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Judicial Decision Making Under Michigan Sentencing Guidelines

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JUDICIAL DECISION MAKING UNDER MICHIGAN SENTENCING GUIDELINES

by

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Many states and the federal judiciary have adopted sentencing guidelines as a mechanism of sentencing reform. This study used the bounded rationality model to investigate judicial decision-making under Michigan Sentencing Guidelines, and the effectiveness of the guidelines in reducing or eliminating sentencing disparities -- situations in which legally similar defendants receive dissimilar sentences.

A statistical and comparative analysis of a database sample of felony cases (n = 20,834), sentenced in four different-sized Michigan counties from 1992 through 1997, was examined with logistic and linear regression models. Logistic regression results indicate a significant association ($p < .05$) between incarceration and some legal and extralegal variables. Legal variables, such as prior felony convictions, sentencing guideline scores, offense type/severity, the defendant's relationship with the criminal justice system, and extralegal variables, such as the defendant's race and gender, year and county of sentencing, are important predictors of sentencing outcomes. Linear regression results indicate a significant association ($p < .05$) between the minimum term of imprisonment and prior felony convictions, sentencing guidelines and offense type/ severity, but not with extralegal variables. These results suggest that judicial decision-

making remains a human/"bounded rationality" process.

The findings of this study have important policy implications for Michigan. First, defendants who have prior felony convictions or were under the supervision of the criminal justice system when they committed the most recent offense are more likely to receive incarcerative sentences and longer minimum terms of imprisonment. Second, sentencing disparities necessitate the supervision of some offenders in secure/ more expensive correctional facilities when they can be safely supervised in less restrictive/more cost efficient community-based programs. Third, in addition to economic costs, there are social costs associated with the incarceration of nonviolent offenders--including the stigma of incarceration--that remain long after the sentence is discharged.

Substantial economic and social benefits may be realized with policy initiatives aimed at curbing the re-offending rate, enforcing compliance with sentencing guidelines, increasing the availability and use of community-based alternative sanctions, and instituting periodic review/evaluation of sentencing guidelines.

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Finally, this dissertation is dedicated to all persons who continue to fight injustice wherever it exists. May God bless you.

Abel E. Ekpunobi

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GLOSSARY[1]

Felony:
A criminal offense punishable by death, or by incarceration in a state or federal confinement facility for a period of which the lower limit is prescribed by statute in a given jurisdiction, typically one year or more.

Jail Sentence:
The penalty of commitment to the jurisdiction of a confinement facility system for adults, of which the custodial authority is limited to persons sentenced to a year or less of confinement.

Jury Trial:
A statutorily defined number of persons selected according to law and sworn to determine certain matters of fact in a criminal action and to render a verdict of guilty or not guilty.

Misdemeanor:
An offense usually punishable by incarceration in a local confinement facility, for a period of which the upper limit is prescribed by statute in a given jurisdiction, typically limited to a year or less.

Plea Bargaining:
The exchange of prosecutorial and/or judicial concessions, commonly a lesser charge, the dismissal of other pending charges, a recommendation by the prosecutor for a reduced sentence, or a combination thereof, in return for a plea of guilty.

Pre-sentence Report:
The document resulting from an investigation undertaken by a probation agency or other designated authority, at the request of a criminal court, into the past behavior, family circumstances, and personality of an adult who has been convicted of a crime, in order to assist the court in determining the most appropriate sentence.

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[1]SEARCH Group, Inc. (1976). Dictionary of Criminal Justice Data Terminology. First Edition. Washington, D.C.: U.S. Department of Justice, National Criminal Justice Information and Statistics Service.

Prison:
A confinement facility having custodial authority over adults sentenced to confinement for more than a year.

Prison Sentence:
The penalty of commitment to the jurisdiction of a confinement facility system for adults, of which the custodial authority extends to persons sentenced to more than a year of confinement.

Probation:
The conditional freedom granted by a judicial officer to an alleged offender, or adjudicated adult or juvenile, as long as the person meets certain conditions of behavior.

Probation Sentence:
A court requirement that a person fulfill certain conditions of behavior and accept the supervision of a probation agency, usually in lieu of a sentence to confinement but sometimes including a jail sentence.

Probation Violation:
An act or failure to act by a probationer which does not conform to the conditions of his probation.

Release on Bail:
The release by a judicial officer of an accused person who has been taken into custody, upon his promise to pay a certain sum of money or property if he fails to appear in court as required, which promise may or may not be secured by the deposit of an actual sum of money or property.

Retained Counsel:
An attorney, not employed or compensated by a government agency or sub-unit, nor assigned by the court, who is privately hired to represent a person(s) in a criminal proceeding.

Sentence:
The penalty imposed by a court upon a convicted person or the court decision to suspend imposition or execution of the penalty.

CHAPTER I

INTRODUCTION

The criminal justice system in the United States is comprised of three components: law enforcement (the police and the prosecuting attorneys), the courts and corrections. The law enforcement agencies arrest and charge persons or firms suspected of violating the law. A court of law is "a judicial tribunal duly constituted for the hearing and determination of cases" (Webster's, 1994). The correctional process makes decisions about what to do with the convicted offender. The process consists of sentencing and probation, institutional confinement and parole (Ross, Jabe, Elo, Aud, Michaels & Parks, 1989, p. 1).

Bonczar and Beck (1997) estimate that during their lifetime 5.1 percent of U.S. residents will serve time in prison if recent incarceration rates remain unchanged. They reported that men are eight times more likely than women to be incarcerated in their lifetime. Among men, blacks are twice as likely as Hispanics and six times more likely than whites to be sent to prison during their life (p. 1).

It appears that unwarranted disparities exist in sentencing practices. Unwarranted sentencing disparities refer to situations in which legally similar cases receive dissimilar sentences (Ulmer, 1997, p. 7). Sentencing occurs when criminal court judges impose penalties upon convicted persons or decide to suspend imposition or execution of penalties (Search Group, 1976).

A sentence is "a judicial decision or decree, especially one decreeing the punishment to be inflicted on a convicted criminal" (Webster's, 1994). A sentence is passed by a sentencing judge. In Michigan, judicial circuit courts have jurisdiction over felony cases. A felony is a serious crime for which the possible sentence is more than one year in a state correctional facility or prison (Ross et al., 1989, p. 206).

There are 83 judicial circuit courts, or sentencing jurisdictions, in Michigan, one for every county (Wayne County had two circuit courts, Wayne County Circuit Court and the Recorder's Court for the City of Detroit, until October 1, 1997 when the two courts merged). Prior to 1984, Michigan criminal court judges had broad discretionary sentencing authority, often resulting in dramatically different sentences for criminal defendants with similar criminal histories committing nearly identical crimes (DePerno, 1994, p. 385).

In 1984, the Michigan Supreme Court, through Administrative Order, promulgated the Michigan Sentencing Guidelines, subsequently amended in 1988, to create a uniform system of sentencing for all crimes, criminals and circumstances (DePerno, p. 386). The guidelines were designed with the specific goals of reducing disparity and increasing uniformity in sentencing, with the expectation that unwarranted sentence variations would be diminished. The sentencing range in the guidelines pertains only to the minimum sentence since the maximum sentence is set by law. With this reform measure the Court acknowledged and sought to remove the existence of unwarranted disparities in sentencing practices. Sentencing Guidelines is a methodology designed to reduce sentencing disparity while allowing some flexibility in sentencing decisions

(Zalman, Ostrom, Guilliams & Peaslee, 1979, p. 23).

Michigan has an indeterminate sentencing structure. Under this sentencing system, convicted felons can receive a minimum sentence and a maximum sentence, with the exception of cases governed by mandated or "flat" sentences. In indeterminate sentencing, the maximum penalty is determined by law and the minimum penalty is set by the sentencing judge, not to exceed two-thirds of the maximum (Ross et al., 1989, p. 78).

Statement of the Problem

Although much has been written about unwarranted disparities in sentencing and the impact of race on imprisonment decisions (see Chiricos & Crawford, 1995), earlier studies often used data that were gathered fifteen to twenty years before analysis or publication. Ulmer (1997) stated that studies published in the 1980's and 1990's often used data collected during the early or mid-1970's, when sentencing reforms, in the form of sentencing guidelines, had not yet been implemented (p. 12). The earlier data sets are of limited value for describing sentencing practices in jurisdictions that have implemented sentencing guidelines. The author noted that "the comparatively small body of literature on sentencing guidelines. . .(is) largely the story of research on Minnesota's and the federal system's guidelines" (p. 15) .

Another limitation of methodology of earlier studies was noted by Gibson (1978). He observed that research designs which focused on court systems, rather than individual judges, may mask discriminatory acts of some judges. For example, the

larger court systems usually have several trial judges, thus making it possible for sentencing practices to differ significantly among individual judges who make up the same court system or judicial circuit.

Despite many publications about judicial discretion, research on the effects of sentencing guidelines on judicial decision-making and variations in sentencing practices within and between sentencing jurisdictions is limited. Furthermore, despite increased public interest in the criminal justice system in general, and courts and corrections in particular, there are no publications to date about sentencing practices under the Michigan Sentencing Guidelines.

Purpose and Significance of the Study

The purpose and significance of this study is to: (a) fill the existing gap in information by adding to the body of knowledge about sentencing decision-making in jurisdictions which have implemented sentencing guidelines, particularly new information about the sentencing practices of male and female circuit court judges; (b) evaluate the effectiveness of the Michigan Supreme Court sentencing guidelines in reducing unwarranted sentencing disparities and ensuring uniformity in the sentencing of felony defendants; (c) provide prediction models showing the probability of imprisonment for criminal defendants which can be used to estimate the cost implications of varying sentencing decisions; and (d) provide prediction models showing the probabilities of jail and prison confinement (based on historical local sentencing practices) for some offenders who can be targeted for community-based/ alternative to incarceration

programs.

In exploring these issues, this study examined the impact of legally relevant sentencing criteria (for example, offense type and severity, prior felony convictions, and sentencing guidelines) and extralegal factors, or legally irrelevant, sentencing criteria (for example, defendant's race and gender) on the sentencing of criminal defendants in Michigan. The study investigated sentencing as a decision-making process. Sentencing decision-making refers to a judge's choices among possible courses of action or inaction, particularly (a) whether or not defendants are sentenced to jail or to prison, and (b) for how long.

The study was based on the review of criminal case information. The examination of criminal case information was considered important to the study because it allowed for the identification of characteristics and factors that contribute to observable differences in sentencing outcomes. Furthermore, the examination of criminal case information was used to test the "bounded rationality" theory of sentencing decision-making under Michigan Sentencing Guidelines.

The bounded rationality theory, as applied to sentencing decision-making, illustrates that the rational man theory -- searching for optimal alternatives to address problems of criminal behavior -- is unattainable, because sentencing decision-making are "bound" by other social and extralegal factors. As a result of mediating factors, sentencing decision-making is limited to searching for satisfactory alternatives, not optimal alternatives.

Statement of the Research Question

Theory

The theoretical perspective for this study describe the sentencing decision-making environment, which is influenced by institutional/legal or "rational" factors and extralegal or "bounded rationality" factors. The theory of the rational man, as applied to sentencing decision-making, suggests that only rational or legal criteria influence sentencing outcomes. Examples of legal criteria are: offense type and severity, prior felony convictions, and sentencing guidelines.

However, the bounded rationality theory, as applied to sentencing decision-making, recognizes that court communities are influenced by other social or extralegal factors that "bind" or mitigate against the rational man theory. Examples of extralegal factors are the demographic characteristics of sentencing judges and criminal defendants, and the sentencing and case processing cultures of respective court communities.

The underlying logic for designing and conducting this study is that: (a) if legally relevant variables affect sentencing outcomes, then the relationship between the variables may be attributable to known factors like offense type and severity; (b) but if legally irrelevant or extralegal variables affect sentencing outcomes, then the relationship between the variables may be attributable to the social and political context of the court decision-making environment or court community. Thus the degree of sentencing disparity and the bases for such disparity (for example, race, gender, age) may be

influenced by the social factors in particular court communities (Ulmer, 1997, p. 29).

The Research Question

To what extent are sentencing decisions influenced by institutional or legal factors and by extralegal legal factors such as the demographic characteristics of sentencing judges, felony defendants and respective sentencing counties?

Hypotheses

The following hypotheses will be used to test the explanatory power of the Bounded Rationality Theory as applied to sentencing decision-making:

Hypothesis I

There are differences in sentencing decisions between criminal defendants who were convicted of comparable felonies and have similar criminal histories, but are of different races.

Hypothesis II

There are differences in sentencing decisions made by different judicial circuit court systems for criminal defendants who were convicted of comparable felonies and have similar criminal histories.

Hypothesis III

There are differences in sentencing decisions made by judges of different races for criminal defendants who were convicted of comparable felonies and have similar criminal histories.

Hypothesis IV

There are differences in sentencing decisions made by male and female judges for criminal defendants who were convicted of comparable felonies and have similar criminal histories.

Hypothesis V

There are differences in sentencing decisions made for male and female criminal defendants who were convicted of comparable felonies and have similar criminal histories.

Assumptions of the Study

Court and Offender Records

This study assumes that the data contained in the Michigan Department of Corrections' Basic Information Report is generally complete and accurate, and that errors, if any, are not significant.

Scoring of the Sentencing Guidelines

Probation Agents of the Michigan Department of Corrections are responsible for scoring the sentencing guidelines during the preparation of the Pre-sentence Investigation Report. This study assumes that probation agents generally score the sentencing guidelines in the same way all the time. Therefore, it is assumed that the scoring of sentencing guidelines is not biased in any significant way by the persons who do the scoring.

Overview of the Chapters

This study is organized into six chapters. Chapter I includes the statement of the problem, purpose and significance, research question and hypotheses, and assumptions underlying the research. Chapter II provides a review of the literature. Chapter III indicates the theoretical perspective and conceptual framework, and how the framework relates to the problem under study. Chapter IV describes the methods and procedures. This chapter includes and explanation of the research design, sample population, data collection methods, coding procedures, and statistical analysis to be used. Chapter V presents the data analysis and research findings. Chapter VI concludes the study with a summary and conclusions, implications for public policy and recommendations for future research.

CHAPTER II

LITERATURE REVIEW

Introduction

While there are many issues concerning the sentencing of criminal defendants, the key issue studied here is judicial decision-making within the context of sentencing guidelines. This review of the literature address judicial discretion in sentencing and the issue of unwarranted sentencing disparities. It also addresses the use of sentencing guidelines to reform sentencing practices, limit judicial discretion and reduce or eliminate unwarranted sentencing disparities.

Judicial Discretion

An early American discussion on judicial discretion supported unrestricted discretion for trial court judges. John Winthrop, Massachusetts Bay Colony's principal planter and dominant citizen from 1630 to 1649, believed that judges received divine inspiration that enabled them to be just, wise and merciful (Samaha, 1989).

However, unrestricted discretion for trial court judges has been identified as a major contributor to the incidence of unwarranted disparities in the sentencing of criminal defendants. Unwarranted disparities in sentencing refer to situations in which legally similar defendants receive dissimilar sentences.

Unwarranted Disparities in Sentencing

There appears to be ample evidence that race is a determinant factor in sentencing decisions. With data from a Florida sample of 229 cases adjudicated between June 1, 1972 and May 31, 1973, Unnever, Frazier and Henretta (1980) found that white defendants had an eighteen percent greater chance of receiving less severe sentences (probation versus incarceration). The researchers found "a direct race effect" after controlling for important legal variables and other extralegal variables (p. 204). LaBeff (1981) analyzed data from 1,368 Oklahoma prison cases and concluded that ethnicity seemed a moderate, albeit not statistically significant, factor in sentencing for drug and sex offenses. Petersilia's (1985) examination of ethnic discrimination in the criminal justice systems of California, Michigan and Texas found that in each of the three states, judges typically imposed heavier sentences on Hispanic and black defendants than on white defendants convicted of comparable felonies and who had similar criminal records. Similarly, Humphrey and Fogarty's (1987) study of sentencing practices found that the odds of imprisonment were greater for minorities than for similar defendants from the majority population in southern jurisdictions.

Welch, Combs and Gruhl (1988) examined the cases of 3,418 male defendants convicted of a felony between 1968 and 1979 in a large northwestern city and noted that even though the prior record of a prison term is the best predictor of sentence severity, discrimination was more likely against black defendants in the decision to incarcerate (pp. 128-30). Further, their study found that white judges are less likely to

send whites than blacks to prison and judges with prosecutorial experience may be more likely to sentence severely (pp. 130-34). Spohn (1990) studied the sentencing decisions of black and white judges in Detroit and concluded that even though the seriousness of the crime and the offender's prior criminal record were the major determinants of sentencing decisions, the race of the sentencing judge had a slight but statistically significant effect on incarceration decisions. Further, males were more likely than females to be sentenced to prison, black judges were less likely than white judges to sentence offenders to prison, and both black and white judges discriminate against black offenders with respect to decision to incarcerate (pp. 1197-1216).

Albonetti (1991) suggested that unwarranted disparities exist in the sentencing of criminal defendants because judicial decision-making relied on stereotypes and attitudes. As if to confirm Albonetti's assertions, a regression analysis of 61,294 noncapital cases in Pennsylvania revealed that black defendants are somewhat more likely than white defendants to be incarcerated (Kramer & Steffensmeir, 1993). Stevenson and Friedman (1994) argued that judicial tolerance of racial bias in the criminal justice system is one of deliberate indifference since the U.S. Supreme Court ruled in a 1987 case, McCleskey vs.Kemp, that race-based sentencing disparities for similarly defendants are "an inevitable part of our criminal justice system" (p. 509). Spohn (1995) also concluded that sentencing practices were biased.

Chiricos and Crawford (1995) reviewed 38 studies published between 1975 and 1995 that reported evidence of a direct effect of race on sentencing outcomes in noncapital cases and found a direct impact of race on imprisonment decisions (pp. 281-

309). However, their findings only apply to in/out decisions (prison versus non prison sentences) and not to the length of sentences. With regard to the length of sentences, an investigation by the Tennessean newspaper found that blacks received prison sentences of up to three months longer than whites for similar federal crimes (Anonymous, 1995). An explanation for the existence of unwarranted sentencing disparities was offered by Ulmer and Kramer (1996). They reported that white judges are sometimes reluctant to send white offenders to prisons, which are largely populated by black inmates, where they are more vulnerable to abuse by black inmates who are perceived as being more violent than white inmates.

However, there are conflicting reports about disparities in the sentencing of racial and ethnic minorities. A reevaluation of published research on racial bias in criminal sentencing and of data on execution rates by race from 1930 to 1967 and on death sentencing rates from 1967 to 1978 indicated that in the southern states, black homicide offenders were more likely than whites to receive death sentences or be executed (Kleck, 1981). This was not found to be the case in the northern states. Another study analyzed the sentencing data of 1,512 criminal defendants in Milwaukee, Wisconsin, and found that race had a clear effect on both the decision to imprison and the length of prison terms in the period 1967 to 1968, but not in later periods 1971 to 1972 and 1976 to 1977 (Pruitt & Wilson, 1983). But, an analysis of sentencing information on 16,798 felons in Georgia found no evidence that blacks were punished more harshly than whites when offense severity was taken into account (Myers & Talarico, 1986), and a study of California's criminal sentencing practices found no link between

ethnicity and length of imprisonment (Klein, Petersilia & Turner, 1990).

Sentencing Guidelines

The unexplained variations in sentencing disparities have prompted court systems around the country to develop sentencing guidelines in an attempt to bring about equity in sentencing. The Michigan Sentencing Guidelines was developed about the same time as Pennsylvania's and Minnesota's guidelines (1978 - 1984), which pioneered state sentencing guidelines. In 1978, the Michigan State Court Administrative Office received a grant to establish the Michigan Felony Sentencing Project (MFSP) to produce information that would assist the Legislature, the Supreme Court, and the Executive Branch to develop a sentencing policy for Michigan. In 1979, MFSP produced a report which suggested that "within general sentencing norms, the lack of guidance or structure [in the sentencing process] leads inadvertently to variations that are not rationally explained on the basis of offense and offender characteristics" (Zalman et al., 1979, p.2). The report laid the foundation for the Michigan Sentencing Guidelines of 1984. Unlike Pennsylvania's and Minnesota's more restrictive guidelines that are based on prescriptive standards and the informed judgements of its writers (Ulmer, 1997, p. 17), Michigan's guidelines are less restrictive and are based on the statistical average of past sentencing practices. Unfortunately, the Michigan system that allows for more judicial discretion provides a greater opportunity to have unexplained variances in sentencing outcomes. Zalman et al. (1979) noted that sentencing guidelines is a methodology which could significantly reduce sentencing disparity while

allowing flexibility in sentencing decisions. The authors described sentencing guidelines as an "approach by which sentencing decisions of all judges in a jurisdiction are subjected to empirical analysis and that analysis is used to project the 'average' sentences of the judges for a variety of offense and offender fact combinations" (p. 25). It was suggested that criminal sentencing guidelines would eliminate disparities in the sentences between "blacks and whites" (Anonymous, 1991). Therefore sentencing guidelines were expected to reduce reliance on subjective decision-making criteria and consequently reduce unwarranted disparities in sentencing practices.

Commentaries opposing the use of guidelines to limit judicial discretion abound. Becker (1991) argued that sentencing guidelines hamper the exercise of flexibility and discretion for judges who imposed sentences upon convicted offenders. In opposing the implementation of sentencing guidelines, many judges argued that sentencing guidelines did not reduce discretion in the criminal process; rather, it shifted too much power over sentencing decisions to prosecutors (Berkman, 1996). A law professor noted that Michigan sentencing guidelines shifted discretion from trial judges to appellate judges and failed to eliminate sentencing disparity (DePerno, 1994, p. 419). But he did not demonstrate that sentencing guidelines were not useful in limiting sentencing disparity. Not everybody is convinced about the alleged shift in discretionary authority from judges to prosecuting attorneys. Stolzenberg and D'Alessio (1994) noted that prosecutors' charging and plea bargaining practices remained fairly stable across pre-guideline and post-guideline periods in Minnesota (p. 308).

It is also possible that the implementation of sentencing guidelines may have

increased rather than decreased unwarranted disparities. McDonald and Carlson (1993) argued that guidelines designed to eliminate sentencing disparity may have contributed to "substantially aggregate differences in sentences imposed on white, black, and Hispanic offenders" (p. 1). The authors found that a higher proportion of black defendants were charged with trafficking crack cocaine, and that trafficking in crack cocaine was considered the single most important difference that contributed to the overall aggregate longer sentences imposed on blacks, relative to whites and Hispanics in guideline cases, since this offense was singled out by Congress for especially stern punishment (p. 9). Further, the U.S. Department of Justice (1996) noted that although Federal sentences were free of bias under sentencing guidelines, Congressionally imposed mandatory minimums for crack cocaine sentences disproportionately affected African Americans (p. 4).

Deficiencies in Past Literature

Inconclusive and conflicting findings documented in the literature have been attributed to methodological flaws. Among the several explanations offered for the contradictory findings are that earlier studies used old data, and lacked proper controls and statistical procedures. Lotz and Hewitt (1977) looked at the link between race, class, age, sex, dependency, marital status, education and work history (legally irrelevant variables) and sentencing outcomes and found that after controlling for the legally relevant factors such as seriousness of the offense and prior criminal convictions, "even these difficult-to-interpret racial differences vanish" (p. 48). Ulmer (1997) reported

that studies published in the 1980's and 1990's often used data collected during the early or mid-1970's (p. 12). Dated information is not useful for understanding sentencing under sentencing guideline systems, many of which came into existence in the 1980s.

Gibson (1978) noted another commonly observed deficiency in previous research. He observed that research designs which focused on courts rather than judges masked discriminatory acts of particular judges since the larger court systems have many judges whose sentencing practices might differ significantly even though they belonged to the same court system or judicial circuit. Further review of the literature revealed progress toward greater statistical rigor, but a more limited improvement in the theoretical framework. Albonetti (1991) noted that since the 1960s, when labeling and conflict theories ". . . provided the perspectives from which the legal/extralegal debate emerged, little theoretical formulation has followed . . . ." Consequently, he integrated two theoretical perspectives on discretionary decision-making and used the perspectives ". . . as the bases for generating empirical specifications and hypotheses for main and interaction effects in an analysis of the variables affecting sentencing severity." (p. 248)

Ulmer's (1997) review of the statistical design of studies on race disparity revealed examples of inadequate control for factors such as offense type and severity, prior criminal history, and mode of conviction. These factors were found to be better predictors of sentencing outcomes than the defendant's race and, therefore, may have explained the disparities in sentencing outcomes observed in many earlier studies where

adequate controls were not applied. For example, Myers and Talarico's 1986 and 1987 studies used limited and imprecise measures of offense type and severity since offenses differ significantly in terms of the respective penalties prescribed for each offense type by law. For example, the penalty for unarmed robbery may range from little or no jail time, and/or probation, to imprisonment. Armed robbery, on the other hand, carries a mandatory sentence of up to life imprisonment. Although both offenses belong to the robbery category, it will be difficult at best to understand sentencing decisions related to this broad category of offenses, unless the offenses are analyzed separately rather than collectively. Myers and Talarico grouped offenses into five broad categories: violent crimes, robbery, burglary, property theft and damage, and drug offenses. Listing cases by specific offense types, and indicating the statutory maximum penalties for each offense type is more precise and desirable.

Summary

A review of the literature suggests that unrestricted discretion in the sentencing of criminal defendants contributes to the incidence of unwarranted disparities in sentencing. Many studies revealed that demographic factors, such as the race of the criminal defendant, appear to influence sentencing outcomes. Inconclusive and conflicting findings in many earlier studies were attributed to methodological flaws including dated information and data, inadequate statistical controls and a limited theoretical framework. Furthermore, few studies were conducted in jurisdictions which have implemented sentencing guidelines, and none examined judicial decision-making under Michigan Sentencing Guidelines.

CHAPTER III

THEORETICAL PERSPECTIVE

Introduction

In many ways, the evolution of the field of public administration reflects the influence of the rational choice model that has been the principal concern of economists. Both public administration and economics focus on the limitations of the human decision-making mechanisms. The history of public administration is germane to the theoretical base of this study and provides a framework to further the understanding of decision-making in organizations.

Browne (1993) divided decision-making into three categories: (1) Classical, rational; (2) Neoclassical, organizational and bounded rationality; and (3) Political (pp. 13-33). The classical model has its roots in the field of economics. It assumes that decision makers have complete information about the situation at hand, know all available alternatives and the consequences of choosing each one, will choose the alternative that maximizes effort, have only one goal and the process is free of conflict and the decision is made by one person alone.

The neoclassical model is considered descriptive of what actually happens in organizational decision-making and differs from the assumptions in the rational approach in that it acknowledges that: not all alternatives are known; not all possible

choices or actions are known; and the consequences of choices or actions are not known. The characteristics of decision situations in this model are: goals are constantly changing; the consideration of alternatives are sequential rather than simultaneous; the first satisfactory alternative found in the search is accepted; where an existing policy meets the goals, there is little search for alternatives; and where failure occurs, the search is intensified.

The political model focuses on the compromise and bargaining strategies in decision-making. It is concerned with the process of finding alternatives acceptable to all interested parties. Essentially the behavior of individuals in organizational settings is a major point of reference.

This study focused on the first two models — the Rational Man and the Bounded Rationality models — because of the absence of proxy variables in the database. The proxy variables are needed in order to capture some of the political aspects of sentencing decision-making.

The Rational Man Model

The administrative rationality approach to public administration emphasizes the economic and organizational aspects of decision-making and usually excludes political/ sociological considerations and realities. Woodrow Wilson (1887), the intellectual father of the politics versus administration dichotomy, promoted the dispassionate implementation of public policy by advocating the separation of administrative functions from politics. Frank Goodnow (1900) further suggested that administrative functions

were different from policy questions and should be kept separate. The classical/ rational school found expression in scientific management theories, commencing with the work of Frederick Taylor (1912). Taylor maintained that it was scientifically possible to find the one best way of organizing and managing work. William Willoughby (1918) questioned why government officers should not be held to the same standards of efficiency and honesty as demanded in the business world. He saw the budget as an instrument for securing efficiency and economy. Max Weber explored how organizations could benefit from bureaucratic principles (1922), and Leonard White (1926) stressed the managerial concerns of public administration and minimized its legalistic and formal aspects by defining public administration as the management of men and materials in the accomplishment of the purposes of the state. Luther Gulick's theory of organization focused on the division and coordination of work and the office of the chief executive, technical efficiency and organizational patterns (1937).

The Rational Man Model of Judicial Decision-Making

If the rational man model were to hold true in the sentencing of criminal defendants, then the legal or institutional variables would determine sentencing outcomes. The rational man model suggests that the decision-making process is objective and mechanical. In other words, sentencing should be determined by a set of fact patterns which are based on prior criminal histories and the situational context of trial offenses. Since the literature appears to support the existence of unwarranted or unexplained disparities in the sentencing of criminal offenders, it does not appear that the rational

man theory in and of itself is a tenable explanation of judicial decision-making. Extra-legal factors (or rationally irrelevant factors) seem to mediate "rational" reasoning.

The Bounded Rationality Model

Limitations to the rational approach were articulated in the works of the neo-classical, bounded rationality and political theorists. Mary Parker Follett (1922) questioned the detached observation position found in the scientific management model by reviewing the personal relationships in the work place as a human process. Chester Barnard (1938) recognized the effect of the informal organization -- customs, mores, folklore, institutions, social norms and ideals -- on the formal organization, especially the interactions between persons in an organization. Similarly Robert Merton (1940) argued that substituting personalized relationships with the impersonal relationships required under the classical model created conflict.

Since the classical or rational model was closely associated with the business sector, Paul Appleby (1945) attempted to show that government was different from business. The differences were found in the scope of government responsibilities, its public accountability and political character. Herbert Simon (1946) began to lay the groundwork for his seminal book on administrative behavior. He asserted that the rational model was unrealistic because human beings were limited by their skills, manual dexterity, speed of mental processes, habits, and so on -- limits on the ability to perform and limits on the ability to make correct decisions. Dwight Waldo (1948) challenged the scientific management model and invited thinkers from many fields to

contribute to the reconstruction of public administration theory. To him, ". . . if the demands of present world civilization upon public administration are met, administrative thought must establish a working relationship with every major province in the realm of human learning" (p.169). Charles Lindblom (1959) rejected the rational comprehensive approach and described the process of decision-making as a science of muddling through. In making decisions, policy makers generally limit their analysis to incremental or marginal differences in existing policies.

The bounded rationality decision-making theory, though, was primarily developed in the seminal work of Herbert Simon , James March, and other members of the Carnegie School that studied administrative decision-making in organizations (Browne, 1993, p. 22). March and Simon (1958) recognized the limits to rational decision-making (that rational decisions can only be made with complete knowledge of all possible alternatives) and offered an alternative model of decision-making which defined the boundaries of rationality. They viewed the process of making decisions in organizations as searching for satisfactory alternatives to address the problem or issue at hand since, "most human decision-making, whether individual or organizational, is concerned with the discovery and selection of satisfactory alternatives; only in exceptional cases is it concerned with the discovery and selection of optimal alternatives" (pp. 140-141). In developing this theory further, Albonetti (1991) suggested that in the absence of complete knowledge, decision makers reduce uncertainty by relying on past experience, stereotypes, and prejudices (p. 249). In the context of sentencing, uncertainty is the result of limited information about the offender's likelihood of future criminal

behavior.

The Bounded Rationality Model of Judicial Decision-Making

The court communities theory or model of sentencing decision-making was developed by Eisenstein, Flemming and Nardulli (1988). The authors compared a rational model of decision-making with a traditional/legal metaphor -- an environment where courts, judges, and attorneys provide the setting and the personnel who simply apply the law to specific cases or circumstances that arise -- with criminal courts as political environments where different actors interact to make legal decisions (pp. 5-11). The court communities theory offers an alternative to the legal metaphor. The theory maintains that the function of criminal courts -- to process defendants -- is political in nature and that the principal decision makers such as judges and prosecutors exercise substantial discretion and freely choose between courses of action. It also asserts that the recruitment of judges, prosecutors, and public defenders involves a political process and that participants in criminal courts interact with one another to produce political decisions -- because courts affect who gets what, when, and how. Eisenstein and Jacob (1977) described the criminal court environment in the following way:

> The courtroom workgroups, through their ongoing interactions among major participants, develop norms and expectations about sentences that constrain all the participants in any individual case. No defendant is sentenced out of context; the sentence he receives becomes part of the courtroom's norm. Workgroup members contiguously compared defendants and cases with others that had been processed in the courtroom. Thus, the social organization in which courtroom participants operated limited the scope for arbitrary action as much

as the law itself. (p. 286)

Conceptual Framework

As noted above, the underlying logic and conceptual framework for this study is that both legally relevant factors and extralegal factors affect sentencing outcomes. Even though legal factors are considered the major determinants of sentencing outcomes, the extralegal factors or mediating variables appear to have an indirect effect on sentencing outcomes. Unwarranted sentencing disparities are likely to be observed in many jurisdictions since social factors in respective court communities appear to influence sentencing outcomes.

Schematic Representation of the Bounded Rationality Model

This study uses the bounded rationality model of judicial decision-making to examine the effects of legal and extralegal factors on the sentencing of criminal defendants under Michigan Sentencing Guidelines. The schematic representation of the bounded rationality model of judicial decision-making under sentencing guidelines is presented in Figure 1.

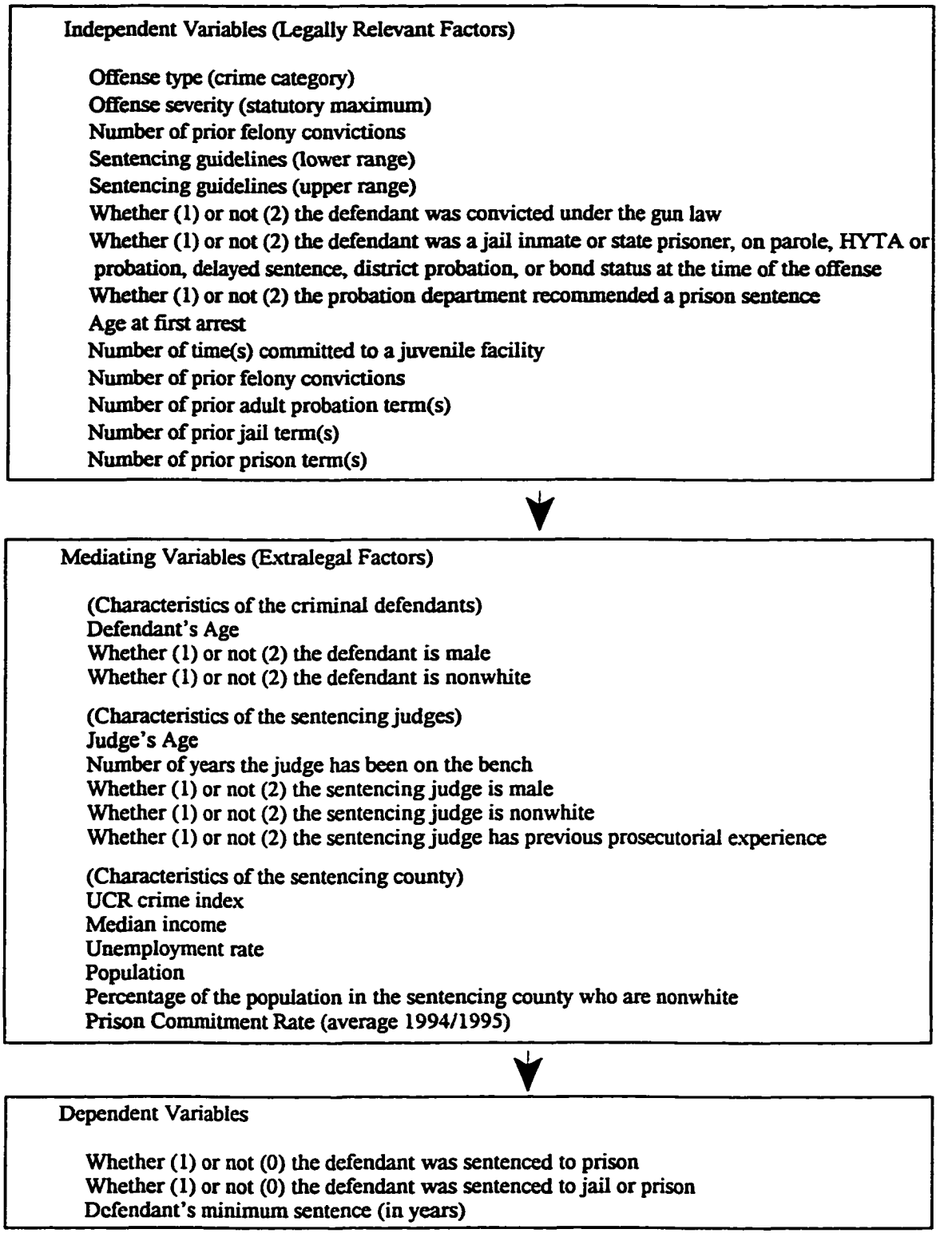

Figure 1. A Research Model to Test the Bounded Rationality Theory of Judicial Decision-Making Under Michigan Sentencing Guidelines.

CHAPTER IV

METHODS

Introduction

A discussion of the methods and procedures used in this study is presented in this chapter. The research model, sample, data collection and management procedures, and procedures for statistical analysis are delineated. The study is consistent with a quantitative paradigm because it "is an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, to determine whether the predictive generalizations of the theory hold true" (Creswell, 1994, p. 2). This study tests the "Bounded Rationality" theory of judicial decision-making within the context of Michigan Sentencing Guidelines.

The independent variables are the legal and institutional factors that guide sentencing (for example, sentencing guidelines, prior felony convictions, and whether the offender was under the supervision of the criminal justice system at the time the offense was committed); and extralegal variables including the demographic characteristics of the sentencing jurisdiction, the sentencing judge, and the criminal defendant. Dependent variables are prison versus non prison sentences; incarcerative (jail and prison) versus non incarcerative sentences; and the minimum term of prison sentences.

The primary data base consists of a sample of court disposition records

maintained by the Michigan Department of Corrections. Dispositions, or case specific information contained in the records, include legal and institutional factors, the demographic characteristics of the criminal defendants and the identifiers of the sentencing judges and sentencing jurisdictions. Additional information about the demographic characteristics of sentencing judges was collected from directories of judges (The Martindale-Hubbell Law Directory, 1991-1996, and The American Bench: Judges of the Nation, 1991-1996), and the offices of the respective circuit court administrators. Jurisdictional information was gathered from the U.S. Census Bureau records and the Michigan Department of State Police. The new data/ information was added to the respective cases in the primary data base through the judge's and sentencing county's identifiers. Data management and statistical procedures were done using SPSS.

Research Methods

The study is a test of the Bounded Rationality Model/theory of judicial decision-making under sentencing guidelines. The Bounded Rationality model builds on the weaknesses of the Rational Man model. If the Rational Man model were to hold true, unexplained differences would not exist in the sentencing of criminal defendants. Offenders who committed similar crimes and have similar criminal backgrounds would receive similar sentences under this model. On the other hand, the Bounded Rationality model suggests that extralegal factors also influence the decision-making process during the sentencing of criminal defendants. Therefore, extralegal factors, such as the gender and race of the judges and the criminal defendants, and differences

in sentencing philosophies between jurisdictions, appear to influence sentencing outcomes.

Sampling Procedure and Data Inclusion Criteria

Quantitative data was collected from the Michigan Department of Corrections Basic Information Report (BIR) database. The BIR data contains information concerning the offender and the offence. The data covers cases adjudicated in Michigan Circuit Courts from January 1, 1992 through December 31, 1997.

Steps in the Multi-Stage Sampling/Selection (Also see Table 1)

1. For each of the six years, a random sample of 15,000 cases was selected from approximately 52,000 dispositions in the State. The random sampling was done using the SPSS random sampling procedure.

2. Four counties representing a Western County, a Rich Suburban County, a Mid-State County and a Metro County were selected from the sample of dispositions in the State.

3. Only the cases that had Sentencing Guideline scores were selected, (about 73 percent of the dispositions in the select counties had sentencing guideline scores).

4. In the Rich Suburb and Metro Counties, cases from 30 judges (15 in each county) who had the most dispositions in their respective jurisdictions were selected. In the remaining counties, the cases from ten judges (five in each county) who handled approximately 90 percent of the dispositions in their respective jurisdictions were

Table 1

Sampling Procedure and Data Inclusion Criteria

Year	All Cases	Random Sample	# Cases in Select Counties	# Cases with SGL Scores	County	# Cases by Select Judges(40)
1992	52,590	15,000	7,284	5,350	All Four Western Rich Sub. Mid State Metro	3,269 321 792 234 1,922
1993	51,223	15,000	7,387	5,426	All Four Western Rich Sub. Mid State Metro	3,781 300 1,277 223 1,981
1994	49,591	15,000	6,976	5,091	All Four Western Rich Sub. Mid State Metro	3,605 334 1,111 235 1,925
1995	52,061	15,000	6,975	5,171	All Four Western Rich Sub. Mid State Metro	3,774 329 1,013 280 2,152
1996	52,767	15,000	6,810	4,944	All Four Western Rich Sub. Mid State Metro	3,765 387 1,250 286 1,842
1997	54,172	15,000	6,374	4,481	All Four Western Rich Sub. Mid State Metro	3,381 284 1,169 283 1,645
Sub-total						21,575
Gun Law						(741)
Total # Cases						20,834

selected.

5. Approximately 3,600 cases for each of the six years were available for analysis after the multistage sampling/selection.

6. The respective sentencing years were coded into a new variable and all selected cases were combined into one comprehensive database.

7. Gun Law cases were removed from the database since convictions under the Gun Law carry a mandatory prison sentence and do not allow judicial discretion in sentencing

To understand how criminal courts operate, it is imperative that the courts should resemble one another enough to make a general approach possible. Courts share a legal culture, much of which finds expression in the U.S. Constitution. For example, guilt is primarily determined through negotiated agreements and dispositions result from collective activity between the key players in the judicial process. Further, courts share common stages in felony case processing -- initial arraignment, determination of probable cause or examination, determination of guilt or innocence, and imposition of the sentence. Courts should also differ enough to make the study interesting and worth the trouble. The social, political and economic differences in sentencing jurisdictions, the informal structure of relationships among the people who work in courts, the value of informal norms that guide their behavior, and a shared understanding about how they treat one another and dispose of criminal cases all appear to influence how criminal defendants fare in differing sentencing jurisdictions.

In an earlier study Eisenstein et al. (1988) analyzed the demographic

characteristics of three of the four counties in this study. Western County was classified as free standing, moderate income, moderate unemployment rate, Republican and conservative; Rich Suburb as wealthy, low unemployment, very Republican, and "ring" or bordering a major city; and Mid-State County as free standing, low income, high unemployment rate, weakly Democratic and moderate (pp 12-21). Besides these counties, Metro County represents a large metropolitan area with a rich diversity of social, political, economic and cultural characteristics.

In 1992, 1993, 1994, 1995, and 1996, Western, Rich, Mid-State and Metro Counties accounted for 47 percent, 47 percent, 46 percent, 46 percent, and 43 percent respectively of the felony court dispositions in the entire state. Therefore, the select counties had a substantial number of the felony court sentences in the state from 1992 through 1996; were significantly different in their social, political, economic and geographical features to allow for the analysis of the effects of these differences; and had sufficient pool/diversity in the bench and/or offender populations to enrich the analysis. Conversely, the smaller counties, with one or two judges, normally have fewer cases and decision makers to permit meaningful quantitative analysis, and are usually more socially and culturally homogenous than medium to large size counties.

Data Collection and Data Collection Instruments

The primary data was electronically extracted from the Department of Corrections' Basic Information Report (BIR) data base in August 1998. The data was converted from its original main frame format to make it readable by SPSS software.

Appendix A describes the data elements contained in the BIR data base (also known as the Court Disposition Record).

A table was developed to collect additional information because the BIR data does not have demographic information about the sentencing judges. The table heading consists of Year of Sentence; Judges' Initials; Judges' Name; First Year on the Bench; Prosecutorial Experience; Years of Birth; Race; and Gender. The data was collected from two directories that list basic biographical information about judges and lawyers in the United States. Additional information, mostly about the race and gender of the judges, was collected from the offices of court administrators in the respective judicial circuits. Appendix B shows the data collection instrument.

A third data set contained information about the respective sentencing counties. The information was gathered from the Michigan Department of Corrections' annual statistical reports, the U.S. Bureau of Census reports and the Michigan Department of State Police Uniform Crime Report (see Appendices C and D). All three data sets were combined into one data base using SPSS. Appendix E describes the data management procedures.

Operational Definitions of Variables

Since some terms may be unfamiliar to the reader, the following operational definitions of variables in the study are delineated for review (see Table 2). The legal variables are the independent variables and the extralegal legal variables are the intervening or mediating variables.

Table 2

Variables in the Study

Variable	Name	Variable Label	Codes/Values
1992	Year of Sentencing		1, 0
1993			1, 0
1994			1, 0
1995			1, 0
1996			1, 0
1997*	(1997 = reference category)		
Western	County of Sentencing		1, 0
Rich			1, 0
Mid-State			1, 0
Metro*	(Metro = reference category)		
Astcrime	Crime Category	Assaultive	1, 0
Drgcrime		Drug offense	1, 0
Nonasslt*	(Nonasslt = reference category)	Non-Assaultive	
X_{11}	Maximum Term of Imprisonment	Statutory Max	Years
X_{12}	Prior Felony Convictions	Prior Fel Convs	Number
X_{13}	Lower Range of Sentencing Guidelines	SGL Min	Months
X_{14}	Upper Range of Sentencing Guidelines	SGL Max	Months
X_{15}	Conviction under the Gun Law	Gun Law Viol	1 = Yes 2 = No
X_{16}	Def's CJ Status at Time of Offense	CJ Status	1 = Yes 2 = No
X_{17}	PSI Recommendation	Sentrec	1 = Prison 2 = No Prison
X_{21}	Age of the Sentencing Judge	Judge's Age	Years
X_{22}	Years the Judge Has Been on the Bench	Years on Bench	Years
X_{23}	Gender of the Sentencing Judge	Judge's Gender	1 = Male 2 = Female
X_{24}	Race of the Sentencing Judge	Judge's Race	1 = Nonwhite 2 = White
X_{25}	Prosecutorial Experience	Ex-prosecutor	1 = Yes 2 = No

Table 2–Continued

Variable	Name	Variable Label	Codes/values
X_{31}	Age of the Defendant	Def's Age	Years
X_{32}	Gender of the Defendant	Def's Gender	1 = Male 2 = Female
X_{33}	Race of the Defendant	Def's Race	1 = Non-white 2 = White
X_{34}	Age at First Arrest	Age 1st Arrest	Years
X_{35}	Commitments to a Juvenile Facility	Juv Comts	Number
X_{36}	Prior Adult Probation Terms	No. Prior Probs	Number
X_{37}	Prior Jail Terms	No. Prior Jail	Number
X_{38}	Prior Prison Terms	No. Prior Prison	Number
X_{41}	Uniform Crime Report Index of Crimes	UCR Index	Number per 100k
X_{42}	County Median Income	Med Income	Amount
X_{43}	County Unemployment Rate	Unemp Rate	Percentage
X_{44}	County Population	County Pop	Number
X_{45}	% of County's Nonwhite Population	Percent Nonwhite	Percentage
X_{46}	County Prison Commitment Rate	Prison Rate	Percentage
Y_{51}	Prison Sentence	Prison Sent	1 = Prison 0 = No Prison
Y_{52}	Jail or Prison Sentence	Jail or Prison	1 = Jail/Prison 0 = No Jail/Prison
Y_{53}	Minimum Prison Sentence	Min Prison Sent	Years

* Coded as variables in the Linear Regression Models, but not in the Logistic Regression Models.

Legal Variables

Legal or institutional factors include a set of variables that represent a criminal defendant's history and describe the nature and severity of the most recent offense. The following variables are legal or institutional:

Crime refers to one of three offense categories covering all offenses. This study uses the same crime categories found in the BIR data base — Assaultive Offense, Drug Offense, and Non Assaultive Offense.

Offense Type/Severity applies to the seriousness of the criminal offense which is measured by the statutory maximum penalty or crime categories. For felony offenses the maximum term of imprisonment normally starts at two years and goes up to life in prison without the possibility of parole. In the BIR data base, life sentences are coded as ninety-nine years.

Number of Prior Felony Convictions includes all prior felony offenses for which the offender was found guilty. This variable also includes felony pleas taken under advisement and subsequently dismissed upon the successful completion of a term of probation. Guilty pleas taken under advisement are not retained in public records.

The sentencing guideline scores represent a range of months -- *Sentencing Guidelines Lower Range* to *Sentencing Guidelines Upper Range*. This allows the sentencing judge to use his or her discretion to impose a minimum sentence that falls within this range. The sentencing guidelines only refer to the minimum sentencing range since the maximum sentence in an indeterminate sentencing structure is determined by the law.

The Gun Law Statute carries a mandatory term of imprisonment for two calender years.

Jail Inmate, State Prisoner, on Parole, HYTA or probation, Delayed Sentence, District Probation, or Bond Status refer to the defendant's criminal justice status, if any, at the time the trial offense was committed.

Probation Departments Recommendation includes prison and non prison sentencing recommendations made by a probation agent (officer) in the pre-sentence investigation report.

Age at First Arrest is the defendant's age at the time of his or her first arrest or conviction, including youth and juvenile offenses/adjudications.

Number of Time(s) Committed to Juvenile Facility applies to the number of times a criminal defendant was committed to a juvenile correctional facility.

Number of Prior Adult Probation Terms is the number of adult probation sentences the defendant received or completed before committing the trial offense.

Number of Prior Jail Terms refer to the number of jail sentences the defendant received or completed before committing the trail offense.

Number of Prior Prison Terms refer to the number of prison sentences the defendant received or completed before committing the trail offense.

Extralegal Variables

Extralegal factors include a set of variables that represent the demographic characteristics of criminal defendants, sentencing judges and the sentencing counties.

The following are extralegal variables:

Defendant's Age is the defendants chronological age at the time the offense was committed.

Defendant's Gender is the defendant's sex.

Defendant's Race refers to one of two racial categories — white and nonwhite.

Judge's Age is the judge's chronological age in the year of sentencing.

Number of Years the Judge has been on the Bench equals the year of sentencing minus the year the judge was elected or appointed to the bench.

Judge's Gender is the judge's sex.

Judge's Race refers to one of two racial categories — white and nonwhite.

Judges' previous Prosecutorial Experience shows if a judge ever held employment as a prosecuting attorney at the federal, state or county levels, including elected and appointed positions.

Uniform Crime Report (UCR) Crime Index represents the crime per one hundred thousand persons in the population. It is a relative measure used to compare crime rates between counties.

Median Income is the median family income of the sentencing county as reported by the U.S. Census Bureau in the 1990 census report.

Unemployment Rate refers to the rate of unemployment in respective counties as reported by the U.S. Census Bureau in 1994.

Population is the population of the sentencing county as reported by the U.S. Census Bureau in the 1990 census report.

Nonwhite Population of Sentencing County is the percentage of the county's population that was not reported as white or Caucasian in the 1990 census.

Prison Commitment Rate is the number of prison sentences in a sentencing county divided by all felony dispositions in that county. The prison commitment rate in this study represents the average of the 1994 and 1995 prison commitment rates in respective sentencing counties.

Miscellaneous

Year refers to the year of sentencing.

County refers to the sentencing jurisdiction or the county where sentencing occurred.

Dependent Variables

Prison versus non Prison Sentences applies to the sentencing outcome. A prison sentence refers to imprisonment in a state correctional facility where the minimum term of incarceration is more than one year.

Jail/Prison Sentence versus Non Jail/Prison Sentence applies to sentencing outcomes that include jail and prison sentences. A jail sentence refers to incarceration in a county correctional facility where the maximum term of incarceration is one year or less.

The Length of Defendant's Prison Sentence refers to the minimum term of imprisonment in a state correctional facility.

Limitations of the Study

Limitations of the study include the following:

There is a lack of comparable pre sentencing guideline statistical or quantitative data necessary to test whether sentencing practices and levels of disparity changed with the use of guidelines.

The BIR data base does not maintain information about the mode of conviction, the type of legal representation available to the defendant, and bonding/pretrial release information. These are variables that may influence sentencing outcomes in some situations. Despite these limitations, the BIR data base is a rich source of state-level information on sentencing outcomes.

The population for this study is limited to defendants who were sentenced by Michigan judicial circuit courts from January 1, 1992 through December 31, 1997. The sample cases must have sentencing guideline scores. Although the current sentencing guidelines, published in 1988, covers most high court misdemeanor and felony offenses (about 73 percent of the cases in the sample have sentencing guideline scores), the offenses promulgated into law after the publication of the 1988 edition of the guidelines are not listed in, or covered by, it. Furthermore, sentences resulting from violation of probation are not covered under the guidelines.

Strengths of the Study

The study examines sentencing outcomes in over 20,000 cases. Past literature

reveals that studies of sentencing practices under guideline regimes did not compare the sentencing practices of male and female judges. Besides comparing the sentencing practices of judges based on their race, this study also examines the sentencing practices of male and female judges.

Statistical Analysis of Data

Logistic Regression

Logistic Regression analysis was used in this study to examine the relationship between the independent variables and sentencing outcomes -- dichotomous dependent variables. It is

> a type of log-linear analysis similar to multiple regression analysis; it is used when both the independent variables and the dependent variable are dummy (dichotomous) variables. It is used for predicting a categorical dependent variable from two or more independent variables. Ordinary least squares can be used when the independent variables are dichotomous but not when the dependent variable is. (Vogt, 1993, p. 131)

Logistic Regression directly estimate the probability of an event occurring. Norusis and SPSS (1994) presented the following equation of a logistic regression analysis:

$$\text{Prob. (event)} = \frac{e^z}{1+e^z}$$

where Z is the linear combination

$$Z = B_0 + B_1X_1 + B_2X_2 + \ldots + B_pX_p$$

and where:

B_x = coefficients estimated from the data

X_x = the independent variables

e = the base of the natural logarithms, approximately 2.718.

The probability of an event not occurring is estimated as:

Prob. (event) = 1 - Prob. (event)

(p. 2).

Multiple Linear Regression

Multiple Linear Regression is an Ordinary Least Squares analysis used to determine the regression equation that best represents the relationship between the independent variables and between the independent variables and the dependent variable. In this study, the dependent variable in the multiple linear regression models is the minimum term of a prison sentence. O'Sullivan and Rassel (1989) presented the following equation of a multiple linear regression analysis:

$$Y = a + b_1X_1 + b_2X_2 + \ldots + b_nX_n$$

where:

Y = dependent variable

a = constant

b = partial regression coefficient that shows the effect of the independent variable on the dependent variable while controlling for all other variables in the equation.

X = independent variable(s)

(p. 376).

Multiple regression enables the analyst to "present several variables in one equation. Furthermore, the regression equation gives the independent effect of each variable while controlling for the other variables in the equation" (Ibid., p. 367). One premise of the classical least squares method, and for regression analysis in general, is that the independent variables are not correlated. Multicollinearity occurs when two independent variables are highly correlated. When this occurs the regression equation cannot accurately estimate the independent effects of the highly correlated independent variables on the dependent variable (O'Sullivan & Rassel, 1989, pp. 374-375). In this study, the presence of multicollinearity was tested by calculating a correlation matrix among the variables. Some variables were eliminated from the analyses models due to severe multicollinearity.

Protection of Human Rights

Following Western Michigan University's requirements, application was made to the Human Subjects Institutional Review Board for permission to conduct this research, and approval was received (see Appendix F). Permission to conduct the study was also obtained from the Michigan Department of Corrections, Office of Research (see Appendix G). Confidentiality and anonymity were maintained in this study and the names of judges, correctional clients and sentencing jurisdictions were not revealed.

CHAPTER V

DATA ANALYSIS

Introduction

This study was primarily designed as a test of the null hypotheses that there are no significant differences in sentences imposed on white and non white defendants, or male and female defendants, once legitimately considered characteristics of the crime and the offender are taken into account. Further, there are no significant differences in the sentences imposed by white and non white judges, or male and female judge's, once legitimately considered characteristics of the crime and the offender are taken into account.

If a statistically significant association between the offender's race or gender, or between the judge's race or gender, and the sentences imposed on the defendants was found after statistically controlling for many measurable legal variables, it may be reasonable to conclude that unwarranted racial and gender disparities exist in the sentencing process. In addition, the modified research models were used to test for differences associated with a criminal defendant being prosecuted in one court system rather than another, and sentenced in a specific calender year rather than another.

In this chapter, the results of the study will be presented and analyzed. Both descriptive and inferential statistics were used. The demographic characteristics of the

sample will be described and the results of the hypotheses tested will be discussed.

Sample Characteristics

The sample consists of 20,834 felony cases that were adjudicated in four judicial circuit courts in Michigan from January 1, 1992 through December 31, 1997. The sample cases all have felony sentencing guideline scores and are not governed under Michigan's gun law which carries a mandatory prison sentence.

The felony cases were adjudicated in four Michigan counties referred to as Western County, Rich County, Mid-State County and Metro County. Based on 1990 United States census figures, Western and Mid-State Counties are populated by 223,411 and 211,946 people respectively. Rich County has a population of 1,083,592 persons and Metro County is home to 2,111,687 people. Demographic characteristics are depicted in Tables 3 and 4.

Regarding relative wealth, Rich County tops the group of four counties with a median family income of $43,407, followed by Western County's $31,060. Metro and Mid-State Counties have median family incomes of $27,997 and $27,980 respectively. Similarly, the unemployment rates were four, four, six and seven percent for Western, Rich, Mid-State and Metro Counties respectively. Significant differences exist between the counties when it comes to the percent of the county population reported as non white. Western, Rich, Mid-State and Metro Counties' non white population are 15 percent, 10 percent, 22 percent and 43 percent respectively.

Overall, in the aggregate of four counties, 23.1 percent of the cases received a

Table 3

Descriptive Statistics of Selected Variables in a Sample of Felony Cases and the Aggregate County Characteristics in Four Michigan Counties

Variable	Aggregate of Four Counties (s = 20,834) (m = 0) (n = 20,834) %	Western County (s = 1,940) (m = 1) (n = 1,939) %	Rich County (s = 6,464) (m = 0) (n = 6,464) %	Mid-State County (s = 1,464) (m = 0) (n = 1,464) %	Metro County (s =10,966) (m = 8) (n = 10,958) %
Sentence					
Prison	23.1	24.5	21.1	29.5	23.2
No Prison	76.9	75.5	78.9	70.5	76.8
Overall Incarcerative Sentence (Jail/Prison)					
Incarcerative Sentence	43.7	52.2	55.0	51.6	34.5
No Incarcerative Sentence	56.3	47.8	45.0	48.4	65.5
Prior Felony Convictions					
= 0	57.0	58.4	61.3	64.9	53.1
= 1	17.5	21.6	14.7	16.9	18.6
= 2	9.5	9.7	8.2	8.2	10.5
> = 3	16.0	10.3	15.8	10.0	17.8
Criminal Justice Status					
Active/Yes	33.3	34.8	32.1	27.7	34.4
No	66.7	65.2	67.9	72.3	65.6

Table 3–Continued

Variable	Aggregate of Four Counties (s = 20,834) (m = 0) (n = 20,834) %	Western County (s = 1,940) (m = 1) (n = 1,939) %	Rich County (s = 6,464) (m = 0) (n = 6,464) %	Mid-State County (s = 1,464) (m = 0) (n = 1,464) %	Metro County (s =10,966) (m = 8) (n = 10,958) %
Probation Department's Sentencing Recommendation					
Prison	26.0	23.4	26.0	23.1	26.9
No Prison	74.0	76.6	74.0	76.9	73.1
Judge's Race					
White	77.1	100	93.7	100	60.2
Non White	22.9	0.0	6.3	0.0	39.8
Judge's Gender					
Male	84.2	100	75.1	82.9	87.0
Female	15.8	0.0	24.9	17.1	13.0
Judge's Prosecutorial Experience					
Prosecutorial Experience	38.5	21.0	45.7	59.7	34.5
No Prosecutorial Experience	61.5	79.0	54.3	40.3	65.5
Defendant's Race					
White	36.1	49.2	57.8	42.1	20.2
Non White	63.9	50.8	42.2	57.9	79.8

Table 3–Continued

Variable	Aggregate of Four Counties (s = 20,834) (m = 0) (n = 20,834) %	Western County (s = 1,940) (m = 1) (n = 1,939) %	Rich County (s = 6,464) (m = 0) (n = 6,464) %	Mid-State County (s = 1,464) (m = 0) (n = 1,464) %	Metro County (s = 10,966) (m = 8) (n = 10,958) %
Defendant's Gender					
Male	85.8	82.2	80.9	84.4	89.5
Female	14.2	17.8	19.1	15.6	10.5
Crime Category					
Assaultive	17.3	17.4	20.1	19.9	15.3
Drug Offense	26.3	26.9	10.5	22.7	36.0
Non Assaultive	56.4	55.7	69.4	57.4	48.7
Year of Sentencing					
1992	15.1	16.4	12.1	15.6	16.5
1993	17.1	15.4	19.3	14.1	17.1
1994	16.6	16.9	16.7	14.5	16.8
1995	17.5	16.9	15.2	18.4	18.9
1996	17.5	19.8	18.9	18.5	16.1
1997	15.8	14.6	17.7	18.9	14.5

Table 3–Continued

Variable	Aggregate of Four Counties (s = 20,834) (m = 0) (n = 20,834) %	Western County (s = 1,940) (m = 1) (n = 1,939) %	Rich County (s = 6,464) (m = 0) (n = 6,464) %	Mid-State County (s = 1,464) (m = 0) (n = 1,464) %	Metro County (s = 10,966) (m = 8) (n = 10,958) %
Aggregate County Characteristics					
Population		223,411	1,083,592	211,946	2,111,687
Median Income		31,060	43,407	27,980	27,997
% Unemployment Rate		4	4	6	7
% Non White Population		15	10	22	43
UCR Index Crime Rate		18,362	12,756	17,621	14,632

Note: (s) = number of selected cases; (m) = number of cases rejected because of missing data; (n) = number of cases included in the analysis.

Table 4

Descriptive Statistics Indicating the Mean and Standard Deviation (SD) of Selected Variables in a Sample of Felony Cases in Four Michigan Counties

Variable	Aggregate of Four Counties (s = 20834) (m = 0) (n = 20834)		Western County (s = 1940) (m = 1) (n = 1939)		Rich County (s = 6464) (m = 0) (n = 6464)		Mid-State County (s = 1464) (m = 0) (n = 1464)		Metro County (s = 10966) (m = 8) (n = 10958)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Defendant's Age	29.23	10.04	27.81	8.92	29.25	10.29	27.83	9.48	29.66	10.11
Defendant's Age at First Arrest	21.35	8.16	20.33	7.03	22.30	9.01	20.46	7.97	21.09	7.77
Judge's Age	55.89	9.16	54.57	6.76	56.59	9.80	51.25	5.93	56.33	9.29
Number of Years a Judge has been on the Bench	12.06	7.58	7.96	3.16	12.01	7.39	5.91	3.20	13.80	7,97
Sentencing Guidelines Minimum Scores (months)	8.60	23.00	8.17	20.46	8.32	22.43	9.24	27.67	8.75	23.07
Prison Sentences Minimum Term (months)	9.33	44.19	9.39	36.06	8.21	40.94	13.73	54.85	9.39	45.68

Note: (s) = number of selected cases; (m) = number of cases rejected because of missing data; (n) = number of cases included in the analysis.

prison sentence while 43.7 percent received an incarcerative sentence (jail or prison). The mean sentencing guideline minimum score was 8.6 months and the mean minimum prison term was 9.33 years. The Probation Department recommended a prison sentence 26 percent of the time.

The majority of the defendants who received a prison disposition were non white (63.9 percent) and male (85.8 percent). The mean age was 29.93 years. Fifty-seven percent of the sample cases had no prior felony conviction, 17.5 percent had one prior felony conviction, 9.5 percent had two prior felony conviction, and 16 percent had three or more prior felony convictions. About 33.3 percent were on active criminal justice supervision (for example, under probation, parole, jail, prison, or bond supervision) at the time they committed the most recent offense.

Regarding Crime Category, 56.4 percent of the defendants were convicted of offenses sub-categorized by the Department of Corrections as "Non Assaultive", 26.3 percent for "Drug" related offenses, and 17.3 percent for "Assaultive" offenses.

The majority of the judges who adjudicated the criminal cases were white (77.1 percent) and male (84.2 percent). On average, they were 56 years old and had been on the bench for 12 years. Overall, 38.5 percent of the bench had prior prosecutorial experience. However, it is noteworthy that in Mid-State County 59.7 percent of the bench had prosecutorial experience.

Results Analysis

A two-step modeling process was used for the statistical analyses. First, four

sets of variables representing the legal/institutional factors, the demographic characteristics of the sentencing judge, the demographic characteristics of the offender, and the aggregate characteristics of the sentencing counties, were selected for the research design (see Figure 1). Second, a smaller number of variables that proved to be significant individual predictors of prison and overall incarcerative sentences were entered into a multiple logistic regression model and a multiple linear regression model.

Variables that describe some aspect of sentencing, such as the statutory maximum penalty for the conviction offense, the Probation Department's sentencing recommendation, sentencing guideline maximum score, prior probation, jail and prison terms, and prior juvenile commitments, were so highly correlated with some independent variables they were excluded from the analyses (see Appendix I). Other variables that were found to be highly inter-correlated with one or more independent variables, such as a county's median family income, unemployment rate, population and percentage of their non white population, UCR crime index, the defendant's age and defendant's age at the time of first arrest, and the judge's age and years on the bench, were excluded from the analyses in order to reduce the negative effects of multicollinearity. Basic demographic variables such as race and gender were kept in the final logistic and linear regression models.

Interpreting Odds Ratios (OR or Exp(B)) Appearing in SPSS Logistic Regression Output

Many dependent variables in social science research, particularly in criminal

justice research, turn out to have simple dichotomies -- either something happens or does not happen. These are also categorical or qualitative variables. Logistic regression is the preferred statistical technique when a research project involves a qualitative or categorical dependent variable (Dowdall, Babbie & Halley, 1997, p. 249). This statistical technique was chosen for the primary analysis because of the categorical dependent variables in this study – Prison Sentence versus No Prison Sentence, and Incarcerative Sentence versus No Incarcerative Sentence. An incarcerative sentence refers to both jail and prison sentences. The indicator category of a categorical or contrast variable indicates the occurrence of an event, for example "Prison sentence" or "jail/prison sentence". Conversely, the reference category of a categorical or contrast variable references the contrast or non occurrence of an event. Examples are "no prison sentence" and "no jail/prison sentence". The interpretation of the relationships between the dependent and explanatory variables will depend on whether the explanatory variables are categorical or non-categorical.

An explanation of logistic regression is deemed necessary since understanding its use is critical to interpreting the analyses. The following examples will be used to explain the interpretation of logistic regression. First, consider the case of a non-categorical explanatory variable 'x12' which is the 'number of prior felony convictions'. Suppose that for 'x12' Exp(B) = 1.46. This value would mean that for each unit increase in the number of prior felony convictions there would be a 46% increase in the odds of receiving a prison sentence. Note that 46% = 0.46 = 1.46-1. Now suppose that for 'x12' Exp(B) = 0.39. This value would mean that for each unit increase

in the number of prior felony convictions there would be a 61% decrease in the odds of receiving a prison sentence. Note that 61% = 0.61 = 1-0.39.

Consider the case of the categorical explanatory variable 'x33' which is the "race of the defendant". The variable is coded so that 1 corresponds to "non white". 'White' is the reference category. Suppose that for 'x33(1)' Exp(B) = 1.54. This value would mean that the odds of receiving a prison sentence are 1.54 times higher for a non white defendant than for a white defendant. Now suppose that for 'x33(1)' Exp(B) = 0.67. This value would mean that the odds of receiving a prison sentence are 1.49 times higher for a white defendant than for a non white defendant. Note that 1.49 = 1/0.67.

Finally, consider the case of the categorical explanatory variables for the respective sentencing years (see Table 5). The variables are coded to compare the respective sentencing year to the average effect of all sentencing years from 1992 through 1997 with 1997 as the reference variable.

Table 5

Categorical Explanatory Variables for the Respective Sentencing Years

	Variables				
Cases	1992	1993	1994	1995	1996
1992	1	0	0	0	0
1993	0	1	0	0	0
1994	0	0	1	0	0
1995	0	0	0	1	0
1996	0	0	0	0	1
1997	0	0	0	0	0

Suppose that for 1992 Exp(B) = 1.84. This value would mean that the odds of receiving a prison sentence were 1.84 times higher in 1992 than in 1997. Now suppose that for 1994 Exp(B) = 0.25. This value would mean that the odds of receiving a prison sentence were four times higher in 1997 (the reference category) than in 1994. Note that 4 = 1/0.25. The explanatory variables for Crime Categories (Assaultive, Drug Offense and Non Assaultive) and County (Western, Rich, Mid-State and Metro) were coded like the sentencing year variables.

The 'Model Accuracy' is one way to assess how well the model fits by comparing predictions to the observed outcomes. It refers to the percentage of cases accurately predicted by the logistic regression model (Ulmer & Kramer, 1996, p. 393). In this study, the acceptable level of statistical significance is less than or equal to .05 ($p < .05$).

Logistic Regression Results

Logistic Regression statistical technique was used in the following analyses: The odds of receiving a prison sentence in the aggregate of four counties, and in the respective counties; the odds of receiving a prison sentence in the aggregate of four counties, and in the respective counties in cases with sentencing guideline minimum scores of less than or equal to 12 months; the odds of receiving an incarcerative sentence (jail or prison) in the aggregate of four counties, and in the respective counties; the odds of receiving an incarcerative sentence in the aggregate of four counties, and in the respective counties in cases with sentencing guideline minimum scores of less than or equal to 12 months (see Figure 2).

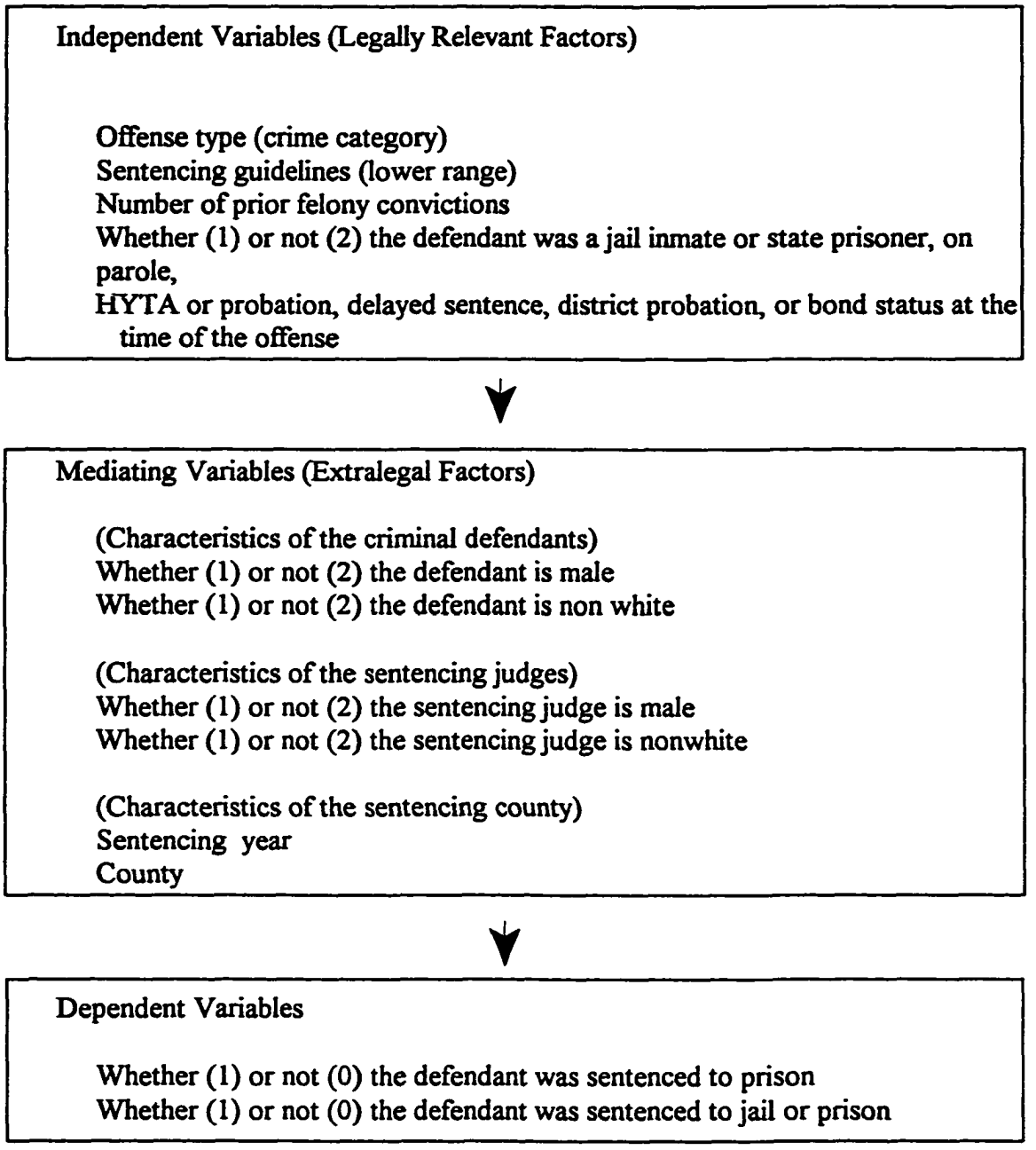

Figure 2. Modified Logistic Regression Model to Test the Bounded Rationality Theory of Judicial Decision-Making Under Michigan Sentencing Guidelines.

The Odds of Receiving a Prison Sentence in the Aggregate of the Four Counties, and in the Respective Counties

Table 6 indicates the odds of receiving a prison sentence in the aggregate of four counties, and in the respective counties. For each unit increase in the number of prior felony convictions there would be a 22 percent, 33 percent, 21 percent, 28 percent and 29 percent increase in the odds of receiving a prison sentence in the Aggregate of the Four Counties, Western, Rich, Mid-State, and Metro Counties respectively ($p < .001$). For each unit increase in the sentencing guideline minimum score, there would be a moderate increase in the odds of receiving prison sentences in the following counties: 11percent in the Aggregate of the Four Counties, 13 percent in Western County, 15 percent in Rich County, 16 percent in Mid-State County, and 9 percent in Metro County. ($p < .001$)

It appears that a defendant's criminal justice supervision status is a good predictor of a likely prison sentence in the logistic regression model. The odds of receiving a prison sentence is 2.58 times higher for a defendant who is under criminal justice supervision than for a defendant who is not under criminal justice supervision in the Aggregate of the Four Counties. Similarly, the odds are 2.99 times higher in Western County, 2.06 times higher in Rich County, 1.54 times higher in Mid-State County and 3.10 times higher in Metro County. (Mid-State $p < .05$, otherwise $p < .001$)

Gender bias is only statistically significant in Rich County, where the odds of receiving a prison sentence are 1.33 times higher with a female judge than with a male judge ($p < .01$). There are no female judges in Western County and this explanatory

Table 6

Logistic Regression Results Indicating the Odds of Receiving a Prison Sentence From a Sample of Felony Cases in Four Michigan Counties

Independent Variables	Aggregate of the Four Counties (s = 20,834) (m = 9) (n = 20,825) Odds Ratio (95% CI)	Western County (s = 1,940) (m = 1) (n = 1,939) Odds Ratio (95% CI)	Rich County (s = 6,464) (m = 0) (n = 6,464) Odds Ratio (95% CI)	Mid-State County (s = 1,464) (m = 0) (n = 1,464) Odds Ratio (95% CI)	Metro County (s = 10,966) (m = 8) (n = 10,958) Odds Ratio (95% CI)
Prior Felony Convictions	1.22*** (1.20, 1.25)	1.33*** (1.20, 1.47)	1.21*** (1.16, 1.25)	1.28*** (1.15, 1.42)	1.29*** (1.21, 1.29)
Sentencing Guidelines Minimum Score	1.11*** (1.11, 1.12)	1.13*** (1.11, 1.15)	1.15*** (1.14, 1.16)	1.16*** (1.13, 1.18)	1.09*** (1.08, 1.10)
Criminal Justice Status Active Status/Yes (1)	2.58*** (2.36, 2.82)	2.99*** (2.25, 3.97)	2.06*** (1.73, 2.46)	1.54* (1.11, 2.16)	3.10*** (2.74, 3.50)
Judge's Gender Male (1)	NS	C	0.75** (0.60, 0.92)	NS	NS
Judge's Race Non White (1)	0.81** (0.72, 0.92)	C	NS	C	0.87* (0.76, 0.99)
Defendant's Gender Male (1)	2.10*** (1.79, 2.47)	1.59* (1.02, 2.46)	1.73*** (1.34, 2.24)	2.34** (1.40, 3.91)	2.77*** (2.10, 3.66)

Table 6–Continued

Independent Variables	Aggregate of the Four Counties (s = 20,834) (m = 9) (n = 20,825) Odds Ratio (95% CI)	Western County (s = 1,940) (m = 1) (n = 1,939) Odds Ratio (95% CI)	Rich County (s = 6,464) (m = 0) (n = 6,464) Odds Ratio (95% CI)	Mid-State County (s = 1,464) (m = 0) (n = 1,464) Odds Ratio (95% CI)	Metro County (s = 10,966) (m = 8) (n = 10,958) Odds Ratio (95% CI)
Defendant's Race Non White (1)	1.40*** (1.27, 1.54)	1.55** (1.16, 2.08)	1.25* (1.05, 1.48)	1.80* (1.15, 2.91)	1.35*** (1.15, 1.57)
Year of Sentencing					
1992 (1)	2.55*** (2.19, 2.97)	2.07** (1.29, 3.32)	NS	NS	3.62*** (2.90, 4.51)
1993 (1)	1.50*** (1.29, 1.75)	NS	1.50** (1.13, 1.98)	NS	2.01*** (1.61, 2.52)
1994 (1)	1.44*** (1.23, 1.68)	NS	1.44* (1.08, 1.92)	0.56* (0.34, 0.93)	1.75*** (1.39, 2.20)
1995 (1)	NS	NS	1.68*** (1.25, 2.25)	0.52* (0.31, 0.87)	NS
1996 (1)	NS	NS	NS		NS
1997 (Reference Category)					
County					
Western	1.38*** (1.18, 1.61)				

Table 6–Continued

Independent Variables	Aggregate of the Four Counties (s = 20,834) (m = 9) (n = 20,825) Odds Ratio (95% CI)	Western County (s = 1,940) (m = 1) (n = 1,939) Odds Ratio (95% CI)	Rich County (s = 6,464) (m = 0) (n = 6,464) Odds Ratio (95% CI)	Mid-State County (s = 1,464) (m = 0) (n = 1,464) Odds Ratio (95% CI)	Metro County (s = 10,966) (m = 8) (n = 10,958) Odds Ratio (95% CI)
County					
Rich (1)	NS				
Mid-State (1)	2.15*** (1.82, 2.53)				
Metro (Reference Category)					
Crime Category					
Assaultive (1)	1.64*** (1.45, 1.85)	NS	1.35** (1.09, 1.68)	NS	2.29*** (1.91, 2.73)
Drug Offense (1)	0.82*** (0.74, 0.91)	NS	NS	NS	0.80*** (0.70, 0.91)
Non Assaultive (Reference Category)					
Model Accuracy	86.19%	85.46%	88.40%	84.02%	85.87%

Note: *p < .05; **p < .01; ***p < .001; (s) = number of selected cases; (m) = number of cases rejected because of missing data; (n) = number of cases included in the analysis; CI = confidence interval; C = constant for all selected cases; NS = no statistically significant association with the dependent variable at the .05 level.

variable is not statistically significant in the Aggregate of the Four Counties, Mid-State and Metro counties. Further the odds of receiving a prison sentence are 2.10 times, 1.59 times, 1.73 times, 2.34 times and 2.83 times higher for a male defendant than for a female defendant in the Aggregate of the Four Counties ($p < .001$), Western ($p < .05$), Rich ($p < .001$), Mid-State ($p < .01$) and Metro ($p < .001$) Counties respectively.

With regard to race, it appears that the odds of receiving a prison sentence are higher with a white judge than with a non white judge in the Aggregate of the Four Counties and in Metro County by 1.23 times ($p < .01$) and 1.15 times ($p < .05$) respectively. Western and Mid-State Counties did not have any non white judges and this variable was not statistically significant in Rich County. For the defendants, the odds of receiving a prison sentence are consistently higher for a non white defendant than for a white defendant in all jurisdictions. The odds ratios for non white defendants are 1.40, 1.55, 1.25, 1.80, 1.35 in the Aggregate of the Four Counties ($p < .001$), Western ($p < .01$), Rich ($p < .05$), Mid-State ($p < .05$), and Metro ($p < .001$) Counties respectively.

In the Aggregate of the Four Counties, the odds of receiving a prison sentence were generally higher in the earlier years, except in Mid-State County. The ongoing push for appropriate and responsible allocation of fiscal resources within the criminal justice system may partially explain this observation. The odds of receiving a prison sentence were 2.55 times higher in 1992, 1.50 times higher in 1993, and 1.44 times higher in 1994 than in 1997 respectively ($p < .001$). However, this variable is not statistically significant in 1995 and 1996. In Western County, the odds of receiving a

prison sentence were 2.07 times higher in 1992 than in 1997 ($p < .01$) . The odds ratios for 1993 through 1997 are not statistically significant in this county. In Rich County, the odds of receiving a prison sentence were 1.50 times higher in 1993 ($p < .01$), 1.44 times higher in 1994 ($p < .05$), and 1.68 times higher in 1995 ($p < .001$) than in 1997, but the odds ratios for 1992 and 1996 were not statistically significant. In Mid-State County, the odds of receiving a prison sentence were 1.79 times higher in 1997 than in 1994 ($p < .05$) and 1.92 times higher in 1997 than in 1995 ($p < .05$), but the odds ratios for 1992 and 1993 were not statistically significant. In Metro County, the odds of receiving a prison sentence were 3.62 times higher in 1992, 2.01 times higher in 1993, and 1.75 times higher in 1994 than in 1997 ($p < .001$). The odds ratios for 1995 and 1996 were not statistically significant.

A comparison of the sentencing behavior of the four counties found that the odds of receiving a prison sentence are 1.38 times higher in Western County and 2.15 times higher in Mid-State County than in Metro County ($p < .001$). However, the odds of receiving a prison sentence are not statistically significant in Rich County. The crime categories are not statistically significant in Western and Mid-State Counties. In the Aggregate of the Four Counties, the odds of receiving a prison sentence are 1.64 higher if the defendant was convicted for an Assaultive offense than for a Non Assaultive offense ($p < .001$). However, the odds of receiving a prison sentence are moderately higher (OR = 1.22) for a defendant convicted of a Non Assaultive offense than for a defendant convicted of a Drug Offense ($p < .001$). In Rich County, the odds of receiving a prison sentence are 1.35 times higher for a defendant convicted of an

Assaultive offense than for a Non Assaultive offense ($p < .01$) . The odds of receiving state imprisonment for a drug offense are not statistically significant in this county.

In Metro County , the odds of receiving a prison sentence are substantially higher (OR = 2.29) for a defendant convicted of an Assaultive offense than for a defendant convicted of a Non Assaultive offense ($p < .001$). However, the odds of receiving a prison sentence are 1.25 times higher for a defendant convicted of a Non Assaultive offense than for a defendant convicted of a Drug Offense ($p < .001$). The Model Accuracy for the respective jurisdictions is 86.19 percent, 85.46 percent, 88.40 percent, 84.02 percent and 85.87 percent for the Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties.

The Odds of Receiving a Prison Sentence in the Aggregate of the Four Counties, and in the Respective Counties in Cases With SGL Minimum Scores Less Than or Equal to 12 Months

To further strengthen the analysis, cases with sentencing guideline minimum scores of less than or equal to 12 months were selected from the sample. Judges appear to have more discretion in these cases because sentences of 12 months or less can be served in the county jails. On the other hand, minimum sentences of more than twelve months are usually presumed to be prison bound since incarcerative sentences that exceed twelve months must be served in state run correctional facilities (prison) and not at county run correctional facilities (jail) which are reserved for short sentences of one year of less.

Table 7 indicates the odds of receiving a prison sentence when the sentencing

Table 7

Logistic Regression Results Indicating the Odds of Receiving a Prison Sentence From a Sample of Felony Cases, With Sentencing Guideline Minimum Scores of Less Than or Equal to 12 Months, in Four Michigan Counties

Independent Variables	Aggregate of the Four Counties (s = 17,957) (m = 8) (n = 17,949) Odds Ratio (95% CI)	Western County (s = 1,671) (m = 1) (n = 1,670) Odds Ratio (95% CI)	Rich County (s = 5,565) (m = 0) (n = 5,565) Odds Ratio (95% CI)	Mid-State County (s = 1,259) (m = 0) (n = 1,259) Odds Ratio (95% CI)	Metro County (s = 9,462) (m = 7) (n = 9,455) Odds Ratio (95% CI)
Prior Felony Convictions	1.19*** (1.16, 1.22)	1.39*** (1.23, 1.56)	1.14*** (1.10, 1.19)	1.25*** (1.19, 1.40)	1.22*** (1.18, 1.26)
Sentencing Guidelines Minimum Score	1.18*** (1.17, 1.19)	1.19*** (1.15, 1.23)	1.23*** (1.20, 1.25)	1.20*** (1.16, 1.24)	1.15*** (1.14, 1.17)
Criminal Justice Status Active Status/Yes (1)	2.82*** (2.55, 3.13)	2.84*** (2.07, 3.90)	2.28*** (1.85, 2.79)	1.66** (1.16, 2.38)	3.45*** (3.00, 3.97)
Judge's Gender Male (1)	NS	C	NS	NS	NS
Judge's Race Non White (1)	0.80** (0.69, 0.92)	C	NS	C	0.82* (0.70, 0.96)
Defendant's Gender Male (1)	2.07*** (1.72, 2.48)	NS	1.87*** (1.39, 2.52)	2.59*** (1.49, 4.51)	2.75*** (1.98, 3.82)

Table 7–Continued

Independent Variables	Aggregate of the Four Counties (s = 17,957) (m = 8) (n = 17,949) Odds Ratio (95% CI)	Western County (s = 1,671) (m = 1) (n = 1,670) Odds Ratio (95% CI)	Rich County (s = 5,565) (m = 0) (n = 5,565) Odds Ratio (95% CI)	Mid-State County (s = 1,259) (m = 0) (n = 1,259) Odds Ratio (95% CI)	Metro County (s = 9,462) (m = 7) (n = 9,455) Odds Ratio (95% CI)
Defendant's Race Non White (1)	1.42*** (1.26, 1.59)	1.47* (1.05, 2.04)	1.30* (1.06, 1.58)	1.88*** (1.32, 2.67)	1.35** (1.13, 1.62)
Year of Sentencing					
1992 (1)	2.53*** (2.12, 3.01)	1.75* (1.03, 2.96)	NS	NS	3.98*** (3.06, 5.17)
1993 (1)	1.54*** (1.29, 1.85)	NS	1.51* (1.09, 2.10)	0.51* (0.28, 0.92)	2.26*** (1.73, 2.97)
1994 (1)	1.49*** (1.24, 1.79)	NS	1.45* (1.02, 2.05)	NS	2.06*** (1.57, 2.71)
1995 (1)	NS	NS	1.88*** (1.33, 2.64)	0.43** (0.25, 0.75)	NS
1996 (1)	NS	NS	NS	0.48** (0.28, 0.83)	NS
1997 (Reference Category)					
County					
Western	1.36*** (1.14, 1.62)				

Table 7–Continued

Independent Variables	Aggregate of the Four Counties (s = 17,957) (m = 8) (n = 17,949) Odds Ratio (95% CI)	Western County (s = 1,671) (m = 1) (n = 1,670) Odds Ratio (95% CI)	Rich County (s = 5,565) (m = 0) (n = 5,565) Odds Ratio (95% CI)	Mid-State County (s = 1,259) (m = 0) (n = 1,259) Odds Ratio (95% CI)	Metro County (s = 9,462) (m = 7) (n = 9,455) Odds Ratio (95% CI)
County					
Rich (1)	.86* (0.74, 0.98)				
Mid-State (1)	2.19*** (1.83, 2.64)				
Metro (Reference Category)					
Crime Category					
Assaultive (1)	1.30*** (1.12, 1.50)	NS	NS	NS	1.77*** (1.42, 2.21)
Drug Offense (1)	0.74*** (0.65, 0.83)	NS	0.65* (0.46, 0.90)	NS	0.77*** (0.66, 0.90)
Non Assaultive (Reference Category)					
Model Accuracy	87.68%	86.24%	89.96%	83.40%	87.68%

Note: *p < .05; **p < .01; ***p < .001; (s) = number of selected cases; (m) = number of cases rejected because of missing data; (n) = number of cases included in the analysis; CI = confidence interval; C = constant for all selected cases; NS = no statistically significant association with the dependent variable at the .05 level.

guideline minimum scores are less than or equal to 12 months. In general, the patterns and trends are similar to the ones found in the previous analysis. With a one unit increase in the prior felony convictions variable, the odds of receiving a prison sentence increases by 19 percent, 39 percent, 14 percent, 25 percent and 22 percent in the Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties respectively ($p < .001$). A one unit increase in the sentencing guideline minimum scores also increases the odds of receiving a prison disposition in the aforementioned jurisdictions by 18 percent, 19 percent, 23 percent, 20 percent and 15 percent respectively ($p < .001$).

Criminal justice status remains a good predictor of a prison sentence in the research model. The odds of receiving a prison sentence are 2.82 times higher in the Aggregate of the Four Counties, 2.84 times higher in Western County, 2.28 times higher in Rich County, 1.66 times higher in Mid-State County and 3.45 times higher in Metro County if the offender is under criminal justice supervision than if the offender is not under criminal justice supervision. (Mid-State County $p < .01$, otherwise $p < .001$)

Gender bias is a significant factor with regard to defendants, but not with regard to judges. The odds of receiving a prison sentence are significantly higher for male defendants than for female defendants by 2.07 times, 1.87 times, 2.59 times, and 2.75 times higher in the Aggregate of the Four Counties, Rich, Mid-State and Metro Counties respectively ($p < .001$). This factor is not statistically significant in Western County. It is noteworthy that in Mid-State County, the defendant's gender appears to

be a better predictor of the odds of imprisonment than the criminal justice status. However, the judge's gender is not a factor in Western County since all the judges in the jurisdiction are men, and not statistically significant in the other jurisdictions.

Regarding the judge's race, the odds of receiving a prison sentence are higher when the judge is white than when the judge is non white by 1.25 times in the Aggregate of the Four Counties ($p < .01$) and 1.22 times in Metro County ($p < .05$). However, this variable is not statistically significant in Rich County, and was omitted from the analysis for Western and Mid-State Counties where all the judges are white. Again, the odds of state imprisonment are consistently higher for non white defendants than for white defendants. The odds of receiving a prison sentence are 1.42 times, 1.47 times, 1.30 times, 1.88 times and 1.35 times higher for a non white defendant than for a white defendant in the Aggregate of the Four Counties ($p < .001$), Western ($p < .05$), Rich ($p < .05$), Mid-State ($p < .001$), and Metro ($p < .01$) Counties respectively.

The trends and patterns in the year of sentencing variable indicates that, in general, the odds of receiving a prison sentence were higher in the earlier years. In the Aggregate of the Four Counties, the odds of receiving a prison sentence were 2.53, 1.54, and 1.49 times higher in 1992, 1993, and 1994 than in 1997 respectively ($p < .001$). This predictor variable was not statistically significant in 1995 and 1996. In Western County, the odds of receiving a prison sentence were 1.75 times higher in 1992 than in 1997 ($p < .05$), but not statistically significant in 1993 through 1996. The odds of receiving a prison sentence in Rich County were 1.51, 1.45,and 1.88 times higher in the years 1993 ($p < .05$) , 1994 ($p < .05$) and 1995 ($p < .001$) than in 1997.

In Mid-State, the same odds were 1.96, 2.33, and 2.08 times higher in 1997 than in 1993, 1995, and 1996 respectively. The odds of receiving a prison sentence in Metro County were 3.98, 2.26, and 2.06 times higher in the years 1992, 1993, and 1994 than in 1997 respectively. However, the variable was not statistically significant in Rich County in 1995 and 1996, Mid-State County in 1992 and 1996, and Metro County in 1995 and 1996.

The measure of the differences in sentencing outcomes between counties show statistically significant differences in the odds of receiving a prison sentence within the lower SGL range. The odds of receiving a prison sentence are 1.36 times higher in Western County ($p < .001$) and 2.19 times higher in Mid-State County ($p < .001$) than in Metro County. However, the odds of receiving a prison sentence are 1.16 times higher in Metro County than in Rich County ($p < .05$). The crime category variable was not statistically significant in Western and Mid-State Counties. But in the Aggregate of the Four Counties and in Metro County, the odds of receiving a prison sentence are respectively 1.30 and 1.77 times higher if the offender committed an Assaultive offense than if the offender committed a Non Assaultive offense ($p < .001$) . The Assaultive crime subcategory was not statistically significant in Rich County. The odds of receiving a prison sentence in the Aggregate of the Four Counties, Rich and Metro Counties are 1.35 ($p < .001$) , 1.54 ($p < .05$) and 1.30 ($p < .001$) times higher respectively when the offender is convicted of a Non Assaultive offense than when the offender is convicted of a Drug Offense. The Model Accuracy for the respective jurisdictions is 87.68%, 86.24%, 89.96%, 83.40% and 87.68% for the Aggregate of

the Four Counties, Western, Rich, Mid-State and Metro Counties.

Thus far, the outcome being discussed is Prison versus No Prison. The next two sections will be devoted to analyzing the odds of receiving an incarcerative sentence (including jail and prison).

The Odds of Receiving an Incarcerative Sentence in the Aggregate of the Four Counties, and in the Respective Counties

In general, it appears that the trends are somewhat similar between the logistic regression results indicating the odds of receiving a prison sentence and the logistic regression results indicating the odds of receiving an incarcerative sentence. Table 8 indicates the odds of receiving an incarcerative sentence.

For each one unit increase in the number of prior felony convictions there would be a 31 percent, 38 percent, 49 percent, 30 percent and 27 percent increase in the odds of receiving an incarcerative sentence in the Aggregate of the Four Counties, Western, Rich, Mid-State, and Metro Counties respectively ($p < .001$). A one unit increase in the sentencing guidelines minimum score would cause a moderate increase in the odds of receiving an incarcerative sentence in the following counties: 7 percent in Aggregate of the Four Counties, 7 percent in Western, 7 percent in Rich, 12 percent in Mid-State, and 7 percent in Metro County. ($p < .001$)

Again, as in predicting a prison sentence, an active status under criminal justice supervision at the time of the conviction offense remains a strong predictor of an incarcerative sentence in the model. The odds of receiving an incarcerative sentence are

Table 8

Logistic Regression Results Indicating the Odds of Receiving an Incarcerative Sentence (Jail and Prison) From a Sample of Felony Cases in Four Michigan Counties

Independent Variables	Aggregate of the Four Counties (s = 20,834) (m = 9) (n = 20,825) Odds Ratio (95% CI)	Western County (s = 1,940) (m = 1) (n = 1,939) Odds Ratio (95% CI)	Rich County (s = 6,464) (m = 0) (n = 6,464) Odds Ratio (95% CI)	Mid-State County (s = 1,464) (m = 0) (n = 1,464) Odds Ratio (95% CI)	Metro County (s = 10,966) (m = 8) (n = 10,958) Odds Ratio (95% CI)
Prior Felony Convictions	1.31*** (1.28, 1.34)	1.38*** (1.24, 1.53)	1.49*** (1.41, 1.58)	1.30*** (1.15, 1.47)	1.27*** (1.23, 1.31)
Sentencing Guidelines Minimum Score	1.07*** (1.06, 1.07)	1.07*** (1.05, 1.08)	1.07*** (1.06, 1.08)	1.12*** (1.10, 1.15)	1.07*** (1.06, 1.07)
Criminal Justice Status Active Status/Yes (1)	2.74*** (2.55, 2.95)	2.60*** (2.07, 3.26)	3.72*** (3.23, 4.28)	2.05*** (1.52, 2.75)	2.45*** (2.22, 2.71)
Judge's Gender Male (1)	1.13* (1.02, 1.26)	C	NS	0.69* (0.50, 0.95)	1.27** (1.07, 1.50)
Judge's Race Non White (1)	NS	C	NS	NS	1.22*** (1.10, 1.37)
Defendant's Gender Male (1)	2.16*** (1.95, 2.40)	2.19* (1.65, 2.90)	2.41*** (2.07, 2.81)	1.90*** (1.35, 2.69)	2.05*** (1.70, 2.47)

Table 8–Continued

Independent Variables	Aggregate of the Four Counties (s = 20,834) (m = 9) (n = 20,825) Odds Ratio (95% CI)	Western County (s = 1,940) (m = 1) (n = 1,939) Odds Ratio (95% CI)	Rich County (s = 6,464) (m = 0) (n = 6,464) Odds Ratio (95% CI)	Mid-State County (s = 1,464) (m = 0) (n = 1,464) Odds Ratio (95% CI)	Metro County (s = 10,966) (m = 8) (n = 10,958) Odds Ratio (95% CI)
Defendant's Race Non White (1)	1.27*** (1.18, 1.36)	NS	1.28*** (1.14, 1.45)	1.66*** (1.29, 2.13)	1.16* (1.03, 1.31)
Year of Sentencing					
1992 (1)	1.15* (1.01, 1.30)	NS	.057*** (0.46, 0.71)	NS	2.06*** (1.72, 2.48)
1993 (1)	1.13* (1.01, 1.28)	1.58* (1.09, 2.29)	0.65*** (0.53, 0.79)	0.40*** (0.26, 0.61)	2.06*** (1.72, 2.47)
1994 (1)	1.17** (1.04, 1.32)	NS	NS	0.37*** (0.25, 0.59)	1.64*** (1.37, 1.98)
1995 (1)	NS	NS	NS	0.46*** (0.31, 0.69)	NS
1996 (1)	1.33*** (1.19, 1.49)	1.54* (1.09, 2.18)	NS	0.56** (0.37, 0.82)	2.11*** (1.77, 2.53)
1997 (Reference Category)					
County					
Western	3.35*** (2.97, 3.79)				

Table 8–Continued

Independent Variables	Aggregate of the Four Counties (s = 20,834) (m = 9) (n = 20,825) Odds Ratio (95% CI)	Western County (s = 1,940) (m = 1) (n = 1,939) Odds Ratio (95% CI)	Rich County (s = 6,464) (m = 0) (n = 6,464) Odds Ratio (95% CI)	Mid-State County (s = 1,464) (m = 0) (n = 1,464) Odds Ratio (95% CI)	Metro County (s = 10,966) (m = 8) (n = 10,958) Odds Ratio (95% CI)
County					
Rich (1)	3.96*** (3.61, 4.35)				
Mid-State (1)	3.47*** (3.03, 3.97)				
Metro (Reference Category)					
Crime Category					
Assaultive (1)	1.61*** (1.46, 1.78)	2.02*** (1.46, 2.79)	1.53*** (1.30, 1.81)	NS	1.65*** (1.41, 1.92)
Drug Offense (1)	0.76*** (0.70, 0.83)	0.70** (0.55, 0.89)	NS	NS	0.73*** (0.66, 0.81)
Non Assaultive (Reference Category)					
Model Accuracy	76.25%	71.60%	75.87%	72.54%	78.44%

Note: *p < .05; **p < .01; ***p < .001; (s) = number of selected cases; (m) = number of cases rejected because of missing data; (n) = number of cases included in the analysis; CI = confidence interval; C = constant for all selected cases; NS = no statistically significant association with the dependent variable at the .05 level.

2.74 times higher in the Aggregate of the Four Counties, 2.60 times higher in Western County, 3.72 times higher in Rich County, 2.05 times higher in Mid-State County, and 2.45 times higher in Metro County when the defendant is under active criminal justice supervision than when the defendant is not under any criminal justice supervision. ($p < .001$)

It appears the odds of receiving an incarcerative sentence are higher if the judge is a man than if the judge is a woman by 1.13 and 1.27 times in the Aggregate of the Four Counties ($p < .05$) and Metro County ($p < .01$) respectively. In Mid-State County, the odds of incarceration are 1.45 times higher with a female judge than with a male judge ($p < .05$). The explanatory variable is not statistically significant in Rich County. Western County was dropped from the analysis since all their judges are men. Regarding the race of the bench, the odds of receiving an incarcerative sentence in Metro County are 1.22 times higher if the sentencing judge is non white than if the sentencing judge is white ($p < .001$). Western and Mid-State Counties were omitted from the analysis since the two counties do not have non white judges. Further, this variable is not statistically significant in the Aggregate of the Four Counties and Rich County.

There is evidence to suggest that being male virtually doubles the odds of incarceration. The odds of receiving an incarcerative sentence are 2.16 times higher in the Aggregate of the Four Counties, 2.19 times higher in Western County, 2.41 times higher in Rich County, 1.90 times higher in Mid-State County and 2.05 times higher in Metro County when the defendant if male than when the defendant is female. ($p <$

.001) The odds of receiving an incarcerative sentence are moderately higher for a non white defendant than for a white defendant in the Aggregate of the Four Counties, Rich, Mid-State and Metro Counties, by 1.24 times, 1.28 times, 1.66 times, and 1.13 times respectively (Metro County $p < .05$, otherwise $p < .001$). The defendant's race is not statistically significant in Western County.

With regard to the sentencing year variables, in the Aggregate of the Four Counties the odds of receiving an incarcerative sentence were 1.15 times higher in 1992 ($p < .05$) 1.13 times higher in 1993 ($p < .05$), 1.17 times higher in 1994 ($p < .01$), and 1.33 times higher in 1996 ($p < .001$) than in 1997 respectively, but were not statistically significant in 1995. In Western County, the odds of receiving an incarcerative sentence were 1.58 times higher in 1993 ($p < .05$) and 1.54 times higher in 1996 ($p < .05$) than in 1997. The odds ratios for 1992, 1994 and 1995 were not statistically significant in this county.

In Rich County, the odds of receiving an incarcerative sentence were higher in 1997 than in 1992 and 1993 by 1.75 and 1.54 times respectively ($p < .001$). The odds ratios were not statistically significant in 1994, 1995 and 1996. Similarly, odds of receiving an incarcerative sentence in Mid-State County were 2.50, 2.70, 2.17 and 1.79 times higher in 1997 than in 1993 ($p < .001$), 1994 ($p < .001$), 1995 ($p < .001$) and 1996 ($p < .01$) respectively. The odds ratio for 1992 was not statistically significant. In Metro County, the odds of receiving an incarcerative sentence were 2.06 times higher in 1992, 2.06 times higher in 1993, 1.64 times higher in 1994 and 2.11 times higher in 1996 than in 1997 respectively ($p < .001$). The odds ratio for 1995 was not

statistically significant.

There are significant differences between the counties with regard to incarceration. The odds of being incarcerated are 3.35 times higher in Western County, 3.96 times higher in Rich County, and 3.47 times higher in Mid-State County than in Metro County ($p < .001$). However, unlike a previous analysis which showed that the odds of imprisonment are higher in Metro County than in Rich County, the current analysis indicates the odds of overall incarceration are 3.96 times higher in Rich County than in Metro County. This suggests that Rich County relies more on the use of jail sentences than Metro County, while the latter relies more on the use of prison sentences than the former.

Although the 'Crime' variable as a whole was not statistically significant in Mid-State County, the odds of receiving an incarcerative sentence are higher if the defendant was convicted for an Assaultive offense than for a Non Assaultive offense in the Aggregate of the Four Counties (OR = 1.61), Western (OR = 2.02), Rich (OR = 1.53) and Metro County (OR = 1.65) ($p < .001$). However, the odds of receiving an incarcerative sentence are moderately higher for a defendant convicted of a Non Assaultive offense than for a defendant convicted of a Drug Offense in Aggregate of the Four Counties (OR = 1.32) ($p < .001$), Western (OR = 1.43) ($p < .01$) and Metro County (OR = 1.37) ($p < .001$). The crime subcategory was not statistically significant in Rich County. The Model Accuracy for the respective jurisdictions are 76.25 percent, 71.60 percent, 75.87 percent, 72.54 percent and 78.44 percent for the Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties. To further

strengthen the analysis, cases with SGL minimum scores less than or equal to 12 months were selected for further analysis.

The Odds of Receiving an Incarcerative Sentence in the Aggregate of the Four Counties, and in the Respective Counties in Cases With SGL Minimum Scores Less Than or Equal to 12 Months

Table 9 indicates the odds of receiving an incarcerative sentence within the lower SGL minimum range. With every one unit increase in the number of prior felony convictions the odds of receiving a prison sentence increases by 32 percent, 49 percent, 51 percent, 34 percent and 26 percent in the Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties respectively ($p < .001$). The odds of an incarcerative sentence increase moderately by 9 percent, 6 percent, 9 percent, 14 percent, and 9 percent with every one unit increase in the minimum score of the sentencing guidelines in the Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties respectively ($p < .001$). It appears that criminal justice status remains a good predictor of an incarcerative sentence in this model. The odds of receiving an incarcerative sentence are 2.85 times higher in the Aggregate of the Four Counties, 2.53 times higher in Western County, 4.13 times in Rich County, 2.14 times in Mid-State County and 2.46 times in Metro County when the defendant is under active criminal justice supervision than when the defendant is not under any criminal justice supervision ($p < .001$).

Again, there appears to be some evidence indicating the presence of gender bias in sentencing practices. The odds of receiving an incarcerative sentence are 2.15 times,

Table 9

Logistic Regression Results Indicating the Odds of Receiving an Incarcerative Sentence (Jail and Prison) From a Sample of Felony Cases, With Sentencing Guideline Minimum Scores of Less Than or Equal to 12 Months, in Four Michigan Counties

Independent Variables	Aggregate of the Four Counties (s = 17,957) (m = 8) (n = 17,949) Odds Ratio (95% CI)	Western County (s = 1,671) (m = 1) (n = 1,670) Odds Ratio (95% CI)	Rich County (s = 5,565) (m = 0) (n = 5,565) Odds Ratio (95% CI)	Mid-State County (s = 1,259) (m = 0) (n = 1,259) Odds Ratio (95% CI)	Metro County (s = 9,462) (m = 7) (n = 9,455) Odds Ratio (95% CI)
Prior Felony Convictions	1.32*** (1.28, 1.35)	1.49*** (1.32, 1.69)	1.51*** (1.41, 1.61)	1.34*** (1.17, 1.54)	1.26*** (1.22, 1.30)
Sentencing Guidelines Minimum Score	1.09*** (1.08, 1.10)	1.06*** (1.04, 1.09)	1.09*** (1.07, 1.10)	1.14*** (1.10, 1.17)	1.09*** (1.08, 1.10)
Criminal Justice Status Active Status/Yes (1)	2.85*** (2.64, 3.08)	2.53*** (2.00, 3.21)	4.13*** (3.56, 4.78)	2.14*** (1.57, 2.90)	2.46*** (2.21, 2.74)
Judge's Gender Male (1)	1.17** (1.05, 1.30)	C	NS	0.70* (0.50, 0.97)	1.40*** (1.16, 1.67)
Judge's Race Non White (1)	NS	C	NS	C	1.27*** (1.13, 1.43)
Defendant's Gender Male (1)	2.15*** (1.94, 2.39)	2.16*** (1.62, 2.89)	2.44*** (2.08, 2.86)	2.01*** (1.41, 2.88)	1.96*** (1.61, 2.40)

Table 9–Continued

Independent Variables	Aggregate of the Four Counties (s = 17,957) (m = 8) (n = 17,949) Odds Ratio (95% CI)	Western County (s = 1,671) (m = 1) (n = 1,670) Odds Ratio (95% CI)	Rich County (s = 5,565) (m = 0) (n = 5,565) Odds Ratio (95% CI)	Mid-State County (s = 1,259) (m = 0) (n = 1,259) Odds Ratio (95% CI)	Metro County (s = 9,462) (m = 7) (n = 9,455) Odds Ratio (95% CI)
Defendant's Race Non White (1)	1.26*** (1.17, 1.36)	NS	1.30*** (1.15, 1.48)	1.68*** (1.29, 2.18)	NS
Year of Sentencing					
1992 (1)	NS	NS	0.56*** (0.45, 0.70)	0.64* (0.42, 0.97)	2.06*** (1.69, 2.53)
1993 (1)	NS	1.61* (1.10, 2.37)	0.62*** (0.51, 0.76)	0.37*** (0.23, 0.57)	2.24*** (1.84, 2.73)
1994 (1)	1.16* (1.02, 1.31)	NS	NS	0.36*** (0.23, 0.56)	1.76*** (1.44, 2.16)
1995 (1)	NS	NS	NS	0.42*** (0.28, 0.64)	1.26* (1.03, 1.54)
1996 (1)	1.36*** (1.21, 1.53)	NS	NS	0.57** (0.38, 0.86)	2.38*** (1.96, 2.90)
1997 (Reference Category)					
County					
Western	3.49*** (3.07, 3.96)				

Table 9–Continued

Independent Variables	Aggregate of the Four Counties (s = 17,957) (m = 8) (n = 17,949) Odds Ratio (95% CI)	Western County (s = 1,671) (m = 1) (n = 1,670) Odds Ratio (95% CI)	Rich County (s = 5,565) (m = 0) (n = 5,565) Odds Ratio (95% CI)	Mid-State County (s = 1,259) (m = 0) (n = 1,259) Odds Ratio (95% CI)	Metro County (s = 9,462) (m = 7) (n = 9,455) Odds Ratio (95% CI)
County					
Rich (1)	4.21*** (3.82, 4.65)				
Mid-State (1)	3.55*** (3.08, 4.10)				
Metro (Reference Category)					
Crime Category					
Assaultive (1)	1.41*** (1.27, 1.57)	1.94*** (1.38, 2.72)	1.40*** (1.18, 1.67)	NS	1.33** (1.11, 1.58)
Drug Offense (1)	0.75*** (0.69, 0.82)	0.68** (0.53, 0.89)	NS	NS	0.72*** (0.64, 0.81)
Non Assaultive (Reference Category)					
Model Accuracy	74.39%	69.06%	73.05%	68.63%	78.02%

Note: *p < .05; **p < .01; ***p < .001; (s) = number of selected cases; (m) = number of cases rejected because of missing data; (n) = number of cases included in the analysis; CI = confidence interval; C = constant for all selected cases; NS = no statistically significant association with the dependent variable at the .05 level.

2.16 times, 2.44 times, 2.01 times and 1.96 times higher for male offenders than for female offenders in the Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties respectively ($p < .001$). The odds of receiving an incarcerative sentence are 1.17 and 1.40 times higher with male judges than with female judges in the Aggregate of the Four Counties ($p < .01$) and Metro County ($p < .001$) respectively. In Mid-State County, the odds of an incarcerative sentence are 1.43 times higher with a female judge than with a male judge ($p < .05$). This variable was omitted for Western County since all their judges are male, and was not statistically significant in Rich County.

Holding true to earlier patterns, race continues to be an important predictor of sentencing outcomes in some jurisdictions. The odds of receiving an incarcerative sentence are 1.26 times, 1.30 times and 1.68 times higher for non white defendants than for white defendants in the Aggregate of the Four Counties, Rich and Mid-State Counties respectively ($p < .001$). This variable was not a statistically significant predictor of sentencing outcome in Western and Metro Counties. Interestingly, the odds of receiving an incarcerative sentence are 1.27 times higher in Metro County if the sentencing judge is non white than if the sentencing judge is white ($p < .001$). This variable was not statistically significant in the Aggregate of the Four Counties and Rich County. The remaining two counties had all white judges.

In the Aggregate of the Four Counties the odds of receiving an incarcerative sentence were 1.16 times higher in 1994 ($p < .05$) and 1.36 times higher in 1996 ($p < .001$) than in 1997 respectively, but not statistically significant in 1992, 1993, and

1995. In Western County, the odds of receiving an incarcerative sentence were 1.16 times higher in 1993 than in 1997 ($p < .05$), but not statistically significant in 1992, 1994 , 1995 and 1996. The odds of receiving an incarcerative sentence in Rich County were 1.79 and 1.61 times higher in 1997 than in 1992 and 1993 respectively ($p < .001$), but not statistically significant in 1994, 1995 and 1996. Similarly, the odds of receiving an incarcerative sentence in Mid-State County were higher in 1997 than in 1992 through 1996 by 1.56 ($p < .05$), 2.70 ($p < .001$), 2.78 ($p < .001$), 2.38 ($p < .001$) and 1.75 ($p < .01$) times respectively. In Metro County, the odds of receiving an incarcerative sentence were 2.06 times higher in 1992, 2.34 times higher in 1993, 1.76 times higher in 1994, 1.26 times higher in 1995 and 2.38 times higher in 1996 than in 1997 respectively. (1995 $p < .05$, otherwise $p < .001$)

The odds of receiving an incarcerative sentence are 3.49 times higher in Western County, 4.21 times higher in Rich County, and 3.55 times higher in Mid-State County than in Metro County respectively ($p < .001$). With regard to the 'Crime' variables, the odds of receiving an incarcerative sentence are higher if the defendant was convicted for an Assaultive offense than for a Non Assaultive offense by 1.41 times in the Aggregate of the Four Counties ($p < .001$), 1.94 times in Western County ($p < .001$), 1.40 times in Rich County ($p < .001$) and 1.33 times in Metro County ($p < .01$). This crime subcategory is not statistically significant in Mid-State County. Further, the odds of receiving an incarcerative sentence are moderately higher for a defendant convicted of a Non Assaultive offense than for a defendant convicted of a Drug Offense in Aggregate of the Four Counties (OR = 1.33) ($p < .001$), Western (OR = 1.47) ($p <$

.01) and Metro County (OR = 1.39) ($p < .001$). The Drug offense subcategory was not statistically significant in Rich and Mid-State Counties. The Model Accuracy for the respective jurisdictions is 74.39 percent, 69.06 percent, 73.05 percent, 68.63 percent and 78.02 percent for the Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties.

Linear Regression Results

The linear regression equation predicts or estimates the average minimum term of imprisonment for offenders in four Michigan counties (see Figure 3). The following linear regression equation indicates the degree of variation in the dependent variable (average minimum term of a prison sentence in years) explained by the model or the independent variables included in the equation. The R^2 (or Coefficient of Determination) indicates the percentage of the variation in the average minimum term of a prison sentence that is explained by the model. (O'Sullivan & Rassel, 1989, p.371)

$Y = a + bX_1 + bX_2 \ldots bX_n$

Y = dependent variable

a = constant or intercept

b_1 = regression coefficient for X_1 association with Y while controlling for X_2 through X_n

X_1 = independent variable X_1

b_2 = regression coefficient for X_2 association with Y while controlling for X_1, X_3 through X_n

X_2 = independent variable X_2

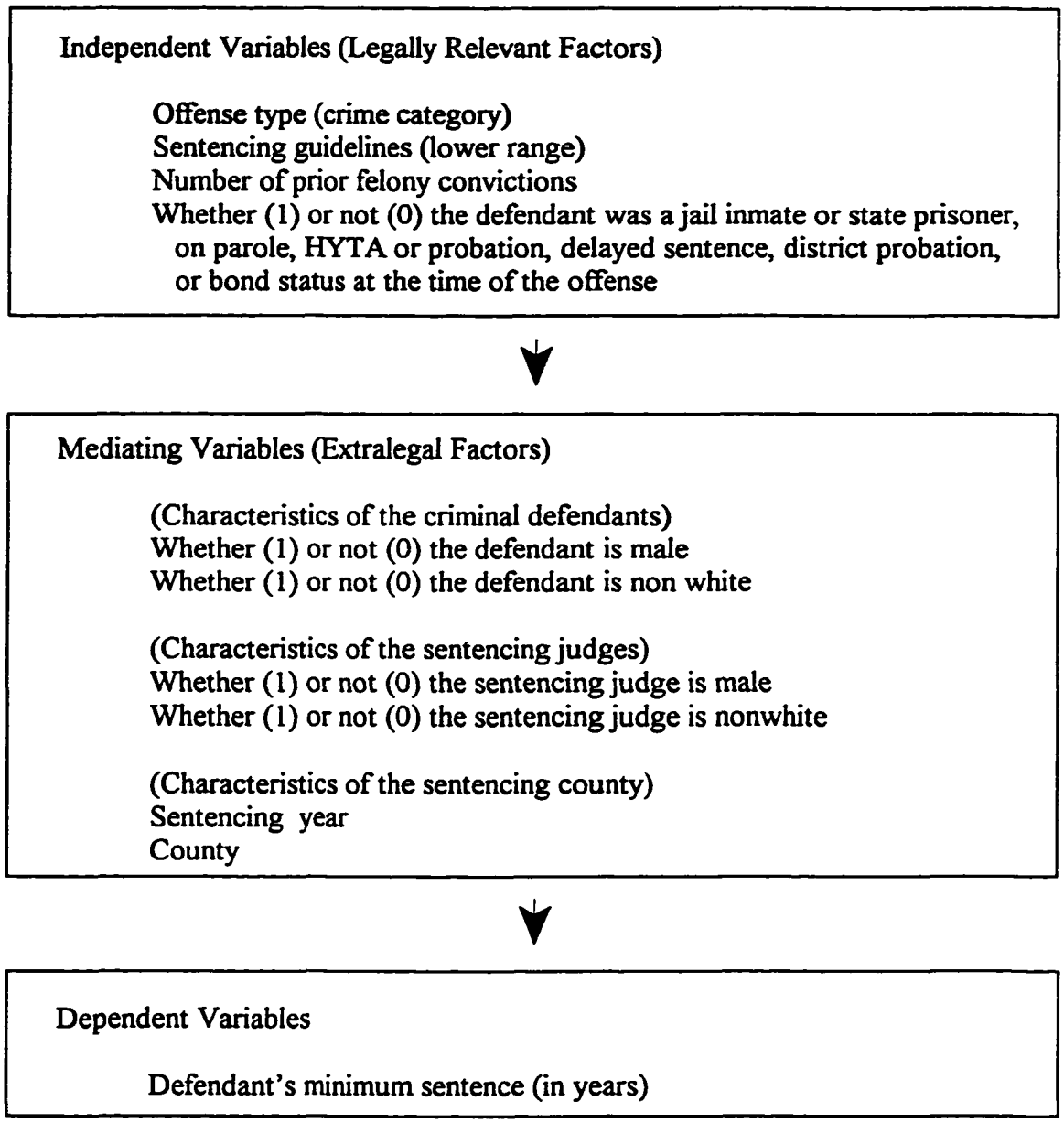

Figure 3. Modified Linear Regression Model to Test the Bounded Rationality Theory of Judicial Decision-making under Michigan Sentencing Guidelines.

Table 10 shows the linear regression results indicating the coefficients for predicting the average minimum term of imprisonment from a sample of felony cases in four Michigan counties.

Table 10

Linear Regression Results Indicating the Coefficients for Predicting the Average Minimum Term of a Prison Sentence From a Sample of Felony Cases in Four Michigan Counties

Independent Variables	Aggregate of the Four Counties (n = 4,824) b (Beta)	Western County (n = 476) b (Beta)	Rich County (n = 1,364) b (Beta)	Mid-State County (n = 432) b (Beta)	Metro County (n = 2,549) b (Beta)
Constant	17.33*** (-)	11.35*** (-)	-6.85* (-)	-20.42** (-)	62.27*** (-)
Prior Felony Convictions	1.36*** (0.05)	X	1.70*** (0.07)	8.70*** (0.21)	X
Sentencing Guidelines Minimum Score	1.05*** (0.49)	1.06*** (0.56)	1.25*** (0.61)	1.00*** (0.49)	0.95*** (0.43)
Criminal Justice Status Active Status/Yes (1)	X	X	X	X	X
Judge's Gender Male (1)	X	C	X	X	-9.54* (-0.04)
Judge's Race Non White (1)	X	C	X	C	X
Defendant's Gender Male (1)	-16.06*** (-0.04)	X	X	X	-44.92 (-0.09)

Table 10–Continued

Independent Variables	Aggregate of the Four Counties (n = 4,824) b (Beta)	Western County (n = 476) b (Beta)	Rich County (n = 1,364) b (Beta)	Mid-State County (n = 432) b (Beta)	Metro County (n = 2,549) b (Beta)
Defendant's Race Non White (1)	X	X	X	20.92** (0.11)	X
Year of Sentencing					
1992 (1)	X	X	X	X	X
1993 (1)	X	X		X	X
1994 (1)	7.63** (0.03)	X	12.75** (0.06)	29.04** (0.11)	X
1995 (1)	X	X	X	X	X
1996 (1)	X	X	X	X	-11.56* (-0.04)
1997 (1)	X	X	X	X	-11.57* (-0.04)
County					
Western	X				
Rich	-7.00** (-0.04)				

Table 10–Continued

Independent Variables	Aggregate of the Four Counties (n = 4,824) b (Beta)	Western County (n = 476) b (Beta)	Rich County (n = 1,364) b (Beta)	Mid-State County (n = 432) b (Beta)	Metro County (n = 2,549) b (Beta)
County					
Mid-State (1)	8.84* (0.03)				
Metro (Reference Category)	X				
Crime Category					
Assaultive (1)	14.80*** (0.08)	X	X	27.80*** (0.14)	18.57*** (0.10)
Drug Offense (1)	X	X	X	X	X
Non Assaultive (1)	X	X	X	X	X
Adjusted R^2	0.29	0.32	0.38	0.37	0.25
F	277.12***	219.71***	274.09***	51.02***	142.22***
Stepwise Model Used No.	7	1	3	5	6

Note: *p < .05; **p < .01; ***p < .001; (n) = number of cases included in the analysis; C = constant for all selected cases; X = excluded from model through the Stepwise method.

In the Aggregate of the Four Counties, the predicted average minimum term of imprisonment is:

Y = 17.33 + (Prior Felony Convictions * 1.36) + (SGL Minimum x 1.05) - (if the defendant is male, subtract 16.06) + (if sentenced in 1994, add 7.63) - (if sentenced in Rich County, subtract 7.00) + (if sentenced in Mid-State County, add 8.84) + (if sentenced of an Assaultive offense, add 14.80).

The Adjusted R^2 is .29 and F is 277.12 ($p < .001$). The product of the SGL minimum should be divided by 12 because this independent variable is measured in months and the dependent variable is measured in years. Dividing the product of the SGL minimum by 12 months would convert the figure to its equivalent in years. This rule also applies to subsequent equations that include the SGL minimum as an independent variable.

In Western County, the predicted average minimum term of imprisonment is:

Y = 11.35 + (SGL Minimum x 1.06).

The Adjusted R^2 is .32 and F is 219.71 ($p < .001$).

In Rich County, the predicted average minimum term of imprisonment is:

Y = -6.85 + (Prior Felony Convictions * 1.70) + (SGL Minimum x 1.25) + (if sentenced in 1994, add 12.75).

The Adjusted R^2 is .38 and F is 274.01 ($p < .001$).

In Mid-State County, the predicted average minimum term of imprisonment is:

Y = -20.42 + (Prior Felony Convictions * 8.70) + (SGL Minimum x 1.00) + (if the defendant is non white, add 20.92) + (if sentenced in 1994, add 29.04) + (if

sentenced of an Assaultive offense, add 27.80).

The Adjusted R^2 is.37 and F is 51.02 ($p < .001$).

In Metro County, the predicted average minimum term of imprisonment is:

Y = 62.27 + (SGL Minimum x 0.95) - (if the judge is male, subtract 9.54) - (if the defendant is male, subtract 44.92) - (if sentenced in 1996, subtract 11.56 or if sentenced in 1997, subtract 11.57) + (if sentenced of an Assaultive offense, add 18.57).

The Adjusted R^2 is .25 and F is 142.22 ($p < .001$).

In general, the adjusted coefficients of determination in the regression models indicate that less than half of the variations in the average minimum terms of imprisonment are explained by the models. Therefore, it is important to stress that only 29 percent, 32 percent, 38 percent, 37 percent, and 25 percent of the variations in the average minimum terms of imprisonment in the Aggregate of the Four Counties, Western, Rich, Mid-State, and Metro Counties respectively, are explained by the regression models.

In all jurisdictions, a one unit increase in the SGL minimum score is associated with an increase in the predicted average minimum term of a prison sentence ($p < .001$). In the Aggregate of the Four Counties, Rich and Metro Counties, a one unit increase in the prior felony conviction variable is associated with an increase in the estimated average minimum term of imprisonment ($p < .001$). This variable was excluded from the regression equation models in Western and Metro Counties.

With regard to the year of sentencing, the regression models predict that an

offender sentenced to state imprisonment in 1994 would have received a higher minimum term of imprisonment in the Aggregate of the Four Counties, Rich and Mid-State Counties ($p < .01$), but not necessarily in Western or Metro Counties. Interestingly, an offender sentenced to imprisonment in 1996 or 1997 in Metro County is predicted to receive a lower minimum term of imprisonment ($p < .05$). The 1996 and 1997 sentencing years do not appear to be statistically significant factors in the regression models of the other jurisdictions.

In terms of 'between county' differences, the regression model for the Aggregate of the Four Counties estimate a higher average minimum term of imprisonment for offenders sentenced in Mid-State County ($p < .05$), and a lower average minimum term of imprisonment for offenders sentenced in Rich County ($p < .01$). This variable was not statistically significant in the regression models of Western and Metro Counties. Further, offense type and severity appear to be statistically significant factors in predicting the average minimum term of imprisonment in the Aggregate of the Four Counties, Mid-State and Metro Counties, but not in Western and Rich Counties. In the Aggregate of the Four Counties, Mid-State and Metro Counties, offenders convicted of Assaultive crimes are predicted to receive a higher average minimum term of imprisonment ($p < .001$).

With regard to gender, in Metro County, the estimated average minimum term of imprisonment is lower for a male defendant ($p < .001$) or for a defendant sentenced by a male judge ($p < .05$). Regarding race, in Mid-State County, the predicted average minimum term of a prison sentence is higher for a non white defendant ($p < .01$).

These variables are not statistically significant in the respective regression models of the other counties.

Hypotheses Testing

Null Hypothesis I: There are no differences in sentencing decisions between criminal defendants who are convicted of comparable felonies and have similar criminal histories, but are of different races.

There is evidence to reject the null hypothesis with regard to prison sentences in all jurisdictions. The odds of state imprisonment are higher for a non white defendant than for a white defendant in Aggregate of the Four Counties, Western, Rich, Mid-State and Metro Counties. Furthermore, in cases with SGL minimum scores less than or equal to 12 months the pattern remains the same.

There is evidence to reject the null hypothesis with regard to overall incarceration in the Aggregate of the Four Counties, Rich, Mid-State and Metro Counties where the odds of receiving an incarcerative sentence are higher for a non white defendant than for a white defendant, but not in Western County where the variable is not statistically significant. Further, there is evidence to reject the null hypothesis with regard to overall incarceration in cases with SGL minimum scores less than or equal to 12 months in the Aggregate of the Four Counties, Rich and Mid-State Counties because the odds of receiving an incarcerative sentence are higher for a non white defendant than for a white defendant, but not in Western and Metro Counties where the variable is not statistically significant.

There is evidence to reject the null hypothesis with regard to average minimum term of imprisonment in Mid-State County where a non white defendant is estimated to have a higher minimum term of imprisonment, but not in other jurisdictions where the variable is not statistically significant.

Null Hypothesis II: There are no differences in sentencing decisions made by different judicial circuit court systems for criminal defendants who were convicted of comparable felonies and have similar criminal histories.

There is evidence to reject the null hypothesis with regard to prison sentences in Western, Mid-State and Metro Counties, but not in Rich County. The odds of receiving a prison sentence are 1.38 times higher in Western County and 2.15 times higher in Mid-State County than in Metro County, but not statistically significant in Rich County. Further, there is evidence to reject the null hypothesis with regard to cases with SGL minimum scores less than or equal to 12 months in all counties. The odds of receiving a prison sentence are 1.36 times higher in Western County and 2.19 times higher in Mid-State County than in Metro County. However, the odds of receiving a prison sentence are 1.16 times higher in Metro County than in Rich County.

There is evidence to reject the null hypothesis with regard to overall incarceration since differences exist between the counties. The odds of being incarcerated in Western County are 3.35 times higher than in Metro County, and in Mid-State County the odds of incarceration are 3.47 times higher than in Metro County. Unlike the previous analysis which showed that the odds of imprisonment are higher in Metro County than in Rich County, the odds of overall incarceration are 3.96 times higher in Rich

County than in Metro County . Further, in cases with SGL minimum scores less than or equal to 12 months, the odds of receiving an incarcerative sentence are 3.49 times higher in Western County, 4.21 times higher in Rich County, and 3.55 times higher in Mid-State County than in Metro County respectively.

There is evidence to reject the null hypothesis with regard to the average minimum term of imprisonment in Rich and Mid-State Counties, but not in Western and Metro Counties. A defendant sentenced in Rich County is estimated to have a lower average minimum term of imprisonment, and a defendant sentenced in Mid-State County is estimated to have a higher average minimum term of imprisonment. This factor was not statistically significant in Western and Metro Counties.

Null Hypothesis III: There are no differences in sentencing decisions made by judges of different races for criminal defendants who were convicted of comparable felonies and have similar criminal histories.

There is evidence to reject the null hypothesis with regard to prison sentences in the Aggregate of the Four Counties and Metro County, but not in Western, Rich and Mid-State Counties. The odds of receiving a prison sentence are higher in the Aggregate of the Four Counties and Metro County with a white judge than with a non white judge. Further, in cases with SGL minimum scores less than or equal to 12 months, the odds of receiving a prison sentence are still higher in the Aggregate of the Four Counties and Metro County when the judge is white than when the judge is non white. This variable is not statistically significant in Rich County, and Western and Mid-State Counties were omitted from the analysis since all their judges are white.

There is evidence to reject the null hypothesis with regard to overall incarceration in Metro County, where the odds of receiving an incarcerative sentence are higher with a non white judge than with a white judge, but not in the other jurisdictions. This variable is not statistically significant in the Aggregate of the Four Counties and Rich County, and Western and Mid-State Counties were omitted from the analysis since all their judges are white. The results are similar with regard to cases with SGL minimum scores less than or equal to 12 months.

There is no evidence to reject the null hypothesis with regard to the average minimum term of a prison sentence in all jurisdictions because the variable is not statistically significant in the models for the Aggregate of the Four Counties, Rich and Metro Counties. Further, Western and Mid-State Counties were omitted from the analysis since both counties have an all white bench.

Null Hypothesis IV: There are no differences in sentencing decisions made by male and female judges for criminal defendants who were convicted of comparable felonies and have similar criminal histories.

There is evidence to reject the null hypothesis with regard to prison sentences in Rich County, but not in the other four jurisdictions. In Rich County, the odds of receiving a prison sentence are higher with a female judge than with a male judge. However, this variable is not statistically significant in the Aggregate of the Four Counties, Mid-State and Metro Counties. Western County was omitted from the analysis since all their judges are male. Further, this variable is not statistically significant in all jurisdictions in cases with SGL minimum scores less than or equal to 12

months.

There is evidence to reject the null hypothesis with regard to overall incarceration in the Aggregate of the Four Counties, Metro and Mid-State Counties, but not in Western and Rich Counties. Again, Western County was not included in the analysis since it has an all male bench. In the Aggregate of the Four Counties and Metro County, the odds of overall incarceration are higher with a male judge than with a female judge. However, in Mid-State County, the odds of overall incarceration are higher with a female judge than with a male judge. The results are similar for cases with SGL minimum scores less than or equal to 12 months.

There is evidence to reject the null hypothesis with regard to the average minimum term of imprisonment in Metro County, but not in other jurisdictions. A defendant sentenced by a male judge in Metro County is estimated to have a lower minimum term of imprisonment than a defendant sentenced by a female judge. However, this variable is not statistically significant in the regression models for the Aggregate of the Four Counties, Rich and Mid-State Counties. Western County was omitted from this analysis since all their judges are men.

Null Hypothesis V: There are no differences in sentencing decisions made for male and female criminal defendants who were convicted of comparable felonies and have similar criminal histories.

There is evidence to reject the null hypothesis with regard to state imprisonment. The odds of receiving a prison sentence are higher for a male defendant than for a female defendant. However, there is evidence to reject the null hypothesis with

regard to state imprisonment in cases with SGL minimum scores that are less than or equal to 12 months, in the Aggregate of the Four Counties, Rich, Mid-State and Metro Counties, but not in Western County where the variable is not statistically significant. In the Aggregate of the Four Counties, Rich, Mid-State and Metro Counties, the odds of receiving a prison sentence are higher for male defendants than for female defendants. It is noteworthy that in Mid-State County, the defendant's gender appear to be a better predictor of the odds of imprisonment than the defendant's criminal justice status. Regarding overall incarceration, there is evidence suggesting that being male essentially doubles the odds of incarceration. In all jurisdictions, the odds of receiving an incarcerative sentence are higher when the defendant is male than when the defendant is female even in cases with SGL minimum scores less than or equal to 12 months.

There is evidence to reject the null hypothesis with regard to the average minimum term of imprisonment in the Aggregate of the Four Counties, Metro County, but not Western, Rich and Mid-State Counties. A male defendant in the Aggregate of the Four Counties and Metro County is estimated to receive a lower minimum term of imprisonment. However, this variable is not statistically significant in the regression models for Western, Rich and Mid-State Counties.

CHAPTER VI

IMPLICATIONS, SUMMARY AND CONCLUSIONS, RECOMMENDATIONS

Introduction

The purposes of this study were to: (a) fill the existing gap in information by adding to the body of knowledge about sentencing decision-making in jurisdictions which have implemented sentencing guidelines, particularly new information about the sentencing practices of male and female circuit court judges; (b) evaluate the effectiveness of the Michigan Supreme Court sentencing guidelines in reducing unwarranted sentencing disparities and ensuring uniformity in the sentencing of felony defendants; (c) provide prediction models showing the probability of imprisonment for criminal defendants which can be used to estimate the cost implications of varying sentencing decisions; and (d) provide prediction models showing the probabilities of jail and prison confinement (based on historical local sentencing practices) for some offenders who can be targeted for community-based/ alternative to incarceration programs.

The key elements of this study, legally relevant sentencing criteria (for example, offense type and severity, prior felony conviction, and sentencing guidelines) and extra-legal factors, or legally irrelevant sentencing criteria (for example, defendant's race and gender, age) were found to be useful in predicting state imprisonment, overall incarceration and the average minimum term of imprisonment. Implications related to

the conceptual framework will be discussed followed by summary and conclusions, implications for public policy, and recommendations for future research.

Implications Related to the Conceptual Framework

The underlying logic and conceptual framework for this study is that both legally relevant factors and extralegal factors affect sentencing outcomes. Even though legal factors are considered the major determinants of sentencing outcomes, the extra-legal factors or mediating variables appear to have an indirect effect on sentencing outcomes.

The test of the theoretical framework indicates that indeed both legally prescribed and extralegal variables affect sentencing outcomes in Michigan, notwithstanding the use of guidelines. The study found that in general, legally prescribed variables, particularly the defendant's status with respect to criminal justice supervision at the time of the offense, prior felony convictions, sentencing guidelines, and offense type/ severity are important predictors of imprisonment and overall incarceration. In addition to the legal factors, the defendant's gender and race were also found to be important in predicting state imprisonment and overall incarceration. However, with regard to the average minimum term of imprisonment, the legally prescribed factors, particularly prior felony convictions, sentencing guidelines, and offense type/severity, are the major predictors of the average minimum term of imprisonment. In general, the extra-legal variables are not as important for the average minimum term of imprisonment as they are for predicting state imprisonment and overall incarceration -- the in/out

sentencing decisions.

The conceptual framework casts sentencing as a human or "bounded rationality" decision-making process which cannot be subjected to the mechanics of the "rational man" model. Social and cultural factors influence decision-makers, thus giving rise to unexplained variances in sentencing outcomes. The findings of this study are consistent with the theoretical framework because unwarranted disparities in sentencing persist despite the imposition of a more 'rational' and 'objective' sentencing decision-making instrument, namely, the Michigan Sentencing Guidelines.

Summary and Conclusions

Logistic Regression was used to predict sentencing decisions with regard to state imprisonment and overall incarceration, and Ordinary Least Squares was used to predict the average minimum term of imprisonment. This study controlled for legal variables, such as SGL scores, prior felony convictions, offense type/severity, and the offender's criminal justice status. These controls address the criticism attributed to Klech and Wilbanks by Ulmer and Kramer (1996) that "extra legal sentencing differences mostly reflect differential criminal involvement and severity by race and gender" (p. 388). Further, this study approximates a pooled cross-sectional time series since the sentencing year and sentencing county were included to control for yearly and county variations.

Four legal variables were found to consistently influence sentencing outcomes: prior criminal convictions, SGL minimum scores, defendant's criminal justice status (a

jail inmate or state prisoner, on parole, HYTA or probation, delayed sentence, or bond status at the time of the offense), and offense type/severity. A prior felony conviction increases the odds of receiving a prison sentence, including cases with SGL minimum scores that are less than or equal to 12 months. The effect of this variable is also statistically significant with regard to overall incarceration because it increases the odds of receiving an incarcerative sentence, including cases with SGL scores less than or equal to 12 months. Further, the prior felony conviction variable is predicted to increase the average minimum term of imprisonment in three of the five jurisdictions in this study.

The sentencing guideline variable is also a good predictor of sentencing outcomes inasmuch as an increase in the SGL minimum score increases the odds of receiving a prison sentence, including cases with SGL minimum scores less than or equal to 12 months. The SGL variable also increases the odds of receiving an incarcerative sentence even in cases with SGL minimum scores less than or equal to 12 months. The offender's status with the criminal justice system appears to be the strongest predictor of state imprisonment and overall incarceration because the odds of receiving a prison sentence are higher for defendants who are under criminal justice supervision at the time of the offense than for defendants who are not under criminal justice supervision at the time of the offense including cases with SGL minimum scores less than or equal to 12 months. Also, the odds of receiving an incarcerative sentence are higher for defendants under active criminal justice supervision than for defendants who are not under supervision at the time of the offense even after controlling for cases with SGL minimum scores less than or equal to 12 months.

Regarding offense type/severity, the results appear to indicate that generally offenses classified as 'Assaultive' have higher odds of receiving state imprisonment and overall incarceration than cases classified as 'Non Assaultive' and 'Drug Offense'. It is somewhat surprising to observe that cases classified as 'Drug Offenses' generally had a lesser likelihood of state imprisonment and overall incarceration than cases classified as 'Non Assaultive'. A plausible explanation for the anomaly was articulated by Stolzenberg and D'Allessio (1994) when they stated that the failure to capture adequately the within-offense variation and severity is problematic (p. 308). Therefore, even though some drug offenses carry severe penalties up to life imprisonment without the possibility of parole, many offenses also classified under this category do not appear to carry severe penalties.

Despite the key role of legal factors in the sentencing process, some extralegal variables were found to influence sentencing outcomes in the full model and in the model of each county. The defendant's race and gender are statistically significant factors in predicting state imprisonment and overall incarceration, but not the average minimum term of a prison sentence. The findings are consistent with the conclusions reached by the following researchers among others: Unnever, Frazier and Henretta (1980); Petersilia (1985); Humphrey and Fogarty (1987); Welch, Combs, and Gruhl (1988); Klein, Petersillia and Turner (1990) who found no link between length of sentence and ethnicity; Spohn (1990, 1995); Kramer and Steffensmeier (1993); Chiricos and Crawford (1995); Ulmer and Kramer (1996); Ulmer (1997). However, the findings conflict with the conclusions reached by Pruit and Wilson (1983) who argued that

race did not have any effect on both the decision to imprison and the length of sentences after the year 1970, and Myers and Talarico (1986) who found no evidence in a Georgia study that blacks were punished more harshly than whites when offense severity was taken into account.

The odds of receiving a prison sentence are higher for non white defendants than for white defendants including cases with SGL minimum scores less than or equal to 12 months. Also, the odds of receiving an incarcerative sentence are higher for non white defendants than for white defendants in 80 percent of the jurisdictions in the study, and in cases with SGL minimum scores less than or equal to 12 months the odds of overall incarceration are higher for non white defendants than for white defendants in 60 percent of the jurisdictions in the study. With regard to predicting the average minimum term of imprisonment, non white defendants are estimated to receive a higher average minimum prison term in Mid-State County, but not in other jurisdictions.

Regarding the defendant's gender, the odds of state imprisonment are higher for male defendants than for female defendants in all jurisdictions, including cases with SGL minimum scores less than or equal to 12 months. The trend remains the same with regard to overall incarceration where the odds of receiving an incarcerative sentence are higher for male defendants than for female defendants including cases with SGL minimum scores less than or equal to 12 months. With regard to predicting the average minimum term of imprisonment, male defendants are estimated to receive a lower average minimum prison term in the Aggregate of the Four Counties and Metro County, but not in other jurisdictions.

The results are mixed with regard to the impact of the judge's race and gender in the sentencing process. For example, the odds of receiving a prison sentence are higher in Rich County if the sentencing judge is female than if the judge is male. However, the judge's gender is not statistically significant in the other jurisdictions, and not significant in any jurisdiction in cases with SGL minimum scores less than or equal to 12 months. Keep in mind that Western County has an all male bench. Regarding overall incarceration, the odds of receiving an incarcerative sentence are higher in the Aggregate of the Four Counties and Metro County if the sentencing judge is male than if the sentencing judge is female. In Mid-State County, the odds of overall incarceration are higher if the sentencing judge is female, but not significant in Rich County. Similar results were obtained in cases with SGL minimum scores less than or equal to 12 months.

In terms of the judge's race, the results from this study appear to confirm Spohn's (1990) conclusion that the judge's race has a slight but statistically significant effect on the decision to incarcerate, and that both black and white judges discriminate against black offenders with respect to the decision to incarcerate (pp. 1197-1216). Further, Uhlman (1979) found in his study of decision-making by black judges in a large urban city that even though the average sentence accorded a black defendant is 18 percent more severe than the average sentence given a white, black judges sentence black defendants more harshly than white judges sentenced blacks (p. 70). In this study, the odds of receiving state imprisonment are higher with white judges than with non white judges in the Aggregate of the Four Counties and Metro County, but are not

statistically significant in Rich County. Western and Mid-State Counties have an all white bench and Rich County has only one nonwhite judge out of approximately twenty judges on the circuit bench. However, this variable is not statistically significant in cases with SGL minimum scores less than or equal to 12 months. Interestingly, with regard to overall incarceration, the odds of receiving an incarcerative sentence are higher with non white judges than with white judges in Metro County, but are not statistically significant in other jurisdictions or with regard to predicting the average minimum term of imprisonment. The same applies to cases with SGL minimum scores less than or equal to 12 months.

Eisenstein et al. (1988) and Ulmer (1997) noted the variances in sentencing practices between local jurisdictions. The sizes of the court communities are associated with their use of incarcerative options. In general, the mid-size counties (Western and Mid-State) have significantly higher state imprisonment and overall incarceration levels than the larger counties (Rich and Metro). It is noteworthy that although Metro County has a higher imprisonment rate than Rich County, the latter has a higher rate of overall incarceration than the former. This suggests that Rich County relies more on the use of jail sentences than Metro County, while the latter relies more on the use of prison sentences than the former. Also defendants sentenced in Mid-State County have a higher predicted average minimum term of imprisonment and defendants in Rich County have a lower predicted average minimum term of imprisonment. This variable is not statistically significant in the regression models of Western and Metro Counties.

Another interesting finding is that in general, sentencing jurisdictions have a

significantly higher incarceration rate in earlier years than in the later years. The on-going push for appropriate and responsible allocation of fiscal resources within the criminal justice system may partially explain this observation. With the passage of the Michigan Community Corrections' Act in 1988, and subsequent increases in budgetary allocations for alternatives to incarceration programs, Michigan expanded its use of community-based alternatives and noticed a reduction in prison admissions (Michigan Department of Corrections, 1997).

In summary, legal factors contained in Michigan Sentencing Guidelines (offense type/severity, prior felony convictions, and criminal justice status) appear to be the most influential predictors of state imprisonment, overall incarcerations and, to a limited extent, sentence length. However, extralegal factors such as the defendant's race and gender, and the sentencing jurisdictions appear to contribute to unwarranted disparities in the incarceration of criminal defendants in the full model and in the model of each county.

Implications for Public Policy

There are clear public policy implications which can be drawn from this study. The first is related to resource allocation. The results of the study indicate that non white and male defendants are disproportionately imprisoned and incarcerated. In effect, some legally similar defendants receive dissimilar sentences. While some of these defendants are considered appropriate for the less restrictive and cost efficient community-based correctional programs, the others are imprisoned or incarcerated in

jail. The policy implication is clear: why waste public funds in sentencing some defendants (who have similar profiles as other defendants sentenced to community programs) to expensive incarcerative programs when they can be sanctioned appropriately in less restrictive, cost efficient community-based programs?

The second implication relates to two important predictors of sentencing outcomes. This study shows that besides offense type/severity and sentencing guidelines, the most consistent predictors of state imprisonment and overall incarceration are the defendant's criminal justice status and prior felony conviction variables. There is a need for more policy and program plans aimed at reducing the re-offending rates or recidivism. By making the reduction of recidivism a top priority, the state might realize significant savings from reductions in prison admissions and overall incarceration.

The third implication relates to the public trust and resource allocation. The fact that non white defendants continue to be disproportionately imprisoned and incarcerated appears to violate the trust that citizens hold in judicial institutions. Are all men, and women, really created equal and treated as equals? This does not appear to be the case in relation to sentencing practices in Michigan's circuit courts. Further, substantial economic and social costs related to incarcerative sentences imposed on otherwise community-eligible non white and male defendants may be reduced, if not eliminated, with the strict enforcement of sentencing guidelines and regular monitoring of sentencing practices in Michigan's courts.

The state may also benefit from effective community education about the cost implications, appropriate use, and effectiveness of various sanctions and services. Fur-

ther, the publication and dissemination of sentencing data and statistics to the public at large may encourage prudence and responsibility in the use of community resources for sentencing purposes.

Recommendations for Future Research

The results of this study suggest the need for continued investigation of issues about unwarranted sentencing disparities in Michigan's trail courts. In addition, the results of this study suggest the need to continually monitor the use of sentencing guidelines and practices. Strengthening the guidelines by providing more structure and improving the enforcement mechanism appears desirable.

Qualitative studies need to be conducted in select jurisdictions to learn more about the causes of unwarranted sentencing disparities. For example, studies that employ interview and ethnographic techniques to probe the attitudes and values of judges and other key players in court systems around the state may enrich our understanding of court communities and account for the unexplained variations in sentencing outcomes.

More research should be conducted with variables that are not currently captured in the BIR database, particularly the mode of conviction (plea, judge or by jury) and the type of legal defense available to the defendant (attorney retained by the defendant or a court appointed attorney/public defender). Ulmer (1997) found the mode of conviction to be an important predictor of sentencing outcomes.

In summary, there is need to continue investigating the issues about

unwarranted disparities in sentencing in order to find more meaningful approaches for reducing or eliminating a problem that has contributed to increasing the already high cost of Michigan's correctional system and reducing the quality of justice dispensed to Michigan's male and non white criminal defendants.

Appendix A

A Guide to Michigan Department of Corrections' Basic Information Report/Court Disposition Information

04/12/91

FIELD #s (1-7 see page 5) **COURT DISPOSITION RECORD**

8 X. SENTENCING COUNTY (CHARACTERS 1-2)- COUNTY OF THE COURT IN WHICH CLIENT WAS SENTENCED; SEE ATTACHED COUNTY CODE LIST

9 X. DOCKET NUMBER (CHARACTERS 3-11)

MAY HAVE SEVERAL DOCKET NUMBERS PER PERSON AND/OR SEVERAL PERSONS PER DOCKET NUMBER. EACH DOCKET-NUMBER-PERSON COMBINATION WILL HAVE A RECORD.

10 X. PERSON'S NAME (CHARACTERS 12-30)

11 X. ATTEMPT FLAG (CHARACTER 31)
1= ATTEMPTED CRIME NON-ATTEMPT OTHERWISE

12 X. FIRE-ARM - POSSESSION OF A FIREARM FLAG (CHARACTER 32)
1 = ALSO CONVICTED OF GUN LAW NO GUN LAW OTHERWISE

13 X. MICHIGAN COMPILED LAW NUMBER (CHARACTERS 33-42)

14 X. LENGTH OF MAXIMUM TERM ALLOWED -(CHARACTERS 43-44) 99 = LIFE

15 X. TYPE OF TERM FLAG (CHARACTER 45) M = VALUE FOR LENGTH OF MAXIMUM TERM ALLOWED IS NUMBER OF MONTHS, OTHERWISE VALUE IS THE NUMBER OF YEARS

16 X. SEX OF PERSON (CHARACTER 46) M = MALE F = FEMALE

17 X. DATE PERSON WAS SENTENCED (CHARACTERS 47-52)

18 X. SENTENCING JUDGE'S INITIALS (CHARACTERS 53-55)

19 X. CASELOAD NUMBER FOR AGENT WHO PREPARED PSI(CHARACTERS 56-58)

20 X. PERSON'S STATUS AT TIME OF OFFENSE (CHARACTER 59)

8 = JAIL OR STATE PRISONER
6 = PAROLE
4 = HYTA OR PROBATION
3 = DELAYED SENTENCE
D = DISTRICT PROBATION
B = ON BOND
0 = NONE

21 X. SENTENCE RECOMMENDED BY AGENT (CHARACTER 60)

1 = NO RECOMMENDATION
2 = JAIL, FINE, COST, RESTITUTION OR COMBINATION THEREOF
3 = PROBATION

4 = PRISON
9 = CASE NOT REFERRED FOR PSI
Y = YOUTHFUL TRAINEE - PROBATION
C = YOUTHFUL TRAINEE - PRISON
D = DELAYED SENTENCE
O = OTHER

22 15. MINIMUM TERM IMPOSED (CHARACTERS 61-63)VALUE IS IN YEARS ROUNDED TO THE NEAREST TENTH OF YEAR FOR PRISON SENTENCES; WILL BE BLANK FOR OTHER TYPES OF DISPOSITIONS
990 = LIFE OR NINETY-NINE YEARS OR MORE

23 16. MAXIMUM TERM IMPOSED - (CHARACTERS 64-66)SAME FORMAT AS MINIMUM TERM FOR PRISON SENTENCES; NUMBER OF MONTHS FOR PROBATION DISPOSITIONS

24 17. JAIL TERM IMPOSED FLAG (CHARACTER 67)
1 = JAIL TERM IMPOSED, OTHERWISE NO JAIL TERM

25 18. FINES OR COST FLAG (CHARACTER 68)
1 = FINE OR COST TO BE PAID, OTHERWISE NO FINE OR COST

26 19. RESTITUTION FLAG (CHARACTER 69)
1 = RESTITUTION TO BE PAID, OTHERWISE NO RESTITUTION

27 20. SUPPORT FLAG (CHARACTER 70)
1 = SUPPORT TO BE PAID, OTHERWISE NO SUPPORT

28 21. BIRTHYEAR - YEAR PERSON WAS BORN (CHARACTERS 71-72)

29 22. RACE OF PERSON (CHARACTER 73)

0 = WHITE
1 = BLACK
2 = AMERICAN INDIAN
3 = MEXICAN
4 = CHINESE
5 = JAPANESE
6 = OTHER
OTHERWISE UNKNOWN

— 23. STATE IN WHICH PERSON WAS BORN (CHARACTERS 74-75)

30 24. NUMBER OF PRIOR JUVENILE COMMITMENTS (CHARACTER 76) NUMBER OF TIMES COMMITTED TO A JUVENILE FACILITY, 9 = 9 OR MORE.

31 25. NUMBER OF PRIOR ADULT PROBATIONS (CHARACTER 77) 9 = 9 OR MORE.

32 26. NUMBER OF PRIOR JAIL TERMS (CHARACTER 78) 9 = 9 OR MORE.

33 ~~27~~. NUMBER OF PRIOR PRISON TERMS(CHARACTER 79) 9 = 9 OR MORE.

34 ~~28~~. TYPE OF DISPOSITION RECEIVED (CHARACTER 80)

B Boot Camp
5 DSS

1 = DELAYED OR SUSPENDED SENTENCE
2 = JAIL, FINE, RESTITUTION OR COST
3 = PRISON
4 = PROBATION
5 = SUSPENDED SENTENCE (NO LONGER USED)
6 = HYTA GIVEN PROBATION
7 = HYTA SENT TO PRISON CAMP
8 = SENT TO MENTAL HOSPITAL

35 ~~29~~. DISTRICT CONTAINING SENTENCING COURT (CHARACTER 81)

36 ~~30~~. CIRCUIT CONTAINING SENTENCING COURT (CHARACTER 82-83)

3RD CIRCUIT SPLIT INTO 82 = WAYNE COUNTY, Q2 = DETROIT RECORDER'S COURT FOR 1981; ALL OF THE 1982 3RD CIRCUIT CODED AS "82".

37 ~~31~~. CRIME CATEGORY (CHARACTER 84)SEE ATTACHED CRIME CATEGORY LIST

38 ~~32~~. AGE AT FIRST ARREST (CHARACTERS 85-86)

39 ~~33~~. NUMBER OF PRIOR FELONY CONVICTIONS (CHARACTERS 87-88)

40 ~~34~~. THE LOW END OF THE SENTENCING GUIDELINE RECOMMENDATION (CHARACTERS 89-91)

41 ~~35~~. THE HIGH END OF THE SENTENCING GUIDELINE RECOMMENDATION (CHARACTERS 92-94)

42 ~~36~~. SENTENCING GUIDELINES NOT APPLICABLE (CHARACTER 95) AN "X" INDICATES THAT THE SENTENCING GUIDELINE IS NOT APPLICABLE.

43 ~~37~~. SOCIAL SECURITY NUMBER (CHARACTER 96-104)

44 ~~38~~. SID - STATE POLICE IDENTIFICATION NO. (CHARACTERS 105-112)

— ~~39~~. STATUS AT TIME OF OFFENSE (CHARACTERS 113-121)

45 AN "X" IN POSITION 113 INDICATES NO STATUS WITHIN THE CRIMINAL JUSTICE SYSTEM AT TIME OF OFFENSE

46 " " " " 114 INDICATES THAT THIS PERSON WAS A HYTA CASE AT TIME OF OFFENSE

47 " " " " 115 INDICATES THAT THIS PERSON WAS ON FELONY PROBATION

48 " " " " 116 INDICATES THAT THIS PERSON WAS ON PROBATION FROM THE DISTRICT COURT

49 " " " " 117 INDICATES THAT THIS PERSON WAS ON DELAYED SENTENCE STATUS

50 " " " " 118 INDICATES THAT THIS PERSON WAS ON PAROLE

51 " " " " 119 INDICATES THAT THIS PERSON WAS IN JAIL

52 " " " " 120 INDICATES THAT THIS PERSON WAS IN PRISON

53 " " " " 121 INDICATES THAT THIS PERSON WAS ON BOND

40. FILLER (CHARACTERS 122-150)

Office of Community Corrections
BIR Data -- Field Descriptions

Field #s		Field Name	Paradox Field Type	Description
1	1	ID	A19*	Identifier -- Soc. Sec. No. if present in BIR record, otherwise SID if present, else Name
	2	DISP	A1	Disposition -- coded as Prison, Probation, Split, Jail, Other
	3	MAND	S	Numeric value -- positive integer if Mandatory, otherwise 0 (for obscure INSYTE reasons)
4	4	MCLM	A15	Category of offense, from MDOC INSYTE view (see below)
	5	TLAW	A15	PACC Code
	6	SGLZ	A1	SGL minimum coded as 0, 1-11, 12, 13-24, 25+, Retail Fraud, OUIL3, Other NA, Unknown
	7	AGENTREC	A17	Agent recommendation
	8	PAROLE	A1	Y if on parole, N if not
	9	PROB	A1	C if on Circuit Court probation, else D if on District Court probation, else N
	10	PFC	A2	Prior Felony Convictions coded as "/0", "/1", "2+"
	11	SGLMIN	A3	SGL Minimum Minimum
	12	SGLMAX	A3	SGL Minimum Maximum
	13	SEX	A1	Sex as M or F
5	14	CTY	A2	County number
	15	MONTH	A2	Month of sentencing (as 01, 02, etc.)

* ref. # 4 ⟶ MCLM Categories:

MURDER
ASSAULTIVE
SEX-OFFENDER
ESCAPE
ARSON-OFFENDER
MINOR
CHILD
} ASSAULTIVE

DRUG-OFFENDER
NON-ASSAULTIVE

COUNTY CODE LIST

01	Alcona	30	Hillsdale	59	Montcalm
02	Alger	31	Houghton	60	Montmorency
03	Allegan	32	Huron	61	Muskegon
04	Alpena	33	Ingham	62	Newaygo
05	Antrim	34	Ionia	63	Oakland
06	Arenac	35	Iosco	64	Oceana
07	Baraga	36	Iron	65	Ogemaw
08	Barry	37	Isabella	66	Ontonagon
09	Bay	38	Jackson	67	Osceola
10	Benzie	39	Kalamazoo	68	Oscoda
11	Berrien	40	Kalkaska	69	Otsego
12	Branch	41	Kent	70	Ottawa
13	Calhoun	42	Keweenaw	71	Presque Isle
14	Cass	43	Lake	72	Roscommon
15	Charlevoix	44	Lapeer	73	Saginaw
16	Cheboygan	45	Leelanau	74	St. Clair
17	Chippewa	46	Lenawee	75	St. Joseph
18	Clare	47	Livingston	76	Sanilac
19	Clinton	48	Luce	77	Schoolcraft
20	Crawford	49	Mackinac	78	Shiawassee
21	Delta	50	Macomb	79	Tuscola
22	Dickinson	51	Manistee	80	Van Buren
23	Eaton	52	Marquette	81	Washtenaw
24	Emmet	53	Mason	82	Wayne
25	Genesee	54	Mecosta	83	Wexford
26	Gladwin	55	Menominee	M1	S.C.G.R.
27	Gogebic	56	Midland	Q2	R.C. Detroit
28	Grand Traverse	57	Missaukee		
29	Gratiot	58	Monroe		

NAME_OF_FIELD

Crime Category (Left Justify)

A - Homicide
B - Rape
C - Abduction-Kidnapping
D - Assault
E - Robbery
F - Offenses Against Children
G - Sex
H - Drugs
I - Arson
J - Burglary
K - Larceny
L - Auto Theft
M - Forgery, Utering & Publish.
N - Embezzlement
O - Fraud
P - Bribery
Q - Malicious Destruction
R - Weapons
S - Prostitution
T - Desertion & Non-Support
U - Gambling
V - Interferring with Legal Process
W - Interferring with Public Utilities or Services
X - Miscellaneous
Y - Conspiracy
Z - Motor Vehicle Code Violation

Appendix B

Data Collection Instrument for Judicial Background Information

Appendix B.

Characteristics of **Western County** Judges (1992 - 1997)

year	field018	name	x21	x22	x23	x24	x25
765432			28	85	1	2	2
7654			45	93	1	2	2
765432			45	87	1	2	2
765432			40	83	1	2	1
765432			42	87	1	2	2
32			48	86	1	2	2

Note: Year = sentencing year(s); field018 = initials; name = name; x21 = age; x22 = number of years on the bench; x23 = gender; x24 = race; x25 = prosecutorial experience. Values: x23 (1) = male; x24 (1) = non white; x25 (1) = yes.

Appendix B continued.

Characteristics of **Rich County** Judges (1992 - 1997)

year	field018	name	x21	x22	x23	x24	x25
76			38	76	2	2	2
765432			48	89	1	2	1
765432			30	82	1	2	1
765432			56	91	2	2	1
76543			48	92	2	1	1
765432			37	82	1	2	1
765432			33	76	1	2	2
765432			33	79	1	2	2
7			47	97	2	2	2
7654			39	93	1	2	1
75432			46	86	2	2	2
7			64	97	2	2	2
765432			25	81	1	2	2
765432			48	91	1	2	2
765432			32	76	1	2	2
6452			29	73	1	2	2
65432			21	67	1	2	1
5432			42	88	1	2	2
32			28	73	1	2	1
632			39	79	2	2	2

Note: Year = sentencing year(s); field018 = initials; name = name; x21 = age; x22 = number of years on the bench; x23 = gender; x24 = race; x25 = prosecutorial experience. Values: x23 (1) = male; x24 (1) = non white; x25 (1) = yes.

Appendix B continued.

Characteristics of **Mid-State County** Judges (1992 - 1997)

year	field018	name	x21	x22	x23	x24	x25
765432			49	88	2	2	1
765432			32	87	1	2	2
765432			48	92	1	2	1
765432			44	85	1	2	1
765432			43	91	1	2	2

Note: Year = sentencing year(s); field018 = initials; name = name; x21 = age; x22 = number of years on the bench; x23 = gender; x24 = race; x25 = prosecutorial experience. Values: x23 (1) = male; x24 (1) = non white; x25 (1) = yes.

Appendix B continued.

Characteristics of **Metro County** Judges (1992 - 1997)

year	field018	name	x21	x22	x23	x24	x25
7			57	95	2	2	2
765432			37	74	1	1	1
72			46	87	1	1	2
765432			32	90	1	2	2
765			59	94	1	1	2
765432			26	72	1	2	2
76543			53	92	2	1	1
765432			41	79	1	1	1
7654			52	93	2	1	2
7432			31	68	1	1	2
764			43	85	1	2	1
76532			44	79	2	1	2
7			53	86	2	1	2
765			57	81	1	2	2
7654			31	75	1	2	1
642			58	91	2	1	2
65432			30		1	2	2
65432			46	85	1	1	1
5			50	94	2	1	2
543			43	88	1	2	2
53			44	90	1	2	2
3			47	90	2	1	2
6432			48	83	1	1	2
432			42	78	1	2	2
32			43		1	2	2
2			57	91	1	2	1
2			38	88	1	2	1

Note: Year = sentencing year(s); field018 = initials; name = name; x21 = age; x22 = number of years on the bench; x23 = gender; x24 = race; x25 = prosecutorial experience. Values: x23 (1) = male; x24 (1) = non white; x25 (1) = yes.

C:\MyFiles\DISSERTA\judges.wpd

Appendix C

Summary of County Specific Statistical Data

Appendix C.

Demographic Statistics for Select Michigan Counties.

County	Population	Race=white	% non-white	Md hshld $	Unemp Rate %	%PCR mdpt9495
Michigan	9,295,147	7,756,086	17	31,020	6	25
Western	223,411	197,427	15	31,060	4	24
Rich	1,083,592	970,674	10	43,407	4	17
Mid-State	211,946	165,430	22	27,980	6	27
Metro	2,111,687	1,212,007	43	27,997	7	22

Note: PCR = Prison Commitment Rate; Mdpt 9495 = the mid point of the PCR rate for 1994 and 1995 combined; Md Hshld $ = median household income; Unemp Rate = unemployment rate.

Sources:

Population and household income data = 1990 Census of population, general population characteristics for Michigan; Unemployment Rates = 1994 Census Report; Prison Commitment Rates = Michigan Department of Corrections' 1994 and 1995 Annual Reports.

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Appendix D

Summary of County Specific Uniform Crime Report of Indexed Crimes

Appendix D.

Uniform Crime Report (UCR) Index of Crimes in Four Michigan Counties (1992 - 1997)

County	Population	Crime Index	1992	1993	1994	1995	1996	1997
Western	223,411	ucr index	14,894	14,023	13,393	13,968	10,381	3,642
		non-index	26,128	23,207	19,141	21,080	17,470	5,743
		subtotal	41,022	37,230	32,534	35,048	27,851	9,385
		crime indx a	6,667	6,277	5,995	6,252	4,647	1,630
		crime indx b	11,695	10,388	8,568	9,436	7,820	2,571
		crime indx tl	18,362	16,664	14,562	15,688	12,466	Error
Rich	1,083,592	ucr index	51,656	48,339	41,991	42,145	39,418	41,631
		non-index	86,570	85,426	76,715	73,885	67,480	63,753
		subtotal	138,226	133,765	118,706	116,030	106,898	105,384
		crime indx a	4,767	4,461	3,875	3,889	3,638	3,842
		crime indx b	7,989	7,884	7,080	6,819	6,227	5,883
		crime indx tl	12,756	12,345	10,955	10,708	9,865	9,725
Mid-State	211,946	ucr index	14,806	14,480	13,359	11,961	10,945	9,106
		non-index	22,542	22,699	22,711	21,839	22,016	17,668
		subtotal	37,348	37,179	36,070	33,800	32,961	26,774
		crime indx a	6,986	6,832	6,303	5,643	5,164	4,296
		crime indx b	10,636	10,710	10,715	10,304	10,388	8,336
		crime indx tl	17,621	17,542	17,018	15,947	15,552	12,632
Metro	2,111,687	ucr index	177,283	175,932	178,483	172,619	175,746	173,509
		non-index	131,703	126,829	136,658	134,900	136,378	127,107
		subtotal	308,986	302,761	315,141	307,519	312,124	300,616
		crime indx a	8,395	8,331	8,452	8,174	8,323	8,217
		crime indx b	6,237	6,006	6,472	6,388	6,458	6,019
		crime indx tl	14,632	14,337	14,924	14,563	14,781	14,236

Note: Crime Index = (number of crimes × 100,000 ÷ county population).

Source:

34th - 39th Annual Editions of the Uniform Crime Report – Compiled by the Michigan Department of State Police, East Lansing, Michigan; Population = 1990 Census.

C:\MyFiles\DISSERTA\UCR Table.wpd

Appendix E

Data Management Procedures

Appendix E.

Data Management Procedure – (SPSS 8.0)

Variable	Name	Variable Label	Codes/Values*	Procedure
1992 1993 1994 1995 1996 1997*	Year of Sentencing (1997 = reference category)		1, 0 1, 0 1, 0 1, 0 1, 0	Created new variables
Western Rich Mid-State Metro*	County of Sentencing (Metro = reference category)		1, 0 1, 0 1, 0	Recoded 005 into new variables
Astcrime Drgcrime Nonasslt*	Crime Category (Nonasslt = reference category)	Assaultive Drug offense Non-Assaultive	1, 0 1, 0	Recoded 004 into new variables
X_{11}	Maximum Term of Imprisonment	Statutory Max	Years	Copied 014 into new variable
X_{12}	Prior Felony Convictions	Prior Fel Convs	Number	Copied 039 into new variable
X_{13}	Lower Range of Sentencing Guidelines	SGL Min	Months	Copied 040 into new variable
X_{14}	Upper Range of Sentencing Guidelines	SGL Max	Months	Copied 041 into new variable
X_{15}	Conviction under the Gun Law	Gun Law Viol	1 = Yes 2 = No	Recoded 012 into 1=1, else=2, in new variable
X_{16}	Def's CJ Status at Time of Offense	CJ Status	1 = Yes 2 = No	Recoded 020 into 0=2, else=1 in new variable

* For the linear regression analyses, the values for the categorical variables which are coded as '2' were recoded as '0', and the reference categories '1997', 'Metro' and 'Non Assaultive' were made new categorical variables with values '1' and '0'.

Appendix E Continued.

Data Management Procedure – (SPSS 8.0)

Variable	Name	Variable Label	Codes/Values	Procedure
X_{17}	PSI Recommendation	Sentrec	1 = Prison 2 = No Prison	Recoded 021 into 4=1, else=2 in new variable
X_{21}	Age of the Sentencing Judge	Judge's Age	Years	Recoded 018 into new variables $X_{21\text{-}25}$ Xyear - Judge's YOB = Years (all=2 digits)
X_{22}	Years the Judge Has Been on the Bench	Years on Bench	Years	Xyear - 1st years as judge = Years
X_{23}	Gender of the Sentencing Judge	Judge's Gender	1 = Male 2 = Female	Judge's gender
X_{24}	Race of the Sentencing Judge	Judge's Race	1 = Non-white 2 = White	Judge's race
X_{25}	Prosecutorial Experience	Ex-prosecutor	1 = Yes 2 = No	Ex-prosecutor
X_{31}	Age of the Defendant	Def's Age	Years	Copied 028 into new variable Xyear - Def's YOB = Years
X_{32}	Gender of the Defendant	Def's Gender	1 = Male 2 = Female	Recoded 016 into m=1, f=2 in new variable
X_{33}	Race of the Defendant	Def's Race	1 = Non-white 2 = White	Recoded 029 into 0=2, else=1 in new variable
X_{34}	Age at First Arrest	Age 1st Arrest	Years	Copied 038 into new variable
X_{35}	Commitments to a Juvenile Facility	Juv Comts	Number	Copied 030 into new variable
X_{36}	Prior Adult Probation Terms	No. Prior Probs	Number	Copied 031 into new variable
X_{37}	Prior Jail Terms	No. Prior Jail	Number	Copied 032 into new variable
X_{38}	Prior Prison Terms	No. Prior Prison	Number	Copied 033 into new variable

Appendix E Continued.

Data Management Procedure – (SPSS 8.0)

Variable	Name	Variable Label	Codes/Values	Procedure
X_{41}	Uniform Crime Report (UCR) Index of Offenses	UCR Index	Number per 100k	Recoded 005 into county UCR Index for respective years
X_{42}	Median Income in Sentencing County	Med Income	Amount	Recoded 005 into county median income in 1990
X_{43}	Unemployment Rate of the Sentencing County	Unemp Rate	Percentage	Recoded 005 into county unemployment rate in 1994
X_{44}	Population of Sentencing County	County Pop	County pop	Recoded 005 into county pop in 1990
X_{45}	% of County's Population Who Are Non-white	Percent Non-white	Percentage	Recoded 005 into percent nonwhite in respective counties (1990 census)
X_{46}	Prison Commitment Rate of Sentencing County	Prison Rate	Percentage	Recoded 005 into average of 1994/1995 PCR in respective counties
Y_{51}	Prison Sentence	Prison Sent	1 = Yes 2 = No	Recoded 034 into PRISON =1, else=0 in new variable
Y_{52}	Prison or Jail Sentence	Prison or Jail	1 = Yes 2 = No	Copied Y_{51} into new variable--jail & prison. Then recoded 024 into 1=1 in new variable
Y_{53}	Minimum Prison Sentence	Min Prison Sent	Years	Copied 022 into new variable

Appendix F

Approval Letter From the Human Subjects Institutional Review Board

Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: 4 August 1998

To: Peter Kobrak, Principal Investigator
Abel Ekpunobi, Student Investigator

From: Richard Wright, Chair

Re: HSIRB Project Number 98-06-14

This letter will serve as confirmation that your research project entitled "Sentencing Policies under Michigan Sentencing Guidelines" has been **approved** under the **exempt** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 28 July 1999

Appendix G

Approval Letter From the Michigan Department of Corrections

State of Michigan

John Engler, *Governor*

Department of Corrections

Grandview Plaza Building
P.O. Box 30003
Lansing, Michigan 48909
Kenneth L. McGinnis, *Director*

June 8, 1998

Abel
6240 Gossard Avenue
East Lansing, MI 48823

Dear Abel:

We have received your acknowledgment of limitations submitted in response to our letter dated June 5, 1998. We are satisfied that issues raised in the Research Section's letter have been addressed. **Thus, Research Section approval for your research project is hereby granted.** While you have acknowledged the limitations of your study as a condition of approval, we would appreciate being advised of any changes to the study methodology as referenced in your June 8, 1998 letter.

In keeping with Department Policy, you should provide a copy of this letter and the June 5 letter to any Department staff from whom you are requesting information or other assistance related to your study. As we indicated in the earlier correspondence, the final decision as to whether to allow the research or provide any requested information rests with the office or agency involved. They will decide if your request can be accommodated without disrupting normal operations. If they have any questions, feel free to have them contact the Research Section.

In your June 8, 1998 letter, you make reference to "technical assistance" from the Research Section. While we make every effort to assist researchers with their projects, you must understand that such projects are not a priority and that any such assistance would be provided on a strictly "as time is available" basis. At the present time, given Research Section project commitments and deadlines, such assistance would be available on an extremely limited basis.

We wish you continued success in your endeavors.

Sincerely,

R. Douglas Kosinski, Supervisor
Program Evaluation Unit
Research Section

Appendix H

Sample of Michigan Sentencing Guidelines (Assault Category)

Michigan Sentencing Guidelines

1988

Second Edition

Assault

PRIOR RECORD VARIABLES - ASSAULT

PRV	Points	Variable Name And Categories	Instructions
PRV 1		**PRIOR HIGH SEVERITY FELONY CONVICTIONS**	A. A high severity felony conviction refers to a conviction for any felony included in the following crime groups and statutory maxima: • Assault (life, 120, 60, 48 month maxima) • Burglary (180 month maximum) • CSC (life, 180, 120, 60 month maxima) • Homicide (life, 180 month maxima) • Larceny (120 month maximum) • Robbery (All) All other felony convictions included in the crime groups covered by the guidelines are low severity felony convictions. B. If a prior felony conviction falls outside of the crime groups covered by the guidelines and the judge determines that it is similar to a high severity felony conviction [e.g., Conspiracy to Commit Murder 750.157b(2)], it should be included in scoring this variable.
	50	2 or more prior high severity felony convictions	
	25	1 prior high severity felony conviction	
	0	No prior high severity felony convictions	
PRV 2		**PRIOR LOW SEVERITY FELONY CONVICTIONS**	A. A low severity felony conviction refers to a conviction for any felony included in the following crime groups and statutory maxima: • Assault (24 month maximum) • Burglary (120, 60, 48, 30, 24 month maxima) • CSC (30, 24 month maxima) • Drug (All) • Fraud (All) • Larceny (60, 48, 30, 24 month maxima) • Property Destruction (All) • Weapons Possession (All) All other felony convictions included in the crime groups covered by the guidelines are high severity convictions. B. If a prior felony conviction falls outside of the crime groups covered by the guidelines and the judge determines it is similar to a low severity felony conviction (e.g., Escape 750.193), it should be included in scoring this variable.
	40	3 or more prior low severity felony convictions	
	25	2 prior low severity felony convictions	
	10	1 prior low severity felony conviction	
	0	No prior low severity felony convictions	
PRV 3		**JUVENILE–HIGH SEVERITY ADJUDICATIONS**	A. The adjudicated offense must occur after the offender's 13th birthday and before the offender's 17th birthday to be scored. B. A high severity juvenile adjudication refers to an adjudication involving conduct included in the following crime groups and statutory maxima: • Assault (life, 120, 60, 48 month maxima) • Burglary (180 month maximum) • CSC (life, 180, 120, 60 month maxima) • Homicide (life, 180 month maxima) • Larceny (120 month maximum) • Robbery (All) All other juvenile adjudications included in the crime groups covered by the guidelines are low severity. C. If a prior juvenile adjudication falls outside of the crime groups covered by the guidelines and the judge determines it is similar to a high severity juvenile adjudication, it should be included in scoring this variable.
	25	2 or more prior high severity juvenile adjudications	
	10	1 prior high severity juvenile adjudication	
	0	No prior high severity juvenile adjudications	

PRIOR RECORD VARIABLES - ASSAULT

PRV Points	Variable Name And Categories	Instructions
PRV 4	**JUVENILE–LOW SEVERITY ADJUDICATIONS**	A. The adjudicated offense must occur after the offender's 13th birthday and before the offender's 17th birthday to be scored. B. A low severity juvenile adjudication refers to an adjudication involving conduct included in the following crime groups and statutory maxima: • Assault (24 month maximum) • Burglary (120, 60, 48, 30, 24 month maxima) • CSC (30, 24 month maxima) • Drug (All) • Fraud (All) • Larceny (60, 48, 30, 24 month maxima) • Property Destruction (All) • Weapons Possession (All) All other juvenile adjudications included in the crime groups covered by the guidelines are high severity. C. If a prior juvenile adjudication falls outside of the crime groups covered by the guidelines and the judge determines it is similar to a low severity juvenile adjudication, it should be included in scoring this variable. D. Curfew and status offenses are not to be counted as low severity.
10	4 or more prior low severity juvenile adjudications	
5	2 or 3 prior low severity juvenile adjudications	
0	0 or 1 prior low severity juvenile adjudications	
PRV 5	**PRIOR MISDEMEANOR CONVICTIONS**	Score a misdemeanor only if it is related to one of the following crime groups: Assault, Burglary, Criminal Sexual Conduct, Drug, Fraud, Larceny, Property Destruction, Robbery, or Weapons Possession.
10	4 or more prior misdemeanor convictions	
5	2 or 3 prior misdemeanor convictions	
0	0 or 1 prior misdemeanor convictions	
PRV 6	**PRIOR RELATIONSHIP TO CRIMINAL JUSTICE SYSTEM**	A. A post-conviction relationship exists if, at the time of the instant offense, the offender was: • incarcerated by the Michigan Department of Corrections (includes escapee) • incarcerated in jail (includes escapee) • on parole or probation • awaiting sentence on a probation violation, guilty verdict or guilty plea • on delayed sentence status • on 333.7411 B. An other relationship exists if, at the time of the instant offense, the offender was: • on bond and/or bail • on pre-trial diversion • on Holmes Youthful Trainee status C. Score the appropriate point value if the offender was involved with the criminal justice system of another state or the Federal Government as specified by the relationships mentioned above. D. Relationship to the Criminal Justice System, applies to relationships determined by felony, juvenile and/or misdemeanor convictions or charges.
15	Post-conviction relationship exists or the offender committed the instant offense within six months of termination of probation or parole	
5	Other relationship exists	
0	No relationship exists	

PRIOR RECORD VARIABLES - ASSAULT

PRV	Points	Variable Name And Categories	Instructions
PRV 7		SUBSEQUENT/CONCURRENT FELONY CONVICTIONS	A. Score the appropriate point value when the offender is convicted of multiple felony counts or is convicted of a felony subsequent to the commission of the instant offense. B. A felony firearm conviction should not be used when scoring this variable.
	20	2 or more subsequent/concurrent convictions	
	10	1 subsequent/concurrent conviction	
	0	No subsequent/concurrent convictions	

PRIOR RECORD LEVELS

SCORE	LEVEL
0	A
1-24	B
25-49	C
50+	D

OFFENSE VARIABLES - ASSAULT

OV	Points	Variable Name And Categories	Instructions
OV 1		**AGGRAVATED USE OF WEAPON**	A. In multiple offender cases, when one offender is assessed points for the presence, type, and/or use of a weapon, all offenders shall be assessed the same number of points. B. A firearm refers to an operational or non-operational firearm, or any instrument fashioned to appear to be a firearm. C. Score "5" if an offender uses an object in his or her pocket to suggest the presence of a firearm. * Do not score "5" if the conviction offense is Robbery Armed or Felonious Assault.
	25	A firearm is discharged by offender during commission of the offense	
	15	A firearm pointed toward victim or touching with another weapon	
	5*	A firearm displayed, implied, or possessed; any other weapon displayed	
	0	No firearm discharged, displayed, implied, or possessed; no other weapon	
OV 2		**PHYSICAL ATTACK AND/OR INJURY**	A. In multiple offender cases when one offender is assessed points for physical attack and/or injury, all offenders shall be assessed the same number of points. B. Score "100" when death results from the commission of a crime and homicide is not the conviction offense. C. Terrorism is conduct that is designed to increase substantially the fear and anxiety that the victim suffers during the offense. D. Score "0" if a victim is struck in an assaultive crime and there is no bodily injury.
	100	Victim killed	
	50	Victim treated with excessive brutality	
	25	Bodily injury and/or subjected to terrorism	
	0	No injury	
OV 5		**VICTIM WAS CARRIED AWAY OR HELD CAPTIVE**	Score "0" if the conviction offense is kidnapping.
	15	Victim was moved to another place of greater danger or to a situation of greater danger, or was held captive significantly beyond that which was necessary to commit the offense	
	0	Victim was not carried away or held captive	
OV 6		**MULTIPLE VICTIMS**	Count each person who was placed in danger of injury or loss of life as a victim. * Score "100" points only in Homicide crime group.
	100*	Multiple deaths	
	10	2 or more victims	
	0	Not a multiple victim situation	

OFFENSE VARIABLES - ASSAULT

OV	Points	Variable Name And Categories	Instructions
OV 7		OFFENDER EXPLOITATION OF VICTIM VULNERABILITY	A. The mere existence of one or more of these factors should not automatically be equated with victim vulnerability. B. Exploitation refers to the manipulation of the victim for selfish or unethical purposes. C. Vulnerability refers to the readily apparent susceptibility of the victim to injury, physical restraint, persuasion, or temptation. D. Abuse of authority status refers to situations where a victim is exploited out of fear or deference to an authority figure (e.g., parent-child, doctor-patient).
	15	Offender exploits the victim due to a physical disability, mental disability, youth, agedness, or an abuse of authority status	
	5	Offender exploits the victim through a difference in size/strength, or because the victim was intoxicated, under the influence of drugs, asleep, or unconscious	
	0	No exploitation	
OV 9		OFFENDER'S ROLE	The entire criminal episode or situation should be taken into account in determining whether an offender is a leader.
	10	Leader in multiple offender situation	
	0	Not a leader	
OV 13		PSYCHOLOGICAL INJURY TO VICTIM	
	5	Serious psychological injury to victim or victim's family necessitating professional treatment	
	0	No psychological injury	
OV 25		CONTEMPORANEOUS CRIMINAL ACTS	A. A criminal act is contemporaneous if: (1) it occurs within twenty-four hours of the offense upon which the offender is being sentenced or within six months if it is identical to or similar in nature and (2) it has not and will not result in a separate conviction. B. A felony firearm charge should not be used when scoring this variable.
	15	3 or more contemporaneous criminal acts	
	5	2 contemporaneous criminal acts	
	0	0 or 1 contemporaneous criminal acts	

OFFENSE VARIABLES - ASSAULT

ASSAULT
OFFENSE VARIABLE LEVELS

SCORE	LEVEL
0-9	I
10-24	II
25-49	III
50+	IV

GRIDS - ASSAULT

LIFE

Prior Record Level

Offense Level	A	B	C	D
I	0-36	12-36	24-60	60-120
II	12-48	24-60	48-96	96-240
III	60-144	72-180	96-240	120-300
IV	84-180	96-180	120-300	180-300 or life

750.83	Assault w/intent to commit murder
750.89	Kidnapping

120 MONTHS

Prior Record Level

Offense Level	A	B	C	D
I	0-9	0-12	0-24	12-60
II	0-12	0-24	12-36	24-72
III	0-24	12-36	24-60	36-80
IV	12-48	24-60	36-80	48-80

750.84	Assault w/intent to do great bodily harm
750.86	Assault w/intent to maim
750.87	Assault w/intent to commit felony
750.131a	Torture children

60 MONTHS

Prior Record Level

Offense Level	A	B	C	D
I	0-6	0-12	0-12	12-36
II	0-12	0-12	0-12	18-40
III	0-12	0-12	12-36	24-40
IV	12-40	18-40	24-40	30-40

750.83	Assault w/intent to commit murder (ATT)
750.84	Assault w/intent to do great bodily harm (ATT)
750.86	Assault w/intent to maim (ATT)
750.87	Assault w/intent to commit felony (ATT)
750.136a	Torture children (ATT)
750.349	Kidnapping (ATT)

48 MONTHS

Prior Record Level

Offense Level	A	B	C	D
I	0-6	0-9	0-12	12-32
II	0-9	0-12	0-12	12-32
III	0-12	0-12	6-24	12-32
IV	0-12	12-24	12-32	24-32

750.82	Felonious Assault
750.136	Cruelty to children
750.197c	Assault on a jail custodian or corrections officer

GRIDS - ASSAULT

24 MONTHS

Prior Record Level

Offense Level	A	B	C	D
I	0-6	0-9	0-12	6-12
II	0-9	0-12	0-12	6-12
III	0-12	0-12	0-12	9-16
IV	6-12	6-12	12-16	12-16

750.82	Felonious Assault (ATT)
750.136	Cruelty to children (ATT)
750.197c	Assault on a jail custodian or corrections officer (ATT)
750.479	Resisting officer
750.479a	Assault upon Police Officer
752.861	Kill or injure, negligent use of firearm

Appendix I

Correlation Matrix

Correlations

		statutory max	prior fel convs	SGL min	SGL max	gun law viol	CJ status
statutory max	Pearson Correlation						
	Sig. (2-tailed)						
	N						
prior fel convs	Pearson Correlation	.033**					
	Sig. (2-tailed)	.000					
	N	20834					
SGL min	Pearson Correlation	.573**	.215**				
	Sig. (2-tailed)	.000	.000				
	N	20834	20834				
SGL max	Pearson Correlation	.622**	.227**	.922**			
	Sig. (2-tailed)	.000	.000	.000			
	N	20834	20834	20834			
gun law viol	Pearson Correlation	.a	.a	.a	.a		
	Sig. (2-tailed)	.	.	.	.		
	N	20834	20834	20834	20834		
CJ status	Pearson Correlation	-.014*	-.313**	-.140**	-.161**	.a	
	Sig. (2-tailed)	.046	.000	.000	.000	.	
	N	20834	20834	20834	20834	20834	
sentrec	Pearson Correlation	-.364**	-.390**	-.473**	-.488**	.a	.311**
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
judge's age	Pearson Correlation	-.030**	-.031**	-.063**	-.059**	.a	.025**
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000
	N	20825	20825	20825	20825	20825	20825
years on bench	Pearson Correlation	-.009	.015*	-.032**	-.029**	.a	.010
	Sig. (2-tailed)	.206	.036	.000	.000	.	.173
	N	19843	19843	19843	19843	19843	19843
judge's gender	Pearson Correlation	.010	.032**	.024**	.023**	.a	-.006
	Sig. (2-tailed)	.147	.000	.000	.001	.	.397
	N	20825	20825	20825	20825	20825	20825
judge's race	Pearson Correlation	-.077**	-.062**	-.079**	-.076**	.a	.032**
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000
	N	20825	20825	20825	20825	20825	20825
ex-prosecutor	Pearson Correlation	.000	.011	-.017*	-.016*	.a	-.019**
	Sig. (2-tailed)	.958	.129	.013	.024	.	.006
	N	20825	20825	20825	20825	20825	20825
def's age	Pearson Correlation	-.001	.245**	.067**	.066**	.a	.047**
	Sig. (2-tailed)	.911	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
def's gender	Pearson Correlation	-.059**	-.092**	-.093**	-.096**	.a	.100**
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
def's race	Pearson Correlation	-.035**	-.063**	-.003	-.008	.a	.033**
	Sig. (2-tailed)	.000	.000	.709	.246	.	.000
	N	20834	20834	20834	20834	20834	20834

Correlations

		statutory max	prior fel convs	SGL min	SGL max	gun law viol	CJ status
age 1st arrest	Pearson Correlation	-.022**	-.145**	-.065**	-.069**	.	.170**
	Sig. (2-tailed)	.002	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
juv comts	Pearson Correlation	.032**	.043**	.088**	.085**	.	-.108**
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
no. prior prob	Pearson Correlation	-.018*	.500**	.126**	.142**	.	-.379**
	Sig. (2-tailed)	.011	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
no. prior jail	Pearson Correlation	-.007	.440**	.116**	.132**	.	-.221**
	Sig. (2-tailed)	.342	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
no. prior prison	Pearson Correlation	.042**	.668**	.202**	.207**	.	-.210**
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834
ucr index	Pearson Correlation	.022**	-.015*	.011	.010	.	-.006
	Sig. (2-tailed)	.002	.031	.119	.147	.	.354
	N	20551	20551	20551	20551	20551	20551
med income	Pearson Correlation	-.030**	-.008	-.009	-.011	.	.016*
	Sig. (2-tailed)	.000	.275	.194	.110	.	.022
	N	20834	20834	20834	20834	20834	20834
unemp rate	Pearson Correlation	.036**	.037**	.010	.012	.	-.016*
	Sig. (2-tailed)	.000	.000	.147	.078	.	.024
	N	20834	20834	20834	20834	20834	20834
county pop	Pearson Correlation	.036**	.066**	.005	.008	.	-.025**
	Sig. (2-tailed)	.000	.000	.498	.259	.	.000
	N	20834	20834	20834	20834	20834	20834
percent non-white	Pearson Correlation	.038**	.041**	.008	.011	.	-.022**
	Sig. (2-tailed)	.000	.000	.221	.100	.	.001
	N	20834	20834	20834	20834	20834	20834
YEAR	Pearson Correlation	-.033**	.001	-.033**	-.035**	.	.011
	Sig. (2-tailed)	.000	.872	.000	.000	.	.104
	N	20834	20834	20834	20834	20834	20834
CRIME	Pearson Correlation	-.435**	.023**	-.370**	-.382**	.	-.034**
	Sig. (2-tailed)	.000	.001	.000	.000	.	.000
	N	20834	20834	20834	20834	20834	20834

Correlations

		sentrec	judge's age	years on bench	judge's gender	judge's race	ex-prosecutor
statutory max	Pearson Correlation						
	Sig. (2-tailed)						
	N						
prior fel convs	Pearson Correlation						
	Sig. (2-tailed)						
	N						
SGL min	Pearson Correlation						
	Sig. (2-tailed)						
	N						
SGL max	Pearson Correlation						
	Sig. (2-tailed)						
	N						
gun law viol	Pearson Correlation						
	Sig. (2-tailed)						
	N						
CJ status	Pearson Correlation						
	Sig. (2-tailed)						
	N						
sentrec	Pearson Correlation						
	Sig. (2-tailed)						
	N						
judge's age	Pearson Correlation	.055**					
	Sig. (2-tailed)	.000					
	N	20825					
years on bench	Pearson Correlation	.038**	.632**				
	Sig. (2-tailed)	.000	.000				
	N	19843	19843				
judge's gender	Pearson Correlation	-.008	-.490**	-.316**			
	Sig. (2-tailed)	.262	.000	.000			
	N	20825	20825	19843			
judge's race	Pearson Correlation	.056**	.301**	-.053**	-.323**		
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	20825	20825	19843	20825		
ex-prosecutor	Pearson Correlation	-.003	.053**	-.127**	-.003	.251**	
	Sig. (2-tailed)	.666	.000	.000	.665	.000	
	N	20825	20825	19843	20825	20825	
def's age	Pearson Correlation	-.079**	-.014*	.008	.016*	-.043**	-.004
	Sig. (2-tailed)	.000	.050	.259	.018	.000	.545
	N	20834	20825	19843	20825	20825	20825
def's gender	Pearson Correlation	.133**	.002	.004	-.005	.042**	-.034**
	Sig. (2-tailed)	.000	.760	.533	.465	.000	.000
	N	20834	20825	19843	20825	20825	20825
def's race	Pearson Correlation	.041**	-.009	-.061**	.005	.206**	-.036**
	Sig. (2-tailed)	.000	.204	.000	.442	.000	.000
	N	20834	20825	19843	20825	20825	20825

Correlations

		sentrec	judge's age	years on bench	judge's gender	judge's race	ex-prosecutor
age 1st arrest	Pearson Correlation	.116**	.005	.007	.007	.012	-.030**
	Sig. (2-tailed)	.000	.431	.347	.307	.074	.000
	N	20834	20825	19843	20825	20825	20825
juv comts	Pearson Correlation	-.120**	-.014*	-.034**	-.004	.031**	-.002
	Sig. (2-tailed)	.000	.049	.000	.524	.000	.724
	N	20834	20825	19843	20825	20825	20825
no. prior prob	Pearson Correlation	-.255**	-.036**	-.004	.006	-.020**	.025**
	Sig. (2-tailed)	.000	.000	.613	.353	.004	.000
	N	20834	20825	19843	20825	20825	20825
no. prior jail	Pearson Correlation	-.251**	-.047**	-.053**	.016*	.044**	.015*
	Sig. (2-tailed)	.000	.000	.000	.024	.000	.033
	N	20834	20825	19843	20825	20825	20825
no. prior prison	Pearson Correlation	-.377**	-.030**	.005	.025**	-.062**	.010
	Sig. (2-tailed)	.000	.000	.480	.000	.000	.169
	N	20834	20825	19843	20825	20825	20825
ucr index	Pearson Correlation	-.019**	-.107**	-.096**	-.164**	-.169**	.068**
	Sig. (2-tailed)	.006	.000	.000	.000	.000	.000
	N	20551	20542	19560	20542	20542	20542
med income	Pearson Correlation	.003	.046**	-.028**	.154**	.292**	-.086**
	Sig. (2-tailed)	.631	.000	.000	.000	.000	.000
	N	20834	20825	19843	20825	20825	20825
unemp rate	Pearson Correlation	-.016*	.003	.156**	-.080**	-.388**	.047**
	Sig. (2-tailed)	.021	.638	.000	.000	.000	.000
	N	20834	20825	19843	20825	20825	20825
county pop	Pearson Correlation	-.028**	.095**	.299**	-.012	-.409**	.058**
	Sig. (2-tailed)	.000	.000	.000	.080	.000	.000
	N	20834	20825	19843	20825	20825	20825
percent non-white	Pearson Correlation	-.018*	.022**	.182**	-.097**	-.407**	.079**
	Sig. (2-tailed)	.011	.001	.000	.000	.000	.000
	N	20834	20825	19843	20825	20825	20825
YEAR	Pearson Correlation	.124**	.005	.142**	.166**	-.096**	-.055**
	Sig. (2-tailed)	.000	.492	.000	.000	.000	.000
	N	20834	20825	19843	20825	20825	20825
CRIME	Pearson Correlation	.250**	.045**	.025**	-.014*	.049**	.009
	Sig. (2-tailed)	.000	.000	.000	.037	.000	.207
	N	20834	20825	19843	20825	20825	20825

Correlations

		def's age	def's gender	def's race	age 1st arrest	juv comts	no. prior prob
statutory max	Pearson Correlation						
	Sig. (2-tailed)						
	N						
prior fel convs	Pearson Correlation						
	Sig. (2-tailed)						
	N						
SGL min	Pearson Correlation						
	Sig. (2-tailed)						
	N						
SGL max	Pearson Correlation						
	Sig. (2-tailed)						
	N						
gun law viol	Pearson Correlation						
	Sig. (2-tailed)						
	N						
CJ status	Pearson Correlation						
	Sig. (2-tailed)						
	N						
sentrec	Pearson Correlation						
	Sig. (2-tailed)						
	N						
judge's age	Pearson Correlation						
	Sig. (2-tailed)						
	N						
years on bench	Pearson Correlation						
	Sig. (2-tailed)						
	N						
judge's gender	Pearson Correlation						
	Sig. (2-tailed)						
	N						
judge's race	Pearson Correlation						
	Sig. (2-tailed)						
	N						
ex-prosecutor	Pearson Correlation						
	Sig. (2-tailed)						
	N						
def's age	Pearson Correlation						
	Sig. (2-tailed)						
	N						
def's gender	Pearson Correlation	.081**					
	Sig. (2-tailed)	.000					
	N	20834					
def's race	Pearson Correlation	.023**	.009				
	Sig. (2-tailed)	.001	.183				
	N	20834	20834				

Correlations

		def's age	def's gender	def's race	age 1st arrest	juv comts	no. prior prob
age 1st arrest	Pearson Correlation	.587**	.218**	.083**			
	Sig. (2-tailed)	.000	.000	.000			
	N	20834	20834	20834			
juv comts	Pearson Correlation	-.228**	-.110**	.028**	-.308**		
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	20834	20834	20834	20834		
no. prior prob	Pearson Correlation	.228**	-.088**	.040**	-.146**	-.007	
	Sig. (2-tailed)	.000	.000	.000	.000	.288	
	N	20834	20834	20834	20834	20834	
no. prior jail	Pearson Correlation	.204**	-.051**	.024**	-.140**	.055**	.516**
	Sig. (2-tailed)	.000	.000	.001	.000	.000	.000
	N	20834	20834	20834	20834	20834	20834
no. prior prison	Pearson Correlation	.267**	-.103**	-.071**	-.125**	.044**	.286**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20834	20834	20834	20834	20834	20834
ucr index	Pearson Correlation	-.012	-.087**	-.219**	-.068**	.032**	-.026**
	Sig. (2-tailed)	.087	.000	.000	.000	.000	.000
	N	20551	20551	20551	20551	20551	20551
med income	Pearson Correlation	-.005	.100**	.320**	.075**	-.012	.010
	Sig. (2-tailed)	.513	.000	.000	.000	.094	.139
	N	20834	20834	20834	20834	20834	20834
unemp rate	Pearson Correlation	.033**	-.113**	-.352**	-.046**	-.049**	-.016*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.017
	N	20834	20834	20834	20834	20834	20834
county pop	Pearson Correlation	.060**	-.095**	-.289**	-.001	-.112**	.013
	Sig. (2-tailed)	.000	.000	.000	.886	.000	.061
	N	20834	20834	20834	20834	20834	20834
percent non-white	Pearson Correlation	.036**	-.115**	-.358**	-.046**	-.056**	-.002
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.785
	N	20834	20834	20834	20834	20834	20834
YEAR	Pearson Correlation	.006	.041**	-.019**	-.006	.018**	.018*
	Sig. (2-tailed)	.393	.000	.005	.390	.008	.011
	N	20834	20834	20834	20834	20834	20834
CRIME	Pearson Correlation	-.069**	.081**	-.037**	-.044**	-.011	.022**
	Sig. (2-tailed)	.000	.000	.000	.000	.097	.001
	N	20834	20834	20834	20834	20834	20834

Correlations

		no. prior jail	no. prior prison	ucr index	med income	unemp rate	county pop
statutory max	Pearson Correlation Sig. (2-tailed) N						
prior fel convs	Pearson Correlation Sig. (2-tailed) N						
SGL min	Pearson Correlation Sig. (2-tailed) N						
SGL max	Pearson Correlation Sig. (2-tailed) N						
gun law viol	Pearson Correlation Sig. (2-tailed) N						
CJ status	Pearson Correlation Sig. (2-tailed) N						
sentrec	Pearson Correlation Sig. (2-tailed) N						
judge's age	Pearson Correlation Sig. (2-tailed) N						
years on bench	Pearson Correlation Sig. (2-tailed) N						
judge's gender	Pearson Correlation Sig. (2-tailed) N						
judge's race	Pearson Correlation Sig. (2-tailed) N						
ex-prosecutor	Pearson Correlation Sig. (2-tailed) N						
def's age	Pearson Correlation Sig. (2-tailed) N						
def's gender	Pearson Correlation Sig. (2-tailed) N						
def's race	Pearson Correlation Sig. (2-tailed) N						

Correlations

		no. prior jail	no. prior prison	ucr index	med income	unemp rate	county pop
age 1st arrest	Pearson Correlation						
	Sig. (2-tailed)						
	N						
juv comts	Pearson Correlation						
	Sig. (2-tailed)						
	N						
no. prior prob	Pearson Correlation						
	Sig. (2-tailed)						
	N						
no. prior jail	Pearson Correlation						
	Sig. (2-tailed)						
	N						
no. prior prison	Pearson Correlation	.344**					
	Sig. (2-tailed)	.000					
	N	20834					
ucr index	Pearson Correlation	-.013	.025**				
	Sig. (2-tailed)	.057	.000				
	N	20551	20551				
med income	Pearson Correlation	.044**	-.040**	-.844**			
	Sig. (2-tailed)	.000	.000	.000			
	N	20834	20834	20551			
unemp rate	Pearson Correlation	-.107**	.050**	.636**	-.868**		
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	20834	20834	20551	20834		
county pop	Pearson Correlation	-.150**	.055**	.182**	-.451**	.787**	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	20834	20834	20551	20834	20834	
percent non-white	Pearson Correlation	-.111**	.055**	.621**	-.866**	.981**	.835**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20834	20834	20551	20834	20834	20834
YEAR	Pearson Correlation	.025**	-.015*	-.344**	.042**	-.044**	-.042**
	Sig. (2-tailed)	.000	.031	.000	.000	.000	.000
	N	20834	20834	20551	20834	20834	20834
CRIME	Pearson Correlation	.001	.012	-.006	-.007	.009	.014*
	Sig. (2-tailed)	.845	.093	.415	.342	.179	.037
	N	20834	20834	20551	20834	20834	20834

Correlations

		percent non-white	YEAR	CRIME
statutory max	Pearson Correlation Sig. (2-tailed) N			
prior fel convs	Pearson Correlation Sig. (2-tailed) N			
SGL min	Pearson Correlation Sig. (2-tailed) N			
SGL max	Pearson Correlation Sig. (2-tailed) N			
gun law viol	Pearson Correlation Sig. (2-tailed) N			
CJ status	Pearson Correlation Sig. (2-tailed) N			
sentrec	Pearson Correlation Sig. (2-tailed) N			
judge's age	Pearson Correlation Sig. (2-tailed) N			
years on bench	Pearson Correlation Sig. (2-tailed) N			
judge's gender	Pearson Correlation Sig. (2-tailed) N			
judge's race	Pearson Correlation Sig. (2-tailed) N			
ex-prosecutor	Pearson Correlation Sig. (2-tailed) N			
def's age	Pearson Correlation Sig. (2-tailed) N			
def's gender	Pearson Correlation Sig. (2-tailed) N			
def's race	Pearson Correlation Sig. (2-tailed) N			

Correlations

		percent non-white	YEAR	CRIME
age 1st arrest	Pearson Correlation			
	Sig. (2-tailed)			
	N			
juv comts	Pearson Correlation			
	Sig. (2-tailed)			
	N			
no. prior prob	Pearson Correlation			
	Sig. (2-tailed)			
	N			
no. prior jail	Pearson Correlation			
	Sig. (2-tailed)			
	N			
no. prior prison	Pearson Correlation			
	Sig. (2-tailed)			
	N			
ucr index	Pearson Correlation			
	Sig. (2-tailed)			
	N			
med income	Pearson Correlation			
	Sig. (2-tailed)			
	N			
unemp rate	Pearson Correlation			
	Sig. (2-tailed)			
	N			
county pop	Pearson Correlation			
	Sig. (2-tailed)			
	N			
percent non-white	Pearson Correlation			
	Sig. (2-tailed)			
	N			
YEAR	Pearson Correlation	-.049**		
	Sig. (2-tailed)	.000		
	N	20834		
CRIME	Pearson Correlation	.012	.026**	
	Sig. (2-tailed)	.090	.000	
	N	20834	20834	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

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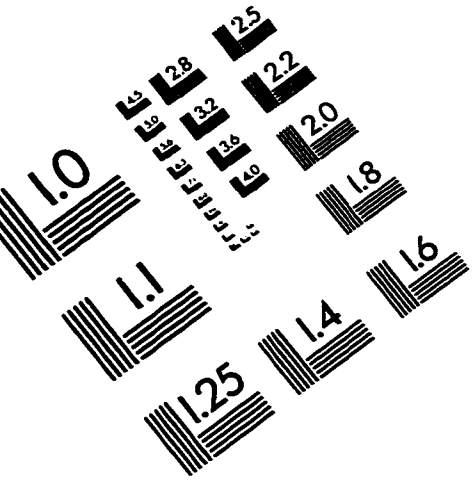
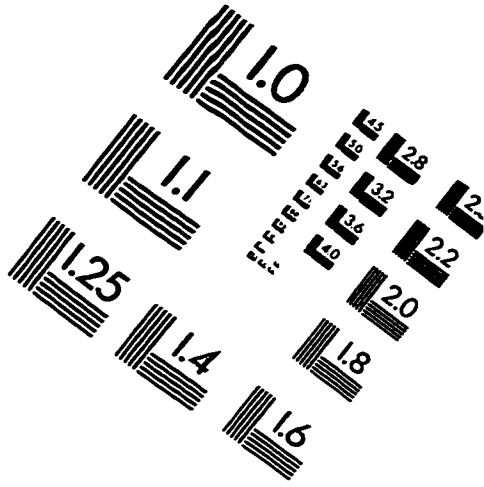
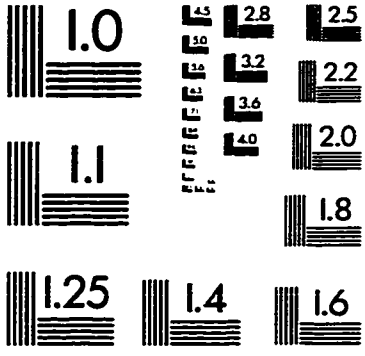
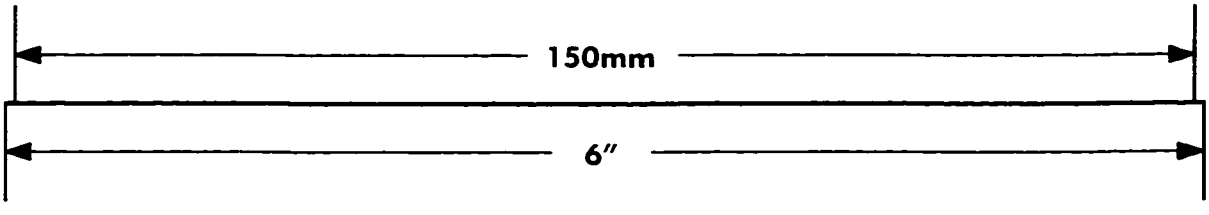
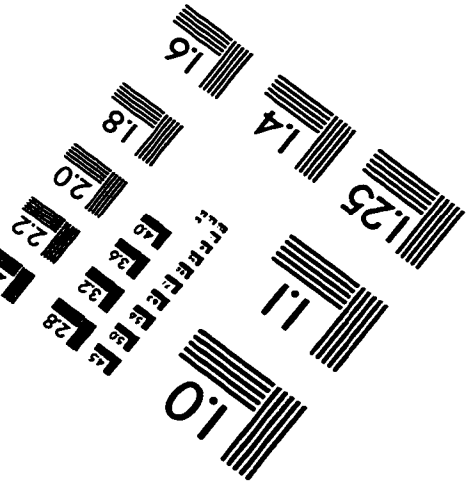
IMAGE EVALUATION TEST TARGET (QA-3)

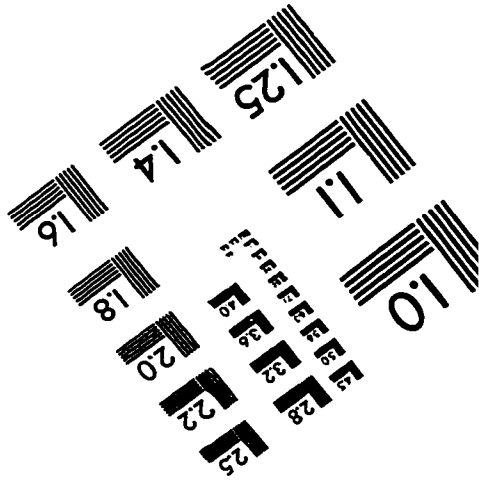












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