legally relevant factors in judicial decision making (charge type, charge classification, disposition, if the offense was a violent or drug offense, the number of counts, and warrant status) all had minimal effects on the judge's decision; all of the odds ratios clustered around the value of one.

For extralegal factors such as race, sex, age, and state region (Mississippi Delta vs. the rest of the state), the results were also minimal. While males, non-whites, younger individuals, and those not from the Delta Region were more likely to receive a prison sentence, the effects were small enough to indicate no disparity between the different types of individuals.

The findings from the logit regression on whether or not an offender was sentenced to jail time are shown in Table 4:

Table 4. Logit Regression for Decision to Jail a Defendant

Variable	b	SE	Wald	Odds
Criminal History	0.013	0.032	0.134	1.013
Charge Type (1=Felony)	-0.345*	0.036	89.862	0.708
Charge Class	0.089*	0.012	54.572	1.093
Type of Trial (1=Trial)	-0.123*	0.047	6.682	0.885
Violent Offense (1=Violent)	0.140*	0.051	7.509	1.15
Drug Offense (1=Drug)	-0.047	0.043	1.199	0.954
Number of Counts	-0.071*	0.018	15.215	0.931
Warrant Status (1=Warrant Issued)	-0.181*	0.055	10.718	0.835
Court Supervision (1=On Parole/Probation)	0.604*	0.092	43.134	1.83
Race (1=Non-White)	-0.116*	0.031	13.738	0.891
Sex (1=Female)	-0.231*	0.037	38.019	0.794
Age	-0.004*	0.001	8.835	0.996
Region (1=Delta Region)	-0.872*	0.074	137.791	0.418
Constant	-2.973*	0.09	1102.27	0.051
-2 Log Likelihood	41026.099			
χ^2	683.423*			
Nagelkerke R ²	0.019			

*p<.05

As in the decision to imprison a defendant, the majority of variables in this analysis were statistically significant; only criminal history and whether or not an offender committed a drug crime were not statistically significant. While the majority of variables were statistically significant, all of the effects were minute. This was the case for both legally relevant factors and extra-legal factors. An offender who was already under court ordered supervision had the greatest odds (twice as likely) of being sentenced to jail time. Compared to the model predicting if an offender received a prison sentence, the analytic model predicting an offender's receipt of jail time was small (Nagelkerke R²=0.019).

This section has explored the judge's decision to detain an offender in a correctional institution. This is the first stage of the decision making process for a judge: if the offender is sentenced to prison or jail time. The second part of a judge's decision-

making revolves around the length of the sentence for a defendant. The next analysis explores this relationship.

The Number of Months Sentenced

The findings from the OLS regression analysis on the number of months to which a defendant was sentenced to prison is presented in Table 5.

Table 5. OLS Regression on Number of Months Sentenced to Prison

Variable	b	SE	β
Criminal History	3.162*	1.001	0.017
Charge Type (1=Felony)	-33.152*	2.574	-0.095
Charge Class	38.966*	0.68	-0.488
Type of Trial (1=Trial)	16.066*	2.502	0.036
Violent Offense (1=Violent)	50.472*	2.646	0.119
Drug Offense (1=Drug)	-18.485*	2.183	-0.056
Number of Counts	14.796*	0.495	0.165
Warrant Status (1=Warrant Issued)	0.275	3.203	0
Court Supervision (1=On Parole/Probation)	-6.181	3.688	-0.009
Race (1=Non-White)	2.379	1.685	0.008
Sex (1=Female)	-16.782*	2.384	-0.039
Age	0.647*	0.086	0.042
Region (1=Delta Region)	-8.782*	3.437	-0.014
R ²	0.234*		
F	613.304		

*P < 0.05

The analytic model is again statistically significant, but with more predictive power than the previous models. Again, because the R² is somewhat irrelevant when dealing with large data sets, the focus of this section is on the coefficients within the regression analysis. Several variables in this model were not statistically significant (whether a warrant was issued, whether the defendant was on probation or parole, and race). The rest of this section will deal with the statistically significant predictors of the number of months sentenced to prison.

In terms of legally relevant variables, the effects were much different than in the previous analyses. Criminal history, which had a substantial influence on a judge's decision to imprison an offender, had one of the smallest effects on the number of months imposed. A person with a larger criminal history score received only three more months in prison. Thus, offenders who were viewed as more culpable were more likely to receive slightly larger sentences. Defendants who had a higher level charge and/or were convicted of a violent offense were more likely to receive longer sentences in prison. A defendant who had a higher charge classification was more likely to receive 38 months more in prison. In relation to offenses seriousness, an offender who committed a violent offense received 50 more months in prison. Also in terms of culpability, offenders with more counts received almost 15 more months in prison.

Two of the legally relevant variables require special consideration. First, offenders who committed some form of drug offense were likely to receive roughly 18 months less. In the analyses of the federal courts, offenders who are convicted of drug offenses often receive harsher penalties for drug offenses. This is because the federal guidelines are structured in such a way as to deal more harshly with drug offenders (mandatory minimums). In Arkansas, either the more serious cases are being transferred to federal court and/or the guideline structure is not as restrictive as it is at the federal level. Second, the charge type (felony vs. other types of offenses) shows counterintuitive results. It was hypothesized that offenders who committed felonies would receive more months in prison. The analysis indicates that offenders who were convicted of non-felonious crimes received 33 more months in prison. There is no ready explanation as to this outcome. It may be due to the fact that there were so many non-felonious cases

(33%) in the data set or a simple miscoding error by the Arkansas Sentencing Commission.

Finally, offenders who chose to go to trial instead of pleading guilty received almost 16 more months in prison. This phenomena has been seen across other courts systems in the U.S. Some researchers (Spohn 2000) refer to this as a so-called “trial tax.” Because there is generally an overwhelming amount of evidence against a defendant who has been charged with a crime, it is hypothesized that judges give harsher sentences to those they perceive as not taking responsibility for their crimes and who take up court resources.

Extra legal variables were all statistically significant in this analysis. Minor disparities occurred across all of these extra legal factors. Offenders who were non-white were more likely to receive almost two and a half months more in prison/jail. As with most studies, males received much harsher sentence lengths than females. In Arkansas, over the three-year period in question, males received almost 17 more months in prison than females. This is similar to findings from federal level data, as well as states that have been analyzed up to this point. While age was statistically significant, it had very minor, positive effects. People in the Mississippi Delta Region served eight months less in prison than offenders elsewhere in the state.

The findings from the negative binomial regression analysis on the number of months to which a defendant was sentenced to jail is presented in Table 6.

Table 6. Negative Binomial Regression on Number of Months Sentenced to Jail

Variable	b	SE	βr**
Criminal History	11.91*	0.026	3.19
Charge Type (1=Felony)	-10.40*	0.016	-5.1
Charge Class	1.09*	0.005	-1.59
Type of Trial (1=Trial)	-0.94	0.023	-0.29
Violent Offense (1=Violent)	-9.04*	0.025	-2.78
Drug Offense (1=Drug)	-4.02*	0.02	-1.57
Number of Counts	1.26	0.009	0.87
Warrant Status (1=Warrant Issued)	2.214	0.026	0.59
Court Supervision (1=On Parole/Probation)	11.85*	0.112	1.96
Race (1=Non-White)	-10.16*	0.015	-4.84
Sex (1=Female)	1.77	0.018	0.46
Age	0.36*	0.001	3.53
Region (1=Delta Region)	16.82*	0.005	3.29
R ²	0.021*		

*P < 0.05

**Roncek's semi-standardized coefficient

As with the decision to imprison and/or jail an offender, there appears to be substantial differences in the way judges decide on the length of either jail or prison sentences. This is shown in the differences between the two R²'s. As well, different variables were significant in this model on the number of months in jail as opposed to the previous model; the type of trial, the number of counts, whether or not a warrant was issued and sex were all statistically insignificant in the negative binomial model.

Again, defendant culpability variables played a significant part in this analysis. People with more extensive criminal histories were more likely to receive 12 more months in jail. Offenders who committed more serious offenses were more likely to receive an extra month in jail. Offenders who committed violent offenses or drug offenses were more likely to garner nine and four months less in jail; these offenders were more likely to go to prison. An offender who was already under court supervision received almost 12 months in jail. While offenders who committed misdemeanors

received more time in jail than their felonious counterparts; again this variable may be miscoded as was seen in the above analysis on the number of months in prison imposed.

Extra-legal variables had an effect in the negative binomial model as well. White defendants received 10 more months in jail than non-white defendants. It is difficult to make anything of this finding as race was non-significant in the previous OLS model. Age had minor effects in the model. It is difficult to interpret the region variable as the value falls outside of the bounds of 12 months. As such, this variable is interpreted based on the sign. People in the Mississippi Delta Region received more time in jails than offenders from elsewhere in the state.

This section has explored the findings of this analysis. Many of the findings contained herein have ramifications for the study of judicial discretion. The next section will explore the conclusions drawn from the findings presented here.

DISCUSSION

Research on disparities in sentencing practices has become commonplace in criminological literature; however, the majority of studies have focused on the federal court system because readily available, secondary data exist for analysis. While there have been several studies completed on sentencing strategies in a few states (Pennsylvania, Minnesota, and Washington), state level analyses are largely lacking from this area of study. This research attempted to fill the void in the literature by examining a state whose sentencing structure has not yet been studied: Arkansas.

Utilizing the predominant research methodology from current studies of sentencing decisions, this analysis of the sentencing guideline structure in Arkansas took

place in two phases. First, an examination of the judge's decision to either imprison or jail the defendant was conducted by utilizing two logistic regressions. Second, for the individuals who were sentenced to prison or jail, OLS regression and negative binomial regression analyses were conducted to explore potential disparities in the length of prison sentences given to these offenders respectively. The results of this analysis in Arkansas illustrate striking comparisons to studies that have been conducted in other locales.

The key finding of this analysis is in regards to Holleran and Spohn's (2004) recent research. Their primary argument is that judicial decisions in relation to prison and jail sentences are two distinct phenomena; as such, judges use different decision making criteria for cases involving the imposition of prison time versus jail time. The current research in Arkansas confirms this argument. Utilizing the same analytic strategies and host of explanatory variables, the analyses presented here show that variables that effected prison sentences (the in/out decision as well as the number of months imposed) did not necessarily effect jail sentences in the same way. First, the overall model R^2 's between prison and jail sentences were vastly different. While the regression models explaining prison sentences were small (logit $R^2=0.144$ and OLS $R^2=0.234$), the models explaining jail sentences were even more minute (logit $R^2=0.019$ and OLS $R^2=0.021$). This suggests that the same variables did not hold the same level of influence for judges when deciding between a prison and a jail sentence.

Second, the individual variables used in the analytic models behaved differently for jail and prison sentences. Variables that were significant in the prison models may have not been significant in the jail models and vice versa. For instance, criminal history was a crucial decision for judges when deciding to send an offender to prison; however,

criminal history was an insignificant predictor of the receipt of a jail sentence. Aside from differences in the statistical significance of variables in the prison and jail models, the magnitude of variables changed across prison and jail sentences as well. While this is not easily interpretable from the number of months sentenced to jail (jail time has an upper limit of 12 months), the logit regressions on the decision to imprison or jail easily illustrate this point. While the variables in the logit regression on jails were mostly all significant, the variables' significances were all minimal (all of the odds clustered around one). In the logit regression on the decision to sentence a defendant to prison, again most of the variables were significant, but specifically both criminal history and if the offender was on probation/parole influenced judges heavily (the odds equaled 6.67 and 12.95 respectively). This analysis thus shows support for Holleran and Spohn's (2004) contentions that prison and jail sentences should be treated as different phenomena.

There were specific conclusions drawn from our data that have relevance for sentencing research. In relation to the judge's decision to imprison a defendant, as with other studies, the greatest predictor of whether or not an offender was sentenced to prison was if he or she was already under some form of court ordered supervision. An offender who was on probation or parole was almost 13 times more likely to go to prison. The next biggest predictor of whether or not an offender received a prison sentence was the criminal history score. Defendants with higher criminal history scores were almost seven times more likely to receive a prison sentence. The offense seriousness score, discussed below, is generally found to be the greatest predictor of whether or not an offender received a prison sentence. This variable was not available in this data set, and thus, no conclusions can be drawn about it. Our proxy of offense seriousness, charge type and

charge classification, showed negligible results for the decision to imprison, but showed those charged with more serious offenses received roughly 38 months more in prison length. Effects on jail lengths were negligible. On the other hand, those charged with felonies received 33 months less in prison and ten months less in jail. This could be an indication this may be a poor proxy of offense seriousness, or there are some problems with the coding of this variables by the Arkansas Sentencing Commission. For this study, little, if any disparity was found in the judge's decision to imprison or jail a defendant. The length of the prison or jail sentence received, however, suggests some disparities.

There was also some discrepancy between variables across the two models. First, as is discussed above, charge class had little influence on the imprisonment decision, but showed substantial effects for sentence length. Secondly, trial type and conviction for a violent offense had minor effects on the decision to imprison, but resulted in 16 and 50 months more incarceration. For jail terms, trial type was not significant, and violent offenses had an opposite effect, resulting in roughly nine months less in jail. Similarly, the number of counts a defendant had was negligible on the decision to imprison or jail, but the more counts a defendant had, the longer their prison sentence was (almost 15 months for prison and one and a half months for jail). On the other hand, the variable which had the greatest influence on the decision to imprison or jail (if the defendant was on probation or parole at the time of the offense) showed a disparity of eleven months longer in jail sentence but had a negative effect on prison length, resulting in about six months less.

Regarding extra-legal variables, both race and gender had negligible effects on the incarceration decision (non-whites were more likely to go to prison but less likely to go to jail; females were less likely to be sentenced to either prison or jail), but non-whites received on average two more months in prison, and 10 months less in jail. Females received on average 16 months less in prison, but almost two months more in jail. Finally although the variable for Delta Region had negative negligible effects on the incarceration decision, those from the Delta Region were likely to receive eight months less in prison, but 16 months more in jail. Again it is unexplainable why that variable shows the opposite effect from prison, or why it is out of range for jail sentences.

Lastly, there were some findings that were unexpected. The first is that those convicted of a drug offense received a year and a half less in prison length, and four months less in jail time. This is most likely because in Arkansas sentences for narcotics violations are not as harsh as those seen in the federal level data. Secondly, those charged with felonies received 33 months less in prison sentence and ten months less in jail time.

Recommendations for Policy Change and Future Research

The database used to conduct this analysis needs to be both expanded and handled more accurately. The Arkansas Office of Courts (AOC) compiles information of the cases themselves. The Arkansas Sentencing Commission (ASC) enters the data that pertains to guideline usage (primarily the decision to depart from the guidelines). These two datasets are in need of care.

Two critical variables were missing from Arkansas sentencing data: The offense seriousness score and the ethnicity of the defendant. The offense seriousness score,

which is integral in a determination of the offender's sentence, had been found in the past to be a key predictor of sentencing outcomes. Since this information has to be acknowledged at some point during court proceedings, it is an important piece of information that is lacking from Arkansas' sentencing data. This resulted in the current research using a proxy (charge type and charge classification) for the offense seriousness judges may have used in determining a defendant's sentence. This measure as a proxy does miss some of the information and is not as accurate as the offense seriousness score. This variable should be included in data collected by the Arkansas Administrative Office of Courts.

Ethnicity is another key variable missing in this data. Some research (Steffensmeier & Demuth, 2000; 2001) has indicated that ethnicity (whether the defendant is Hispanic or non-Hispanic) can influence outcomes across defendants. This may not be important during the time of this research, but will no doubt become a critical part of sentencing issues in Arkansas because of the growing number of Hispanic residents. This influx of Hispanics is due to the state's largely agrarian economy, which attracts individuals from out of state. In the case of Arkansas, a large portion of this out of state population is comprised of Hispanics. Thus, not having a variable in the data for ethnicity masks any potential disparate treatment of this group of individuals.

Adding data elements to data collected in Arkansas on sentencing would be helpful in exploring the effects of the sentencing guideline structure, but it may be even more helpful to ensure current variables are collected accurately and consistently. Three variables are present in the Arkansas data in which information was largely missing or potentially miscoded: Departures, type of offense (felony/misdemeanor), and the type of

counsel. In terms of departure, Kramer and Ulmer (1996) assert that the decision to depart from a proscribed sentence is the key place in the sentence when disparity can occur between groups of individuals. In the Arkansas data, this variable is missing for over 90% of all cases from 2000-2002. This should be a key data element for the Arkansas Sentencing Commission when attempting to determine the efficacy of sentencing guidelines in Arkansas. The Commission should be more diligent when entering this information into their database.

Another variable that may be in need of closer examination is the variable examining the difference between felony and misdemeanor cases. This variable showed counterintuitive results on the number of months sentenced to prison and/or jail. While the results could be correct, it is unlikely that an offender who committed a misdemeanor is more likely to receive 33 more months in prison than a person who committed a felony. In all likelihood this variable is incorrectly coded. If reverse coded the results would be more intuitively correct, but the data was used in this analysis as it was compiled and received by the research team.

As well, there is a field for the type of counsel that represented the defendant. It is often thought that defendants with privately retained counsel will fare better in court. This hypothesis does not have a strong empirical history, however. As such, when data is available for the type of counsel, it is disappointing when the data is not being collected by the responsible agency. If these data were collected, it would help researchers to ascertain whether or not public or private counsel is more proficient at securing verdicts for defendants. Arkansas is not the only State that makes this omission. Data at the federal level and in other state jurisdictions are notorious for not having information in

this field as well. As such, this line of inquiry will have to be studied further at a later date.

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