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An Evaluation of Illinois House Bill 1500, Determinate Sentencing

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AN EVALUATION OF ILLINOIS HOUSE BILL 1500: DETERMINATE SENTENCING

by

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VITA

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INTRODUCTION

On February 1, 1978, House Bill 1500 was implemented in Illinois to completely revise the State's sentencing procedures. Most significantly, determinate sentencing replaced indeterminate sentencing. This represents both a procedural and philosophical change in the Illinois sentencing system.

Basic Differences Between Indeterminate and Determinate Sentencing

Indeterminate sentencing is a system whereby the judge imposes a range of prison time rather than a fixed amount of time. Generally, the judge will impose both a minimum and maximum sentence within a prescribed range of possible sentences. An inmate can reduce his sentence by accumulating good time, which is time removed from the minimum sentence contingent upon the inmate's good behavior while in prison. The actual release date, however, is determined by a parole board. The main purpose of indeterminate sentencing is to provide enough flexibility in sentencing to allow for the varying amount of time required to rehabilitate offenders. With rehabilitation as the goal, the focus is on the inmate's progress in treatment programs after he has committed his crime.

In contrast, under determinate sentencing the judge imposes a single definite sentence from within a prescribed range of sentences.

Although the parole board or a similar body may be maintained for certain functions, the parole release decision is eliminated. Release for inmates is dependent only on the imposed sentence and good time received (which also may be altered under determinate sentencing). Determinate sentencing makes no commitment to rehabilitation. Instead, "fair and certain" punishment is the objective (Twentieth Century Fund, 1976). Simply put, determinate sentencing focuses upon the crime and circumstances related to the crime. In theory, under determinate sentencing, inmates need not prove rehabilitation in order to be released.

The Development of Indeterminate Sentencing

An historical background may be useful in understanding the problems of current sentencing systems and the need for change in these systems. Indeterminate sentencing, at the time it was introduced in the 1870's, was part of a reform movement. According to Fogel (1975, pp. 6-11), colonial America was characterized by harsh, inflexible sentencing. Stocks, pillories, branding and whipping were common forms of punishment and the death sentence was mandated for repeated minor offenses and for a broad range of first offenses. The system was biased against certain individuals: those who could read could escape the death sentence, church absence was a capital offense in Virginia and Quakers in Massachusetts were subject to a variety of punishments such as whippings and having their ears cut off.

Although punishments for different offenses were spelled out in the laws, judges had broad discretionary powers to choose among

different punishments--or to suspend punishment altogether. In addition, British officials had broad powers to pardon criminals, which they often used haphazardly and in a biased manner (Serrill, 1977, pp. 4-5). Thus, the early colonial criminal justice system was both severe and discriminatory.

After the American Revolution, and during the previously mentioned reform movement, a new, innovative sentence--imprisonment--was developed. Imprisonment served as a reform: (1) because it was an acceptable substitute for corporal punishment, and (2) because it was proposed that the penitentiary could reform or "cure" offenders of their criminal pathology. However, sentencing, in terms of judges choosing a fixed sentence, remained essentially unchanged (Serrill, 1977, p. 5). This conflicted with the goal of "curing" inmates, for there was no mechanism for freeing offenders who were "cured" before their sentence was completed.

The solution to this problem came in the form of the indeterminate sentence in the 1870's. The indeterminate sentence allowed the flexibility needed for the rehabilitative goal. Correctional authorities and parole board members were supposed to decide the actual release date for inmates based--in part--on their rehabilitative progress.

Criticisms of Indeterminate Sentencing

Rehabilitation thus served as a foundation for the use of indeterminate sentencing. Philosophically it was a noble reform of

sentencing procedures. In practice, major problems have arisen. One problem is that disparity in the criminal justice system has occurred at a number of levels. One level is that of sentencing, where different judges might impose significantly different sentences for similar offenses (Serrill, 1977, pp. 8-9; Fogel, 1975, pp. 192-199).

Another level at which problems have occurred in terms of disparity in sentencing is release from prison. Although parole boards can and have been used to correct unfair discrepancies in imposed sentences, its discretionary power has also been responsible for discretionary abuses. Such abuses have resulted in inmates being incarcerated for widely differing numbers of years for similar offenses (Fogel, 1975, pp. 192-199).

One solution at the level of sentencing might be to limit the range of sentences from which a judge could choose. Thus, the range of allowable sentences for certain offenses might be reduced from a minimum of one year and a maximum of eight years to a minimum of two years and a maximum of four years. However, this would effect the parole board's decision to release inmates. If the highest allowable maximum sentence was reduced too much, there might not be enough time to rehabilitate criminals. On the other hand, if the minimum sentence was raised too high, offenders might be rehabilitated long before they were allowed to leave prison.

Another major problem with an indeterminate system based on rehabilitation is that for the most part it simply has not worked.

In reviewing evaluations of attempts at rehabilitation which included educational and vocational programs, individual and group counseling, community treatment, halfway houses and length of sentences (as well as other attempts), Fogel (1975, pp. 113-126) finds little evidence to demonstrate that these programs were successful in terms of the most popular measure of success--reduced recidivism.

There are other problems inherent in rehabilitation as the goal of indeterminate sentencing. First of all, it is possible that not all offenders are able to be rehabilitated. Perhaps their behavior is not open to modification, perhaps there are criminal types which are genetically based and cannot change. Secondly, it is not at all clear that prisons are the best environments for behavior change. Thirdly, even if people could be rehabilitated in the prison environment, the question arises as to how one can determine that rehabilitation has taken place. What characteristics or special training should those people have who are assigned the task of determining that rehabilitation has taken place, and do today's parole board members qualify (Twentieth Century Fund, 1976)?

Finally, to conclude this discussion of criticisms of indeterminate sentencing, indeterminate sentencing has been blamed with: (1) causing undue stress on prisoners who do not know when they can expect to be released, and (2) contributing to prisoner unrest due to the awareness of the disparities in sentencing that sometimes occur among individuals who have committed similar crimes (Gettinger, 1977, p. 17; Cargarn & Coates, 1974, p. 144).

A Description of Determinate Sentencing

The indeterminate system has led to recent efforts to establish determinate sentencing procedures in a number of states. The laws of the first three states to pass determinate sentencing laws show some of the variations possible.[1]

Maine. Maine was the first state to pass a determinate sentencing law. It allows broad judicial discretion of offenses within a statutory maximum sentence. Five classes of offenses were established with different maximum sentences. All felonies and misdemeanors fall into one of these classes with a maximum allowable sentence of up to 20 years, 10 years, five years, one year or a half year.

California. Judges must choose the presumptive or middle term of three possible sentences unless mitigating or aggravating circumstances can be proven. For example, for the offense of second degree murder, the presumptive sentence would be six years, but either five or seven years could be chosen depending upon the circumstances. Enhancements can be added on top of the base term for certain defined situations such as carrying a dangerous weapon or for prior convictions. Parole release is abolished, and the Community Release Board is established for considering good time and parole for those still under an indeterminate sentence. Supervision is also provided by the Board. Good time accrues at the rate of three months a year for good institutional behavior. An additional

month can be earned for participation in various programs.

Indiana. Indiana has established high presumptive sentences but has provided broad discretion for judges by allowing for aggravating or mitigating circumstances. So, for instance, the highest presumptive term is 30 years but 20 years may be added or 10 years subtracted. Parole release is abolished but supervision is required upon release. Day-for-day good time exists in Indiana.[2]

Determinate sentencing is seen, by many, to compensate for weaknesses of the indeterminate sentencing system. Since there are no claims for rehabilitation (though rehabilitative programs may be maintained) high recidivism (lack of rehabilitation) does not necessarily indicate failure. Most new determinate sentencing laws do narrow judicial discretion through legislative limits, thus the discretionary abuses by judges under indeterminate sentencing may be reduced. This, along with the elimination of release through parole should lead to less disparity in time served among inmates convicted of similar crimes.

In addition, the use of mandatory sentences can help remove discretion and provide for certainty of punishment. One goal of mandatory sentencing (in which punishments are required for certain offenses) is to sentence a larger number of serious offenders to some imprisonment, even if they serve shorter terms. This reflects the view of many--liberals and conservatives alike--that certainty of

confinement is more important in deterring crime than severity or length of confinement (Petersilia & Greenwood, 1978, pp. 604-615). A complete description of mandatory sentencing appears below.

The Development of a Determinate Sentencing Law in Illinois[3]

There have been a number of different proposals to alter the indeterminate sentencing procedure in Illinois over the past years. David Fogel, the ex-director of the Illinois Law Enforcement Commission and Acting Director of the Illinois Department of Corrections for a short time, devised the "Justice Model" which he describes in his book We are the Living Proof (Fogel, 1975). Fogel discusses a number of modifications in the current criminal code which relate to determinate sentencing including: changing broad legislative minimum and maximum sentences to more narrow ones, changing from indeterminate sentences to sentences fixed at the time of sentencing and eliminating release through parole while instituting a day-for-day system of good time. Although Fogel's model was supported by Governor Walker, the proposal was never introduced into the legislature and thus could not become law.

The current Republican governor, James Thompson, has attempted to get his own "get tough" form of criminal law revision passed in Illinois with no success. Some of the noteworthy aspects of Thompson's proposals include: a "Class X" category for felonies, which carried a mandatory determinate sentence of six years or more and no opportunity for parole, a habitual felon category which carried a determinate sentence of life with no opportunity for parole and Classes 1, 2, 3

and 4 felonies which carried indeterminate sentences with the opportunity for parole retained (Bagley, 1979).[4]

What was signed into law on December 28, 1977 was a compromise bill called House Bill 1500 (HB 1500). The original HB 1500 was developed by a House Judiciary sub-committee. Influenced by Fogel's "Justice Model", it was considered a liberal measure supported by House Democrats and included the following measures: specific provisions for habitual offenders, determinate sentences to replace indeterminate sentences and the elimination of the parole board. The version of HB 1500 which was actually passed by the Illinois legislature consisted of portions of the original bill and certain aspects of Thompson's proposal. The following section describes Illinois' HB 1500 which took effect February 1, 1978.

Illinois House Bill 1500[5]

House Bill 1500, commonly called Illinois' determinate sentencing law and sometimes referred to as Thompson's Class X crime bill, actually made a great number of changes in the Illinois criminal justice system. The previously mentioned change to determinate sentencing will probably have the greatest impact. Offenders will be given a definite sentence of a specified number of years which can be reduced by day-for-day good time. Release through parole is eliminated under HB 1500, although the Parole and Pardon Board is retained as the Prisoner Review Board to determine parole for those sentenced previous to HB 1500 and to perform many of the other functions previously performed by the Parole and Pardon Board.

HB 1500 reduces discretion at the sentencing stage of the criminal justice system by reducing the allowable range of the sentence term under most circumstances.[6] Further, judges are required to state--for the record--the factors or reasons which caused them to select a particular sentence. This along with the elimination of release through parole will, according to advocates of determinate sentencing, reduce disparity in time served by offenders who were convicted of similar crimes.

Some discretion has also been removed due to the addition of mandatory sentencing procedures. Mandatory sentencing requires that a sentence must be given to an individual convicted of a specific crime. Mandatory sentencing is sometimes tied in with (and confused with) determinate sentencing. This can be evidenced by the philosophy attributed to determinate sentencing (but really derived from mandatory sentencing) that certainty of confinement is more important than severity or length of confinement. This could be expected to be reflected in data showing that a larger percentage of offenders are imprisoned for shorter periods of time. (However, due to other changes made by HB 1500 this may not be true in Illinois.)

Mandatory minimum sentences which were already provided for before HB 1500 were retained. Setting mandatory specific sentences was not expanded since it was felt that this would simply transfer sentencing discretion to prosecutors when they decided what charge was to be brought against the accused. However, discretion was partially removed by requiring sentencing as a Class X offender when

the offender was previously convicted of a felony of equal or greater class in the previous ten years. In addition, since HB 1500 was passed, a revision to the Illinois Habitual Offenders Statute was signed into law which requires that anyone convicted for a third time of a Class X offense or Murder receive a sentence of "life in prison" (Illinois Department of Corrections, 1981, p. 6).

Besides the creation of "Class X", previously mentioned, HB 1500 changes the sentencing ranges for the other offense classes (see Note 6).

The Need for Evaluation of Illinois House Bill 1500

The changes due to HB 1500 are significant and wide ranging and their future impact is unknown. In recognition of the need to assess the impact of HB 1500, the Illinois legislature saw fit to create The Criminal Sentencing Commission with the following responsibilities:

(1) To monitor the fiscal impact and effect upon prison populations caused by the use of determinate sentences.

(2) To determine the overall desirability and feasibility of determinate sentencing and reclassification of felonies.

(3) To review the Criminal Code and Code of Corrections and make recommendations on the best methods available for sentencing those convicted of criminal offenses.

(4) To ascertain the number and percentage of commitments to the Department of Corrections compared to the number and percentage of alternative dispositions imposed by the courts, by offense.

(5) To develop standardized sentencing guidelines designed to provide for greater uniformity in the imposition of criminal sentences.

(6) To make such other recommendations as the Commission deems necessary to promote certainty and fairness in the sentencing

process.

(Illinois Criminal Law and Procedure for 1980, 1980, p. 219)

The Judicial Council of California (1977) recognized the need for such a commission as did the Twentieth Century Fund Task Force (Twentieth Century Fund, 1976, p. 25).

In addition, Illinois' new determinate sentencing law is of interest to lawmakers throughout the country. According to researchers at the Illinois Department of Corrections,[7] Illinois is one of only nine states to have passed a determinate sentencing law, although legislators in most other states are considering similar changes. Evaluation of Illinois' determinate sentencing law will provide valuable information to lawmakers in other states which can assist them in deciding: (1) whether or not to switch to some form of determinate sentencing, and (2) what aspects of determinate sentencing are most likely to serve their needs.

Evaluation of this law becomes even more important because, as pointed out by the Judicial Council of California (1977), the determinate sentencing laws that do exist differ from each other radically. Thus, there exists the opportunity to determine which aspects of these laws are most valuable.

This thesis describes the results of an evaluation of HB 1500 which will be used by the Illinois Department of Corrections and The Illinois Criminal Sentencing Commission in their own ongoing assessment of the impact of determinate sentencing in Illinois.

NOTES

[1]This information was obtained from an article by Stephan Gettinger (1977). See "References" for further information.

[2]For every day an inmate spends in prison one day is removed from his sentence. This is known as day-for-day good time. Accumulated good time can be reduced if an inmate violates prison rules. This system is more straight forward than other good time systems and simplifies the calculation of time remaining to be served on a sentence for both the inmates and the prison officials.

[3]Bagley (1979) was used in writing this description of the development and eventual enactment of Illinois House Bill 1500.

[4]Offenses are categorized by severity into "classes." From least to most severe the classes under the new law are 4, 3, 2, 1, X and M (Murder). Class X includes aggravated arson, aggravated kidnapping for ransom, armed robbery, armed violence (with certain weapons), certain drug related offenses, deviate sexual assault, heinous battery, home invasion, rape and treason.

[5]Sources of information include: the researcher's own work at the Illinois Department of Corrections, Chicago Crime Commission (1978) and Bagley (1979).

[6]The following table from the pamphlet entitled "Illinois' New Crime Legislation: What does it do?" (Chicago Crime Commission, 1978) describes these changes.

	Previous Law	New Law
Murder	14 Years-Any Period of Years in Excess of 14	20-40 Years-Life for Exceptionally Brutal Behavior
Class X	No Such Class	6-30 Years
Class 1	4 Years-Any Period of Years in Excess of 4	4-15 Years
Class 2	1-20 Years	3-7 Years
Class 3	1-10 Years	2-5 Years
Class 4	1-4 Years	1-3 Years

[7]Personal communication with John Henning and Linda Adams of the Illinois Department of Corrections, Research and Evaluation Unit.

REVIEW OF RELATED LITERATURE

Assessment of California's Determinate Sentencing Law

Due to the recency of the switch to determinate sentencing procedures in some states, few studies of the impact of such changes currently exist. There are some data available concerning California's determinate sentencing system which took effect July 1, 1977. Keeping in mind that the California system differs in significant ways from the Illinois system ("Introduction" of this thesis), one evaluation (Lipson & Peterson, 1980) found that: (1) the rate of prison commitment had increased under determinate sentencing, although a trend in this direction had been established since 1972, (2) the new law may exacerbate the existing condition of overcrowding due to the elimination of the "safety valve" of release through parole, and (3) the average length of prison sentence has been lowered slightly which may reflect a trend which began in 1976. With regard to this last point, the researchers suggest that it is improper to conclude that the new system is more lenient, because felons who previously would have served jail times of at most one year, now are serving prison terms. Thus, more offenders convicted of less serious offenses are entering the prison system lowering average prison sentences calculated for all inmates.

Another study of the California system (Arthur D. Little, Inc.,

1980) concurred with the finding of shorter sentence lengths. In addition, these researchers concluded that the California determinate sentencing law: (1) "more closely approximates national norms for 'adequacy of punishment'," (2) "has increased the certainty of imprisonment given conviction," and (3) "enhances the capability of attaining sentencing equity." ("Adequacy of punishment" was based upon the median of the average sentences reported by 27 states in the study by Arthur D. Little, Inc.)

Preliminary Investigation of the Impact of Illinois House Bill 1500

Data more directly related to HB 1500 came from a preliminary investigation of the impact of determinate sentencing in Illinois (Illinois Department of Corrections, 1979). By looking at data back to 1973 and changes between 1977 and 1978 (when HB 1500 took effect) the impact of determinate sentencing was assessed. Due to limitations of the data these findings are extremely tentative; however, they may be useful in directing future research.

This preliminary investigation revealed that the conviction rate for felony cases which were disposed in Illinois increased from 43% to 54% for the years 1973 through 1978. This represented an increase in the number of people convicted from 9,371 to 15,642. Between 1977 and 1978 the rate of imprisonment upon conviction continued to increase (1%), reflecting a continuation of an established pattern.

The imprisonment rate fluctuated for Cook County and has

increased slightly for all other counties in Illinois between 1973 and 1978. Between 1977 and 1978 the imprisonment rate had increased state-wide by 3%, but it is impossible to determine whether this reflects a real effect of determinate sentencing or merely a temporary upswing in the imprisonment rate.

Uniformity at the court level was assessed by studying the difference in the conviction rate between Cook County and all other counties (Others) in Illinois. The conviction rate for Cook County had fluctuated slightly between 1973 and 1976 and dropped from 68% to 65% between 1977 and 1978. However, the conviction rate for Others had risen from 41% in 1977 to 44% in 1978 as part of a steadily rising pattern from 29% in 1973. Thus, the narrowing of the difference in conviction rates seems to be part of an established pattern.

Evaluation of Illinois House Bill 1500

Limitations of the preliminary investigation. The preliminary investigation, though instructive, is limited in two major ways. First, reliable data concerning the impact of determinate sentencing were scarce. The court data included the year 1978 which was used to represent the effect of HB 1500. However, data from that year included a number of individuals who were sentenced indeterminately: (a) individuals sentenced in January of 1978, and (b) some individuals who committed their crime before HB 1500 but were sentenced after it took effect.[8] The preliminary investigation indicated that approximately 50% of those sentenced in September of 1978 had a choice or option to be sentenced determinately or indeterminately. Thus,

court data for 1978 cannot be considered truly representative of determinate sentencing. The current study includes data for 1979. A much greater percentage of offenders sentenced in 1979 will have been sentenced determinately. A further description of the analyses of the court data appears below.

Another problem with the preliminary investigation, which will be solved by the current evaluation, is that it did not directly address the most significant aspect of changes in the sentencing procedures--the actual punishment given to the offenders. This can be assessed using one of two dependent variables--time imposed by the judge or time served by the offender.

A comparison of the indeterminate and determinate systems in terms of time imposed upon offenders is not useful for two reasons. (1) Under the determinate system, judges do not set minimum and maximum sentences, thus comparable sentencing data are not available. (2) Time served in prison is of greater interest than time imposed. The time served will reflect the actual punishment (thus the effect of the new law) better than the time imposed, the time served will describe the impact on the prison population in terms of overcrowding better than the time imposed, and finally, the time served should be of greater importance to the offender than the time imposed. Therefore, time served will be used to study this important aspect of the impact of determinate sentencing in Illinois.

The major questions to be answered by the current study. HB 1500

may result in changes in a number of significant areas in the Illinois criminal justice system. The amount of time served in prison by offenders (mentioned above) is one such area. In addition, the new law may alter the percentage of offenders sentenced to imprisonment. Sending a greater percentage of offenders to prison is seen as a positive step by Chief Justice Burger who believes in the need for certainty of punishment ("The Plague of Violent Crime," 1981, p. 50) and by the general public, 70% of whom responded "not very much" or "not at all" to a recent Newsweek Poll question: "How much confidence do you have in the courts to sentence and convict criminals?" ("The Plague of Violent Crime," 1981, p. 49).[9]

Mandatory sentencing advocates also believe that certainty of punishment is more important than severity of punishment, and they believe more serious offenders should be imprisoned even if it is for shorter periods of time. Thus, if HB 1500 reflects the principles of mandatory sentencing, we might expect to find that a greater percentage of serious offenders are serving shorter periods of time in prison. On the other hand, if Governor Thompson's "get tough" policy has an impact, such as longer sentences for Class X offenders, we might expect that serious offenders will be serving longer sentences under HB 1500. The impact of HB 1500 in this regard will be assessed.

Finally, lack of uniformity in sentencing is a major criticism of indeterminate sentencing which was previously discussed. The impact of HB 1500 in this area is thus important to evaluate.

This evaluation will study these three areas of potential impact by HB 1500, by attemting to answer the following questions:

(1) Do offenders serve longer or shorter terms under determinate sentencing? Offenders will be grouped by offense and the data will be analyzed by offense. This will be done to discern differential changes between offense groups which could remain undetected if data for all offenders were analyzed together as one group. The importance of this question is twofold. (a) Since, as mentioned above, time served represents the actual punishment given to an offender, the "hardness" or "softness" of the criminal justice system is, in part, reflected by the length of time offenders are imprisoned. (b) Changes in time served will have a tremendous impact upon the Illinois Department of Corrections. The prisons are currently crowded, impeding care and maintenance of inmates. In the past, crowding has been blamed by various groups for lack of services, inhumane conditions, and prison riots. Any further increase in the prison population could worsen an already difficult situation. A decrease in the prison population could allow the Department of Corrections to solve or at least relieve current problems. An analysis of the impact of HB 1500 can help determine to what extent the size of the prison population is changing. This information should be useful to Illinois legislators and prison officials in planning for Illinois prisons.

(2) Are a greater percentage of offenders being sentenced to imprisonment? The philosophy of mandatory sentencing was described previously as the belief that certainty of punishment is more

important than severity of punishment (i.e., a greater percentage of offenders--especially those convicted of serious offenses--should be imprisoned even if it is for shorter periods of time). The answer to this question will, in some respects, assess the impact of the mandatory sentencing philosophy upon HB 1500. The change in the percentage of individuals imprisoned will be assessed for all offenses combined. (Although the change in the percentage imprisoned of those convicted controlling for offense would be a better measure, the number of individuals convicted by offense is not available and thus this analysis cannot be made.)

(3) Is there greater uniformity of sentencing between counties? This relates to justice and equal treatment under the law. One of the criticisms of indeterminate sentencing is the lack of equity in the system. Determinate sentencing has been proposed to correct this situation. The uniformity of the imprisonment rate for all offenders sentenced in Cook County versus all offenders sentenced in all other counties in Illinois will be determined and compared by type of sentencing (determinate or indeterminate).

NOTES

[8]Those offenders who committed their crime before February 1, 1978 but were sentenced on or after that date could opt for sentencing under either the determinate or indeterminate system.

[9]The complete results of this Newsweek Poll question were:

A great deal	5%
Quite a bit	23%
Not very much	59%
None at all	11%
Don't know	2%

METHOD

Description of Data File

The data file used in this study was created by the Research and Evaluation Unit and the Information Services Unit of the Illinois Department of Corrections. It contains information on all inmates convicted of a felony (and certain misdemeanors) and released or admitted between January 1, 1976 and December 31, 1980. The data were developed from the Illinois Corrections Information System (CIS) and are limited due to lack of standardized input procedures, lack of quality source documents, problems inherent in the structure of the computer files and the method by which information is coded. These problems have often resulted in missing data and miscoded information.

In order to improve reliability, only certain portions of the CIS data were used in developing the data file for this study. Data from the earliest years--1974 and 1975--were omitted entirely due to serious questions concerning their accuracy and usefulness. In addition, to be included in the study sample, the offender's conviction could not include more than one offense. This was necessary due to data input errors in which the most serious offense was not always entered in the correct location. When this type of error was made, cases would be identified by a less serious offense (rather than the most serious offense), but the imposed sentence and actual time

served would be based on the more serious offense.

The data were further restricted to include only nine offenses: murder, rape, armed robbery, voluntary manslaughter, burglary, robbery, aggravated battery, forgery and theft. This was necessary in order to reduce the computations to a manageable level. Analyses using these crimes provide a good indication of the impact of HB 1500 because these crimes represent a variety of offense classes and large numbers of individuals convicted of these crimes are admitted to prison.[10]

Finally, all offenders who received "life" or "death" sentences were omitted from the data. This decision was made based on: (1) the need to have data concerning time served which are quantifiable (time served for offenders sentenced determinately to "death" would be particularly difficult to estimate) and (2) the unavailability of the data for offenders given sentences of "life" or "death" as described in 1979 Statistical Presentation (Illinois Department of Corrections, 1980b, p. 12). Although the impact upon the results of this study are not known, this restriction could have biased the findings for the most serious offenses. For example, if some offenders who previously received "life" sentences in the indeterminate system, now received long determinate sentences, omitting "life" sentences from the analyses would have the effect of increasing time served for some serious offenders sentenced determinately.

Although the data used in this study are certainly more reliable

and accurate than the complete file from which they were developed, they are also quite limited in generalizability. According to information available from the Illinois Department of Corrections Research and Evaluation Unit, restricting the data to convictions with only one offense would reduce the sample by roughly one-half (48%). However, since the author decided that improved reliability and accuracy of the data was of greater importance than extending the generalizability of the findings, the study was conducted with these restrictions.

Development of Groups for Comparing Time Served Under Determinate and Indeterminate Sentencing

Determinate group. The assessment of time served[11] by offenders under determinate sentencing poses a number of problems. The actual time served can only be determined after all offenders imprisoned in a given time period are released. Clearly, this is impractical for determining the time served by offenders sentenced after January 31, 1978, because few serious offenders will be released after only two or three years in prison. However, since most inmates will receive their full complement of good time,[12] we can assume (with day-for-day good time) that inmates will serve about one-half their imposed sentence. Thus, one half the imposed determinate sentence of offenders sentenced between February 1, 1978 and December 31, 1980[13]--the determinate group (DET)--provided the estimated time served under the new law. (An adjustment was made for revoked good time--see Note 12 --by increasing the estimated time served 0.042 years per year. A complete description of this procedure appears in the "Results" section.)

Indeterminate group. Adequate comparison data of time served by offenders sentenced under the indeterminate system were not really available. Although actual release data were available for many offenders sentenced indeterminately, it was difficult to construct an adequate comparison group. For instance, assume that data for offenders released in 1977 were used. This group would consist of offenders sentenced during the past 10 years and more, and would confound time served with date of sentencing. Since we know that sentencing practices have changed over time, this group would not be an appropriate comparison group to determine changes in time served attributable to a law which took effect in 1978. In addition, variables associated with the offender and the offender's most recent admission (e.g., age at arrest, county of residence, jail time served, etc.) would vary. If instead, offenders who were recently sentenced indeterminately were used (sentenced in 1976 or 1977), few serious offenders would have been released and thus their data would not be available for comparison to the DET group.

In reality, no adequate comparison group exists. (Ten years from now when most of the offenders who were most recently sentenced indeterminately have been released, the times served by this group will be the best comparison group.) Therefore, an indeterminate comparison group was constructed using prediction equations developed through multiple regression. Multiple regression with forward (stepwise) inclusion and listwise deletion of missing data was used to develop the linear combinations of variables that accounted for the

largest proportion of variance in the dependent variable-time served (by inmates who had been sentenced indeterminately). Multiple regression analyses were conducted separately for each offense, thus nine prediction equations were developed.

The dependent variable used in the regression analyses was the actual time served by all felons[14] who had been sentenced to prison indeterminately and then were released from prison between January 1, 1976 and December 31, 1980. Independent variables were chosen which were expected to be correlated with time served. The choice of these variables was restricted to those variables which were: (1) available on the computer file (since the regression equations would use data from offenders who were admitted to the Department of Corrections but not necessarily released, the values of the variables would have to be known at the time the offender was processed for admission to the Department of Corrections in order to be accessible from the computer file), (2) available for all felons who were being imprisoned with only one offense on their current conviction and were sentenced determinately and (3) available given other previously described limitations of this study and the computer data file. Given these restrictions, information which could not be used included: (1) number of violations of prison rules (or good time revoked), (2) minimum sentence imposed (the maximum sentence imposed under the indeterminate system was used to represent the definite sentence under HB 1500) and (3) number of prior commitments.[15]

The following offender predictor variables were included in the

regression analyses: race, education, age at current admission to prison, age at arrest, marital status, level of drug use, level of alcohol use, drug-related offense, alcohol-related offense, county of residence, plea, maximum sentence and jail time served.[16] Separate multiple regressions were computed for the following offenses: murder, armed robbery, rape, robbery, burglary, voluntary manslaughter, aggravated battery, forgery, and theft. The equations for predicting indeterminate times served were applied to the offenders sentenced determinately between February 1, 1978 and December 31, 1980. Using the predictor variables of these offenders, predicted times served were calculated and used as the best available comparison group (IND).

Although the actual time served remains confounded with date of sentencing using this method, development of prediction equations based on offender variables allows the equations to be applied directly to the offender group of interest--inmates who received a determinate sentence. Using this method, variables related to the offender and the offender's most recent admission are held constant.

Thus, the determinate (DET) times served consisted of estimates based upon real sentences imposed upon individuals sentenced determinately (assuming day-for-day good time). For these same offenders, predicted times served were calculated as if these offenders had been sentenced indeterminately. The prediction equations (which were developed from real case variables using real times served by inmates who were previously sentenced indeterminately) were applied to the case variables of inmates sentenced determinately to compute predicted

IND times served.

Analyses

Time served. Statistical analyses were conducted on the predicted times served for the IND groups and the estimated times served for the DET groups using Student's t for paired observations (two-tailed). In conjunction with these tests, the average times served computed for the DET and IND groups were compared to assess the meaningfulness of the differences which were found using the t tests. In addition, estimated determinate times served were correlated with predicted indeterminate times served. This was done to verify that any differences discovered using the t tests were due to differences between members of the same paired cases (a paired case consisted of an estimated time served for the DET group and a predicted time served for the IND group using data from the same inmate) and not between members of different pairs of cases. Expected high correlation would indicate that differences between the two groups (IND and DET) represented differences in what the same case (offender) would have received under the different sentencing policies.

Conclusions drawn from the analyses of the differences in average times served between the IND and DET groups were limited by the fact that the data used were biased towards shorter average times served for the IND group. This was due, in part, to the use of releases for the years 1976 through 1980 in developing the prediction equations for the IND group. The problem is that for any particular offense and cohort of offenders admitted to prison in the same year,[17]

cases were selected depending upon the inmates' length of stay in prison. For instance, if we were to look at offenders admitted in 1975 for armed robbery and if we assumed that the average time served was three years, the least time served by any armed robber was one year and the most time served by any armed robber was 20 years, we would find that most of the armed robbers would be released in the years 1976 through 1980, and thus they would be included in the study. However, armed robbers who served longer sentences (seven to 20 years) would not be released until after 1980 and thus would not be included in the study. This type of selection overrepresents inmates who served shorter sentences.

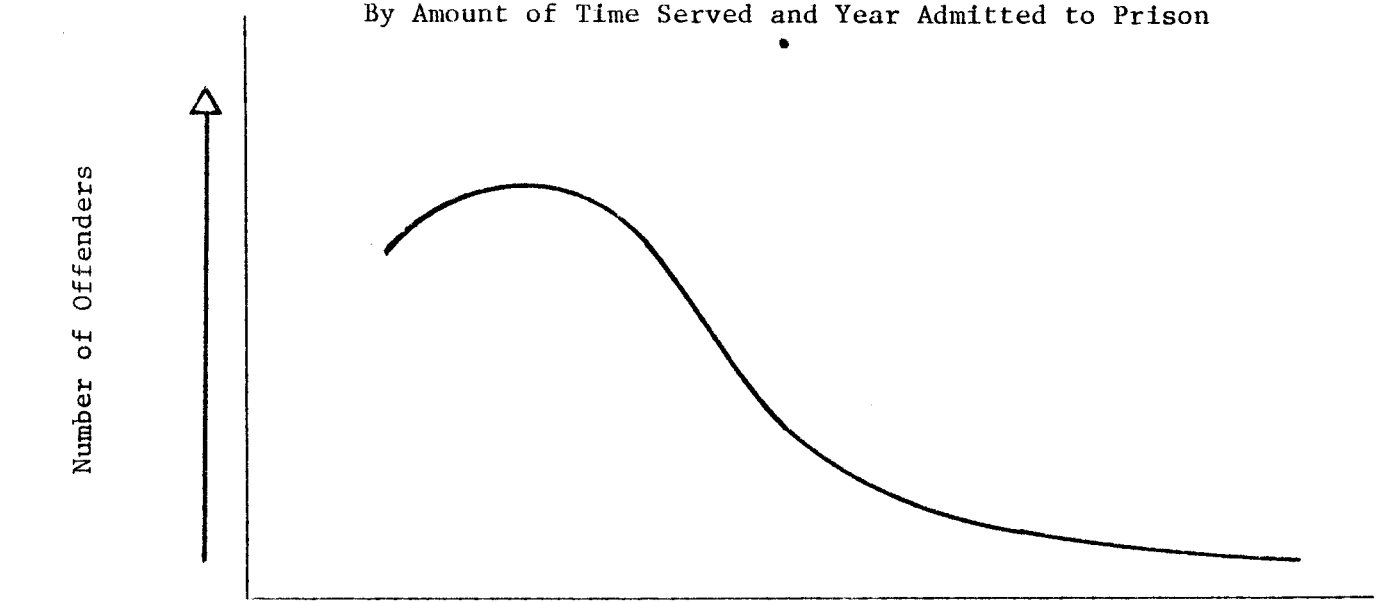
Selection which overrepresents inmates who served longer sentences also occurred. Using the armed robbers again, but this time considering only those armed robbers who entered prison in 1960, only the armed robbers who served 17 to 20 years would be released in the 1976 through 1980 time period. Armed robbers serving shorter sentences would be released before 1976 and would not appear in the study sample. It might be assumed that since all of these sampling biases are operating, they would result in equally proportionate numbers of inmates who served long, short and average sentences. Unfortunately, due to differences in the number of offenders admitted each year, this is not true. Since more offenders were admitted in 1975 than in 1960 (the number admitted in years prior to 1974), the sample is biased towards inmates who were admitted to prison more recently and thus the sample is biased towards inmates who served shorter sentences.

In order to correct this sampling bias, the original predictor variables used to develop the IND prediction equations should have been weighted in relation to the number of offenders admitted each year. However, because the author did not have access to these data when the bias was recognized (after development of the IND prediction equations), these corrections were not made. Instead, an estimate of the effect of the bias was made. This was done by using weights based on the number of offenders admitted each year and applying them to the distribution of actual times served by offenders used to develop the prediction equations. (One release year was chosen to represent the 1976 through 1980 release years used in this study. The year 1977 was chosen because: (1) the number of releasees during that year was close to the median number of releasees for 1976 through 1980 and (2) the data for 1977 were considered more accurate than for the year with the median number of releasees.) This procedure would have the effect of increasing (statistically) the number of releasees from years when the number of offenders admitted to prison was low relative to some standard and decreasing the number of releasees when the number of offenders admitted to prison was high relative to some standard.

The size of the weighting factor (and thus the computed increase in number of releasees) was determined by the relative size of the number of admissions for each admission year of releasees used in this study. For instance, releasees from the year 1977 can be grouped by the amount of time spent in prison, as shown in Figure 1. Releasees for each time served category (time served equals up to two years, two to three years, etc.) are cohorts which were admitted to prison in the

Figure 1.

Hypothetical Distribution of Offenders Released from Prison in 1977
By Amount of Time Served and Year Admitted to Prison



NOTE. Time served includes time served in jail before being admitted to prison.

same year. Releasees who served up to two years were admitted to prison during 1976, releasees who served two to three years were admitted during 1975, etc. If more offenders were admitted to prison during 1976 than in 1970, for instance, the distribution of time served for 1977 releasees will be biased in favor of the 1976 admission year cohort over the 1970 cohort. Equivalently (assuming that the distribution of time served is approximately the same for both cohorts), the distribution of time served for 1977 releasees will be biased in favor of releasees who served up to two years (admitted in 1976 and released in 1977) over the releasees who served seven to eight years (admitted in 1970 and released in 1977). Thus, to correct this bias, the releasees who served seven to eight years would have to be weighted to increase their impact upon the average time served by the 1977 releasees.

To develop the weighting factor, a standard for the number of inmates admitted per year must be chosen. Since the basis for weighting is the relative number of admissions by year, the actual standard chosen is not important as long as it is applied to all admission year cohorts similarly. If the standard of 5,000 admissions were to be chosen and if the number of admissions for 1976 was 4,000 and the number of admissions for 1970 was 3,000, the weighting factors would be 1.25 (5,000 divided by 4,000) for 1976 and 1.67 (5,000 divided by 3,000) for 1970. Thus, since admissions for both cohort years are low compared to the standard, the result is weighting factors which would increase the impact of both years upon the distribution of releasees. However, the weighting factor for 1970 is larger than the weighting

factor for 1976 and the effect of the 1970 cohort would be increased relative to the 1976 cohort. In this manner, the size of each of the admission year cohorts which comprise the 1977 releasee group would be adjusted.

Since 1977 releasees were chosen to represent releasees for 1976 through 1980, the number of offenders admitted in 1977 was used as the standard for calculating the weights. For each offense, the weights were applied to each admission cohort comprising the 1977 releasees and adjusted average times served for 1977 releasees were calculated. The adjusted average times served were then compared to the actual average times served for 1977 releasees to determine the percent change. These percentages were applied to the predicted IND times served resulting in final adjusted IND times served which were used as a comparison group for the estimated DET times served.

Imprisonment rate. The second area of analysis in this study concerned the rate of imprisonment. Evidence that the philosophy of mandatory sentencing had an impact upon the development of HB 1500 would be provided by discovering that a greater percentage of offenders--especially serious offenders--are being imprisoned. In order to assess this, the number of convictions and the number of offenders sentenced to prison broken down by offense is needed. Since the number of convictions by offense is not available, time series analysis of the imprisonment rate for all offenses was conducted.

Uniformity of sentencing. Uniformity between Cook County and

all other Illinois counties (Others)[18] was assessed using data from the Administrative Office of the Illinois Courts obtained from the Illinois Department of Corrections (1980b). Using the imprisonment rate as the dependent variable, time series analyses were conducted for Cook County and Others separately.

NOTES

[10]The number of individuals sentenced determinately in 1978 and 1979 by their offense is: murder, 122; rape, 201; armed robbery, 368; voluntary manslaughter, 250; robbery, 685; burglary, 1323; aggravated battery, 286; forgery, 162; theft, 664 (Illinois Department of Corrections, 1980b, Table 7).

[11]This includes time served in jails before entering state prisons.

[12]A study concerning good time revoked and good time restored to inmates in the Illinois Department of Corrections (Illinois Department of Corrections, 1980a) found that the net number of days revoked for 1980 was 177,678. The average daily population of all Illinois prisons during 1980 was 11,699. Thus, during 1980, 177,678 days of good time were revoked for a period of 11,699 inmate-years, or 15.2 days per inmate year were revoked. Averaged over all inmates in this manner, good time revoked should not have a significant impact on the estimated time served (one-half the imposed determinate sentence) which assumes day-for-day good time. Good time revoked could have a more biasing effect upon estimated time served if it tended to be applied to particular offenses. However, according to the Chief Legal Counsel for the Illinois Department of Corrections, starting in April of 1981, all or most good time was restored to most inmates on a regular basis. Thus, good time revoked should not have any significant impact upon the accuracy of using one-half the imposed determinate sentence as the estimated time served.

[13]Individuals who committed their crimes before February 1, 1978 but were sentenced on or after that date were given the option to be sentenced under either the indeterminate or determinate system. In order to remove this ambiguity from the data, it was desirable to remove from the analyses the individuals who opted for determinate sentencing. Since the date the crime was committed was not available, the date the individual was taken into custody by police was used, and all offenders who were given a determinate sentence and whose custody date was prior to February 1, 1978 were removed from the data.

[14]Inmates convicted of theft included a small percentage of misdemeanants.

[15]The decision to use the indeterminate maximum sentence imposed to represent the definite sentence under HB 1500 was based on the fact that the maximum sentence and the sentence imposed under determinate sentencing both represent the absolute maximum amount of time an inmate could serve in prison for his current conviction.

Since the prediction equations were originally to be applied to first time offenders sentenced determinately, variables such as the number of prior commitments or time previously served in prison were not used. After the equations were developed and after the researcher was unable to rerun those analyses, the decision was made to use repeat offenders.

[16]These variables were chosen in consultation with the supervisor of the Research and Evaluation Unit of the Illinois Department of

Corrections.

[17]Since time served included jail time served before entering prison, the number of offenders sentenced to prison for each sentencing year would have been the most relevant data to use. However, since (1) data concerning the number of offenders sentenced were not as readily available, (2) the number of offenders admitted to prison was available as far back as 1954 and (3) the number of offenders admitted to prison was expected to be strongly correlated with the number of offenders sentenced to prison, the number of offenders admitted to prison by the year admitted was used in these analyses.

[18]Data from the Administrative Office of the Illinois Courts is typically analyzed and presented in this format--Cook versus Others--in part because Cook County accounts for 65% of the total state convictions.

RESULTS

Multiple Regression Equations for Predicting Time Served

The following independent variables were used in the regression analyses: maximum sentence imposed by the judge (MAX), time served in jail before being admitted to prison (JAILTIME), age at arrest (ARSTAGE), age at admission to prison (AGE), alcohol-related offense (AOF), drug-related offense (DOF), level of alcohol usage (AUSE), level of drug usage (DUSE), plea in court (PLEA), county of residence (COUNTY), race (RACE), education (EDUCATION) and marital status (MARITAL). The coding of these variables is described in Table 1. Based on the stipulation that in order to be included in the prediction equation an independent variable must account for at least 1% of the variance in time served, only seven of these variables (MAX, JAILTIME, ARSTAGE, AOF, PLEA, AGE, COUNTY) were used in the prediction equations for any of the offenses. The following results will include data relevant to these variables only. Table 2 describes the mean and standard deviation of the dependent variable, time served, and the number of cases included in the regression analysis for each offense. In addition, the multiple R, R square, standard error of the estimate (SEE) and the F values for each regression equation are shown. The overall percentage of variance accounted for (R square) by each multiple regression equation was between 30% and 70% for seven of the nine offenses. The R square was greatest for the offense of rape (0.81) and smallest for robbery (0.20).

Table 1

Coding Scheme for Independent Variables
Used to Develop Regression Equations

Variable Name	Code
MAX	In Years
JAILTIME	In Years
ARSTAGE	In Years
AGE	In Years
*AOF	0 = No 1 = Yes
*DOF	0 = No 1 = Yes
*AUSE	1 = Heavy 2 = Occasional 3 = Light 4 = Never
*DOF	1 = Heavy 2 = Occasional 3 = Light 4 = Never
PLEA	0 = Pleas Other Than Guilty 1 = Guilty
COUNTY[a]	1 = Counties with population less than 10,000 2 = Counties with population of 10,000 to 74,999 3 = Counties with population of 74,999 or more (excluding Cook County) 4 = Cook County
RACE	0 = Non-White 1 = White
*EDUCATION	Last Grade Completed
*MARITAL	0 = Not Currently Married 1 = Married

(continued)

Table 1 (continued)

NOTE. Asterisk indicates that information was provided by the offender when being processed for admission to the Illinois Department of Corrections. Other information was provided by the sentencing court.

[a]Population of counties was obtained from National Clearinghouse on Aging (1980, pp. 36-39).

Table 2

Descriptive Statistics for the Regression Equations and the Dependent Variable-Time Served

Offense	Number of Cases	Dependent Variable --Time Served[a]		Regression Equation			
		Mean	Standard Deviation	Multiple R	R Square	F	Standard Error of the Estimate
Murder	197	9.75	4.70	0.59	0.35	20.3	3.84
Rape	136	4.69	3.94	0.90	0.81	575.4	1.72
Armed Robbery	1,001	3.32	1.98	0.69	0.47	447.4	1.44
Voluntary Manslaughter	393	3.63	2.09	0.57	0.32	46.4	1.73
Burglary	1,349	1.79	1.45	0.58	0.34	233.1	1.18
Robbery	1,080	1.92	1.26	0.45	0.20	88.6	1.13
Aggravated Battery	397	2.10	1.20	0.56	0.30	44.6	1.02
Forgery	189	1.83	1.63	0.68	0.46	53.5	1.20
Theft	843	1.19	1.12	0.56	0.32	96.6	0.93

[a]Based on inmates who were sentenced indeterminately with only one offense and released between January 1, 1976 and December 31, 1980.

Generally, these figures indicate that a large proportion of the variance remains unexplained by the prediction equations. However, assessment of the SEE's and standard deviations for time served (see Table 2) demonstrate the accuracy gained (with respect to individual scores) by using the prediction equations as opposed to using only the mean time served of released inmates.

All of the F values for the equations are significant beyond the 0.01 probability level. However, this can be attributed to the large number of cases used in each equation. Information regarding the prediction equations used in developing predicted times served under indeterminate sentencing can be found in Table 3. The independent variables used in each equation for each offense are indicated. For all offenses except forgery, MAX accounted for the greatest proportion of variance in time served as indicated by the R square change for each variable. The unstandardized and standardized regression coefficients (B and BETA, respectively) and the standard error of B for each variable in each equation, as well as the constant for each equation, are provided in Table 3.

Analysis of Time Served

The results of the t tests comparing the predicted time served of the IND group to the estimated time served of the DET group are shown in Table 4. The estimated determinate times served were greater than the predicted indeterminate times served for the following offenses: murder, rape, armed robbery, voluntary manslaughter, burglary and robbery. For the offenses of aggravated battery, forgery

Table 3

Description of Regression Equations

	B	BETA	Standard Error of B	Constant	R Square Change
Murder					
MAX	0.0301	0.4963	0.0036		0.2362
JAILTIME	0.6063	0.2541	0.1392		0.0564
AOF	-4.3450	-0.1501	1.7882		0.0222
PLEA	-1.4424	-0.1533	0.5664		0.0148
AGE	-0.0532	-0.1355	0.0237	10.0081	0.0173
Rape					
MAX	0.2834	0.9006	0.0118	1.4236	0.8111
Armed Robbery					
MAX	0.0292	0.6594	0.0010		0.4408
ARSTAGE	0.0532	0.1788	0.0068	1.8865	0.0320
Voluntary Manslaughter					
MAX	0.1733	0.4549	0.0162		0.2524
JAILTIME	0.6369	0.2215	0.1215		0.0413
AGE	-0.0589	-0.0310	0.0145		0.0156
ARSTAGE	0.0399	0.2207	0.0138	1.8925	0.0145
Burglary					
MAX	0.2009	0.5054	0.0089		0.2814
JAILTIME	0.5298	0.1749	0.0670		0.0314
ARSTAGE	0.3603	0.1727	0.0047	0.0196	0.0293
Robbery					
MAX	0.1281	0.2947	0.0119		0.1056
JAILTIME	0.6729	0.2785	0.0661		0.0768
ARSTAGE	0.0272	0.1262	0.0059	0.4453	0.0158
Aggravated Battery					
MAX	0.1924	0.4569	0.0177		0.2133
JAILTIME	0.6683	0.2707	0.1036		0.0698
ARSTAGE	0.0239	0.2111	0.0069		0.0207
AGE[a]	-0.0288	-0.2481	0.0713	1.1597	0.0088

(continued)

Table 3 (continued)

Forgery					
ARSTAGE	0.0365	0.159	0.0125		0.3125
JAILTIME	0.8226	0.5417	0.0819	-0.1907	0.0247
MAX	0.2145	0.3304	0.0355		0.1275
Theft					
MAX	0.1819	0.3850	0.1042		0.2254
JAILTIME	0.8188	0.2329	0.1031		0.0759
ARSTAGE	0.0198	0.1379	0.0043		0.0165
COUNTY	0.1176	0.1276	0.0268	-0.1220	0.0119

[a]Not included in the prediction equation because the R Square change was less than 1%.

Table 4

Comparison of Estimated Determinate Times Served and Predicted Indeterminate Times Served

Offense (Class)	Number of Paired Cases	T	2-Tailed Probability
Murder (M)	219	13.19	0.000
Rape (X)	128	4.55	0.000
Armed Robbery (X)	608	6.58	0.000
Voluntary Manslaughter (2)	326	0.25	0.805
Burglary (2)	1167	13.42	0.000
Robbery (2)	716	4.51	0.000
Aggravated Battery (3)	326	-9.30	0.000
Forgery (3)	138	-2.63	0.010
Theft (3/4/misdemeanors)	1258	-20.32	0.000

and theft, times served were greater for the IND group. These differences in times served are significant (at $p < .001$) for all offenses except voluntary manslaughter and forgery (the results for forgery were significant at $p < .010$). By class of offense, for all Class M, X and 2 offenses, the times served for the DET group were larger than times served by the IND. For Class 3 and Class 3/4/misdemeanor offenses, the times served by the IND group were greater than the times served for the DET group.

The average times served for each offense group are described in Table 5. The average DET times served were calculated by dividing the imposed determinate sentence by two. This assumed that day-for-day good time would be received by the inmates. In reality, (as stated in Note 12), on the average, 15.2 days of good time per year were revoked. Thus, 15.2 days or 0.042 years per year were added to the average DET time served to calculate the corrected DET time served. The standard deviations for DET were also increased by 0.042 times their original value. The corrected average DET times served, the corrected standard deviations for DET and the differences between the corrected DET average times served and the IND average times served are described in Table 5.

Differences in average times served of more than 0.50 years were found for the following offenses: murder, rape and armed robbery. The absolute differences in average time served for the remaining offenses varied from 0.04 years (14 to 15 days) to 0.22 years (2.64 months). As a percentage of the IND time served, differences of +65%, +23% and +20%

Table 5

Average Number of Years Served by the DET Group, the Corrected DET Group and the IND Group

Offense (Class)	Number of Paired Cases	Mean (Standard Deviation)[a] DET	Corrected DET	IND	Difference Between Means[b] Years	Percentage of IND Mean
Murder (M)	219	13.56 (5.48)	14.13 (5.71)	8.58 (2.07)	+5.55	+65
Rape (X)	128	4.67 (3.44)	4.87 (3.58)	4.07 (1.95)	+0.80	+20
Armed Robbery (X)	608	3.74 (2.02)	3.90 (2.10)	3.24 (0.38)	+0.74	+23
Voluntary Manslaughter (2)	326	2.55 (0.95)	2.66 (0.99)	2.54 (0.71)	+0.12	+ 5
Burglary (2)	1167	1.71 (0.49)	1.78 (0.51)	1.56 (0.41)	+0.22	+14
Robbery (2)	716	1.78 (0.46)	1.85 (0.48)	1.70 (0.37)	+0.15	+ 9
Aggravated Battery (3)	326	1.44 (0.57)	1.50 (0.59)	1.66 (0.35)	-0.16	-10
Forgery (3)	138	1.23 (0.39)	1.28 (0.41)	1.32 (0.44)	-0.04	- 3
Theft (3/4/misdemeanor)	1258	0.84 (0.47)	0.88 (0.49)	1.04 (0.41)	-0.16	-15

[a]The correction factor for the "Corrected DET" standard deviation was derived based on the corrected mean as follows: $\left[\Sigma_i(.042X_i-.042\bar{X})^2/N\right]^{\frac{1}{2}} = \left[(.042)^2\Sigma(X_i-\bar{X})^2/N\right]^{\frac{1}{2}} = (.042)\left[\Sigma_i(X_i-\bar{X})^2/N\right]^{\frac{1}{2}}$

[b]The "Difference Between Means" equals the "Corrected DET" mean minus the "IND" mean.

were found for murder, armed robbery and rape, respectively, indicating larger determinate times served. The differences for the Class 2 offenses, burglary, robbery and voluntary manslaughter were also positive (14%, 9% and 5%, respectively). Time served for theft, aggravated battery and forgery (-15%, -10% and -3%, respectively) indicated larger indeterminate times served. The increase in average DET times served would also affect the results of the previously discussed t tests. (Due to the fact that the author's access to the data was limited, he was not able to compute t tests on these data as he would have done if it were possible.) For the offenses murder, rape, armed robbery, voluntary manslaughter, burglary and robbery the value of t would be increased. For aggravated battery, forgery and theft the value of t would be decreased.

Table 6 indicates that the correlations between estimated determinate times served and predicted indeterminate times served were significant beyond the 0.001 probability level for all offenses except murder. (The correlation of 1.000 for rape is due to the face that the variable MAX is the only variable used to calculate the time served for both groups--DET and IND--for this offense.) The correlation (r = .14) for murder is significant at p <.050, but unexpectedly low.

The method of calculating the prediction equations for the IND group was described previously as being biased in favor of predicting shorter times served. In order to estimate the possible impact of this bias, the average time served for felons released in 1977 (the data are not limited to felons convicted of only one offense) by

Table 6

Correlation of Estimated Determinate Times Served with Predicted Indeterminate Times Served

Offense	Number of Paired Cases	Correlation	2-Tailed Probability
Murder	219	0.14	0.038
Rape	128	1.00	0.000
Armed Robbery	608	0.44	0.000
Voluntary Manslaughter	326	0.62	0.000
Burglary	1167	0.63	0.000
Robbery	716	0.43	0.000
Aggravated Battery	326	0.66	0.000
Forgery	138	0.58	0.000
Theft	1258	0.68	0.000

offense was calculated before and after adjusting for the bias. The distribution of 1977 releasees was corrected by weighting the number of offenders in each cohort of inmates which began serving its sentence during the same year. Weights were developed by the following ratio: the number of felons admitted to prison in 1977 divided by the number of felons admitted to prison in the year being weighted. Table 7 indicates the number of felons admitted for the years 1954 through 1977[19] and the correction weight which was calculated for each of those years.

As an example of how the weights were used in the analyses, the average time served by the adjusted or weighted number of robbers released in 1977 is shown in Table 8. Offenders were grouped by years served and the midpoint of the group (to the nearest 0.5 years or 0.05 years) was used to calculate average time served. Narrower groups were used where the frequency of offenders was highest. Since the number of offenders admitted prior to 1954 who were included in this study was small (total number was five), they were not grouped; instead, the actual amount of time served was used in the calculation of average time served.

In order to determine correction weights for years prior to 1954, calculated weights were plotted against admission year (see Figure 2). The admission years and corresponding predicted weights used in this study were 1949, 3.01; 1945, 3.50; 1942, 3.85; and 1935, 4.65. For comparison, an alternative method of calculating the weights for years prior to 1954 was used. The average of the weights for the years 1954 through 1958 (2.40) was used as the weight for years prior to 1954.

Table 7

Number of Felons Admitted and Correction Weight for Each Year

Year Admitted	Number of Felons Admitted	Correction Weight
1954	2088	2.41
1955	2171	2.32
1956	1737	2.90
1957	2124	2.37
1958	2517	2.00
1959	2464	2.04
1960	2751	1.83
1961	2677	1.88
1962	2205	2.28
1963	2529	1.99
1964	2609	1.93
1965	2471	2.04
1966	1941	2.59
1967	2196	2.29
1968	2352	2.14
1969	2499	2.01
1970	2341	2.15
1971	2355	2.14
1972	2550	1.97
1973	2714	1.85
1974	3372	1.49
1975	4217	1.19
1976	4958	1.01
1977	5029	(standard year used)

NOTE. The number of admissions for the standard year 1977 (5029) divided by number of admissions for a particular year equals the correction weight for that year.

Table 8

Calculation of Average Time Served by the Adjusted Number of Robbers Released in 1977

Year Admitted	Years Served	Number of Releasees	X	Correction Weight	=	Adjusted Time Served
1976	0.0-0.50	20		1.01		5.05
	0.51-1.00	167		1.01		126.50
	1.01-1.50	110		1.01		138.88
	1.51-2.00	110		1.01		194.43
1975	2.01-2.50	110		1.19		294.53
	2.51-3.00	77		1.19		251.98
1974	3.01-3.50	65		1.49		314.76
	3.51-4.00	62		1.49		346.43
1973	4.01-4.50	27		1.85		212.29
	4.51-5.00	16		1.85		140.60
1972	5.01-5.50	9		1.97		93.08
	5.51-6.00	9		1.97		101.95
1971	6.01-7.00	7		2.14		97.37
1970	7.01-8.00	3		2.15		48.38
1969	8.01-9.00	1		2.01		17.09
1968	9.01-10.00	0		2.14		0.00
1967	10.01-11.00	2		2.29		48.09
1966	11.01-12.00	0		2.59		0.00
1965	12.01-13.00	0		2.04		0.00
1964	13.01-14.00	1		1.93		26.06
1963	14.01-15.00	0		1.99		0.00
1962	15.01-16.00	0		2.28		0.00
1961	16.01-17.00	0		1.88		0.00
1960	17.01-18.00	0		1.83		0.00

Table 8 (continued)

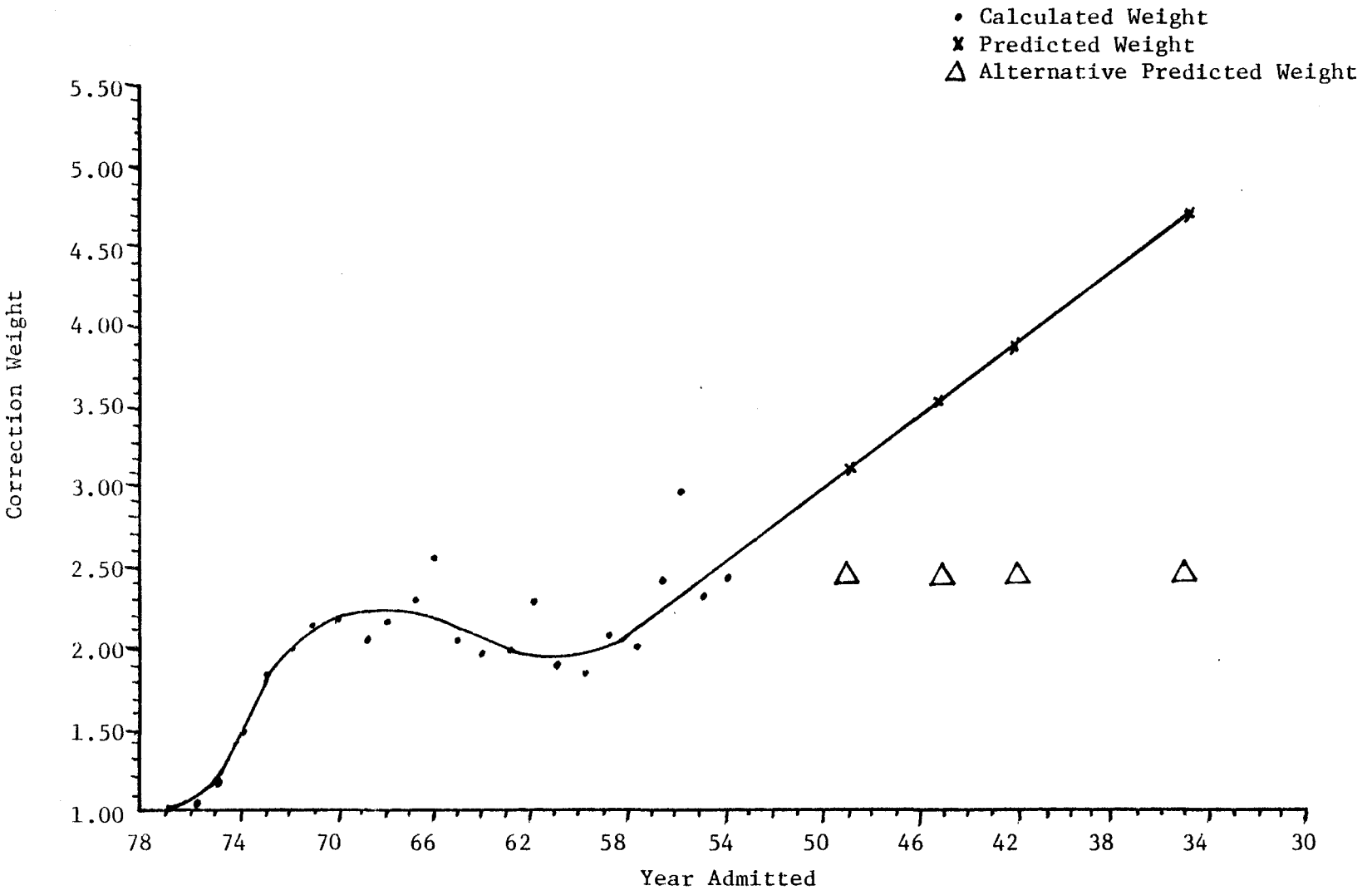
Year Admitted	Years Served	X	Number of Releasees	X	Correction Weight	=	Adjusted Time Served
1959	18.01-19.00		0		2.04		0.00
1958	19.01-20.00		0		2.00		0.00
1957	20.01-21.00		0		2.37		0.00
1956	21.01-22.00		0		2.90		0.00
1955	22.01-23.00		0		2.32		0.00
1954	23.01-24.00		0		2.41		0.00
Prior to 1954	> 24.00[a]		0		--[b]		0.00
TOTAL:							2457.4

Adjusted Average Time Served = 2.54

[a]For years prior to 1954, the actual time served was used in the calculations.

[b]By graphing year admitted against calculated correction weights, predicted correction weights were determined and used for offenders admitted prior to 1954.

Determination of Correction Weights for Admissions Prior to 1954



Results using this alternative method are indicated in parentheses in Table 9. Table 9 shows the adjusted and unadjusted average times served for 1977 releasees. All of the adjusted figures are greater than the unadjusted figures, and the absolute increases, as well as the percentage increases, are included in the table. (Differences in the results due to the use of the alternative method of calculating the weights for years prior to 1954 would not affect the conclusions drawn from these analyses.) The percentage differences for each offense due to the adjustment are quite similar and range from 10% to 19%. If grouped by offense class, the average percentage differences are 14%, 13% and 15% for Classes M and X, Class 2, Class 3 and Class 3/4/misdemeanor, respectively.

The percentage increase in average time served due to the correction for biased data was applied to the average IND times served as calculated using the prediction equations (see Table 5). The final adjusted IND average times served appear in Table 10 as do the DET average times served corrected for revoked good time. The differences between these two sets of figures also appear in Table 10. The corrected DET average time served was larger than the final adjusted IND average time served for Class M and Class X offenses. The actual differences varied between 0.23 years (about three months) and 4.86 years. The final adjusted IND average time served was greater than the corrected DET time served for all remaining offenses, and the actual differences ranged from 0.08 years (one month) to 0.44 years (a little over five months).

Table 9

Average Times Served by Offenders Released in 1977
Before and After Adjusting for Biased Data

Offense (Class)	Average Time Served	Adjusted Average Time Served	Difference	
			Absolute	Percentage of Average Time Served
Murder (M)	10.45	11.92 (11.26)[a]	1.47 (0.81)[a]	14 (8)[a]
Rape (X)	6.15	7.16 (6.99)[a]	1.01 (0.84)[a]	16 (14)[a]
Armed Robbery (X)	3.89	4.36	0.47	12
Voluntary Manslaughter (2)	4.47	4.93	0.46	10
Burglary (2)	2.23	2.65	0.42	19
Robbery (2)	2.22	2.54	0.22	10
Aggravated Battery (3)	2.15	2.52	0.37	17
Forgery (3)	1.97	2.26	0.29	15
Theft (3/4/Misdemeanor)	1.67	1.89	0.22	13

NOTE: These data are based on all offenders released in 1977 for each offense group. As described in the text, data were grouped according to the number of years served in prison and the midpoint of each time served group was used to determine "Average Time Served."

[a]These figures were computed using the average of the weights for the years 1954 through 1958 as the weight for years prior to 1954.

Table 10

Comparison of Corrected DET Average Times Served
and Final Adjusted IND Average Times Served

Offense (Class)	Corrected DET Average Time Served	Final Adjusted IND Average Time Served	Years	Percentage of IND Average Time Served
Murder (M)	14.13	9.78 (9.27)[a]	+4.35 (4.86)[a]	+44 (52)[a]
Rape (X)	4.87	4.72 (4.64)[a]	+0.15 (0.23)[a]	+ 3 (5)[a]
Armed Robbery (X)	3.90	3.63	+0.27	+ 7
Voluntary Manslaughter (2)	2.66	2.79	-0.13	- 6
Burglary (2)	1.78	1.86	-0.08	- 4
Robbery (2)	1.85	1.87	-0.02	- 1
Aggravated Battery (3)	1.50	1.94	-0.44	-23
Forgery (3)	1.28	1.52	-0.24	-16
Theft (3/4/Misdemeanor)	0.88	1.18	-0.30	-25

[a]These figures were computed using the average of the weights for the years 1954 through 1958 as the weight for years prior to 1954.

The differences as a percentage of the "Final Adjusted IND Average Time Served" indicate that the differences are greatest for the most serious (murder) and least serious (aggravated battery, theft and forgery) offenses. (Due to the fact that the author's access to the data was limited, he was not able to compute *t* tests on these data as he would have done if it were possible.)

Analysis of Imprisonment Rate

Imprisonment rates were the second type of data used to evaluate the impact of HB 1500. The rates of imprisonment for all felony convictions (the data are not limited to offenders convicted of only one offense) in Cook County and all other counties (Others) for the years 1974 through 1979 are shown in Table 11. The difference between these two rates is also provided.

The data for Cook County indicates an increase in the percent imprisoned for three years starting with 1975 through 1978. The imprisonment rate for convicted felons rose in those years from 36.4% to 44.2%, a change of 7.8%. Between 1978 and 1979[20] the rate decreased by 2.8%. The data for Others do not show any clear linear trends previous to 1978, although a decrease of 2.1% in the imprisonment rate between 1978 and 1979 was found and is similar to the findings for Cook County for the same years. However, the largest change in the imprisonment rate for both Cook and Others occurs prior to 1979. In 1976 the rate for Cook increased 6.5% and in 1977 the rate for Others dropped 4.3%.

Table 11

Rate of Imprisonment for Convicted Felons

Year	Cook		Others		
	Total Number of Felons Convicted	Percent of Convicted Felons Admitted	Total Number of Felons Convicted	Percent of Convicted Felons Admitted	Percentage Difference Between Cook and Others
1974	7,838	37.4	5,733	35.1	2.3
1975	9,889	36.4	7,495	36.4	0.0
1976	10,455	42.9	8,151	36.8	6.1
1977	11,725	43.0	8,449	32.5	10.5
1978	12,517	44.2	9.465	33.5	10.7
1979	13,775	41.4	8,771	31.4	10.0

Analysis of Uniformity in Sentencing

Imprisonment rates were also used to assess sentencing uniformity. The imprisonment rate for Cook County was higher than that for Others for every year except 1975 when they were equivalent. The difference in imprisonment rates after 1975 increased until 1979 when the trend was reversed and the difference in imprisonment rates decreased.

NOTES

[19]These data were provided by the Research and Evaluation Unit of the Illinois Department of Corrections.

[20]A large proportion of felons sentenced in 1978 (even after February 1, 1978) was sentenced determinately. Thus, 1978 should not be expected to demonstrate the impact of determinate sentencing. Only 1979 data will be used in this study to represent the impact of HB 1500.

DISCUSSION

Time Served

The proposed goal of this study was to evaluate the impact of Illinois House Bill 1500 in three areas. The first area concerned time served in prison by inmates. The results of the t-test analyses indicated that the DET group served longer sentences for the more serious offenses (Classes M, X and 2) and the IND group served longer sentences for the less serious offenses (Classes 3 and 3/4/misdemeanor). The findings are significant ($p < .001$) for all but two offenses (voluntary manslaughter and forgery). The difference in years is greater than 0.50 years for only murder, rape and armed robbery. Thus, for most offenses the calculated differences in average time served between the DET group and the IND group are less than six months, although relative differences between DET and IND groups (as percentages of the IND mean time served) of 10% to 23% were found for five offenses and a relative difference of 65% for murder was found.

A problem in interpreting findings for murder. In analyzing the findings of the t tests and comparisons of average time served, two major problems or biases in the data must be taken into consideration. The first involves the results of the analyses specifically for the offense of murder.

The meaning of the results for murder is unclear due to the

finding that the predicted times served for the IND group were not highly correlated with the estimated times served for the DET group. This finding suggests that differences in average times served were not due to differences between members of the same paired case (an estimated average time served for the DET group and a predicted average time served for the IND group using data from the same inmate). Rather, the differences were due to differences between members of different paired cases.

The low correlation for the offense group murder can probably be traced back to two areas related to the calculation of the DET and IND times served. First, the DET times served were calculated by dividing the maximum imposed sentence (MAX) by two. The closer that the equation for determining IND times served comes to using this same formula (MAX divided by two), the higher the correlation between the DET and IND times served. This is evidenced by the perfect correlation found for the offense of rape in which the IND predictor equation used only one variable--MAX. It follows that, in general, the greater the number of variables used (in addition to MAX) in the prediction equation, the smaller the correlation with DET estimated times served. In addition, when the variables in the prediction equation have an impact in the opposite direction to the impact of MAX (e.g., variables with negative correlations to time served when MAX is positively correlated to time served), the correlation between IND and DET times served will be decreased. Table 3 indicates that both of the above mentioned factors are influencing the low correlation for the offense group murder.

Second, the strength of the correlation between the calculated times served for the DET and IND groups is dependent upon the accuracy of the IND prediction equations. An equation with low accuracy is more likely to produce large differences in the dependent variable given small differences in the independent variables. Thus, the dependence of the predicted times served upon any one variable in the equation, such as MAX, is decreased, decreasing the correlation with DET estimated times served which are based solely on MAX.

Another way of explaining this is that as the variance due to unknown causes (error variance) increases, the correlation between the predicted time served and MAX decreases. Since the DET time served is based solely on MAX, the correlation between the IND time served and the DET time served is reduced.

The standard error of the estimate for murder in Table 2 (3.84) indicates that the prediction accuracy for the equation used to calculate IND time served for murder was lower than for the equations for any of the other offenses.

Bias in calculating IND predicted times served. The second factor which must be considered in evaluating the results of the comparisons of IND and DET times served is the bias involved in the calculation of the predicted IND times served. This bias was caused by: (1) using data from inmates released in 1976 through 1980 and (2) differences in the number of admissions to prison each year. Since the number of offenders admitted to prison increased sharply

starting around 1972, releasees in the 1976-1980 time period were biased in favor of offenders admitted from 1972 through 1980. This resulted in using releasees which were biased towards having served shorter sentences. The impact of this bias was calculated using an analysis which weighted the number of releasees (grouped into categories based on time served) according to the relative number of offenders admitted. It was found, as expected, that the predicted average IND time served for each offense had to be increased to correct for the bias. The "final adjusted IND average times served" were compared to the "corrected DET average times served" and the results provided the best assessment of the impact of HB 1500 upon time served currently available. For the most serious offenses--murder, rape and armed robbery--the corrected DET average times served were greater than the final adjusted IND average times served. The reverse was true for all other offenses. The differences are large for the Class M offense (44%), small for Class X offenses and Class 2 offenses (between 1% and 7%) and larger for Class 3 and Class 3/4/misdemeanor offenses (between 16% and 25%).

Problems in using 1977 releasees as representatives of 1976 through 1980 releasees. Before drawing conclusions from these findings, one final source of error must be discussed. Due to the sharp increase in admissions beginning in 1972 and continuing through 1976 (after which the number of admissions each year varied), the use of the 1977 releasees to represent release data for 1976 through 1980 is responsible for some unknown amount of error in calculating adjusted IND times

served. If changes in the number of offenders admitted over time had been both gradual and consistent, using the number of admissions in 1977 as the standard to represent the years 1976 through 1980 would not have caused a problem. However, because of the dramatic increase in admissions for the years 1972 through 1976, the weighting factors based on those years were very different than the weighting factors based on other years.

An example will most easily demonstrate the problem. Assume that for the offense of rape, most offenders serve about seven years in prison. In terms of this study, those rapists admitted in 1970 or 1981 could have served seven years and been released in 1977. Since these offenders were admitted before 1972, before admissions increased sharply, the number of admissions for 1970 and 1971 would be low relative to 1977 and the correction weights for these years would be relatively large. Now, if rapists who served seven years but were released in 1978, 1979 or 1980 were also used to correct for the bias, these offenders could have been admitted in 1971, 1972, 1973 or 1974. Since the number of admissions in 1972, 1973 and 1974 was much higher than the number of admissions in 1970 and 1971 (and much closer to the number of admissions in the years 1976 through 1980), the correction weights for these years would be smaller. Using smaller correction weights for these new data would reduce the size of the adjusted average IND times served for rapists (and all other offenders). This, in turn, would reduce the differences (found in Table 10) between IND and DET average times served for the less serious offenses and increase the differences for the more serious offenses.

Conclusions. Although the differences for both the serious and less serious offenses are sometimes small, they are consistent by class of offense and they demonstrate that individuals convicted of more serious offenses would serve longer periods of time in prison under HB 1500. This indicates that a "get tough" policy toward criminals may have influenced the design of HB 1500, and that HB 1500 does have a differential effect according to the seriousness of the crime.

The potential impact of these findings upon crowding problems in the Illinois Department of Corrections can be estimated. By applying the findings regarding the differences between the DET and IND average times served (see Table 10) to the number of recent admissions for the nine offenses studied (see Note 10), an estimate can be made of the overall impact of HB 1500 upon time served in prison. The results of these calculations indicate that under HB 1500 the average time served of offenders sentenced determinately in 1978 and 1979 (for the nine offenses studied) would increase by 144 years.

An effect of this magnitude would worsen the crowding situation in Illinois prisons. However, because of the large difference in average time served between DET and IND groups for murder, murderers are most responsible for the 144 year increase in overall average time served. The reliability of the calculations for murders is also the most doubtful, as previously discussed. Thus, the impact of changes in times served upon the prison population is unclear.

Imprisonment Rate

The importance of the differential effect (according to seriousness of offense) of HB 1500 upon time served could be lessened or nullified entirely if there is a significant overall increase or decrease in the number of offenders imprisoned. The number imprisoned is related to the imprisonment rate which was also assessed in this evaluation. Keeping in mind that only the year 1979 was expected to be a true reflection of the effect of HB 1500, data for Cook County showed increasing imprisonment rates from 1974 through 1978 followed by a 2.8% drop in the rate in 1979. Although the same clear trend of increasing rates is lacking for the other counties, a similar drop in the rate (2.1%) occurred between 1978 and 1979 for Others. These results seem to indicate that HB 1500 decreased the overall rate of imprisonment. This somewhat surprising finding motivated the author to investigate possible causes for this finding. The result was the development of three potential explanations.

First, since the imprisonment rate could not be analyzed by offense, the imprisonment rate could have actually increased for certain offenses, but these increases were masked by large decreases in the rate of imprisonment for other offenses. Nonetheless, the overall trend would remain the same and the cause would remain unknown.

Another possibility was that factors other than HB 1500 may have been influencing the imprisonment rate. For instance, crowded prisons might have influenced judges to sentence fewer offenders to prison. The 1979 Statistical Presentation (Illinois Department of Corrections, 1980b, p. 10) indicates that since 1972 the average prison population

in Illinois has been increasing, reaching record levels of 10,966 in 1978 and 11,312 in 1979. Another possible clue that the size of the prison population was problematic was the change in the number and percentage of inmates paroled. The 1979 Statistical Presentation (p. 10) shows that during 1978 the largest number of paroles were granted (3,984), at least since 1970, and the second largest parole rate was recorded (57.5%). This parole rate was an increase of 9.8% over the previous year. According to the supervisor of the Research and Evaluation Unit of the Illinois Department of Corrections, parole can be used as a "safety valve" to relieve crowded prisons. If this was in fact happening, it would indicate that the size of the prison population was creating a fairly significant strain on the Department of Corrections. Thus, the reduction in the rate of imprisonment from 1978 to 1979 could have been the result of an adjustment by the criminal justice system (at the sentencing level) to an extremely large prison population. Judges may have avoided sentencing offenders to prison when possible by making greater use of probation or other alternative sentences.

Upon further investigation, this possibility seemed unlikely. Although the prison population was greater than it had ever been previously, increased parole rates were probably not a reaction to those circumstances. Instead, there is an alternative explanation for increased parole rates at this time. During this same period, the enactment of HB 1500 on February 1, 1978 created a situation which may have caused a large percentage of inmates to be paroled. Upon their first parole hearing after February 1, 1978, inmates imprisoned before

HB 1500 took effect had to either be paroled or given a definite release date under determinate sentencing. According to the Research and Evaluation Unit supervisor, it was likely that rather than maintain inmates in prison whose definite release date would indicate release in a short time, those inmates were paroled. Thus, the increased parole rate may not have been as much a response to crowded prisons, as a response to a procedural requirement of HB 1500.

More direct evidence against the possibility that judges altered sentencing behavior at this time was obtained from both the Chief Legal Counsel and the Research and Evaluation Unit supervisor for the Illinois Department of Corrections. Both of these individuals were very doubtful that judges would have responded to the large prison populations by altering their sentencing behavior. (These two individuals were known--by the author--to have a fairly comprehensive understanding of the Illinois judicial system and thus their opinions were very influential upon the author's conclusions in this area.)

The third explanation for the finding of a decreased imprisonment rate for 1979 concerns judges' understanding of the new law at the time. HB 1500 made numerous changes including: mandating determinate sentences, changes in sentencing ranges and the circumstances under which the sentence of probation could be given, the need to specify mitigating and aggravating factors in a crime, the change from parole to mandatory supervised release, changes in awarding good time, the creation of a new offense class--Class X--and mandatory sentencing for repeat offenders. Perhaps judges were unsure of the precise consequences of

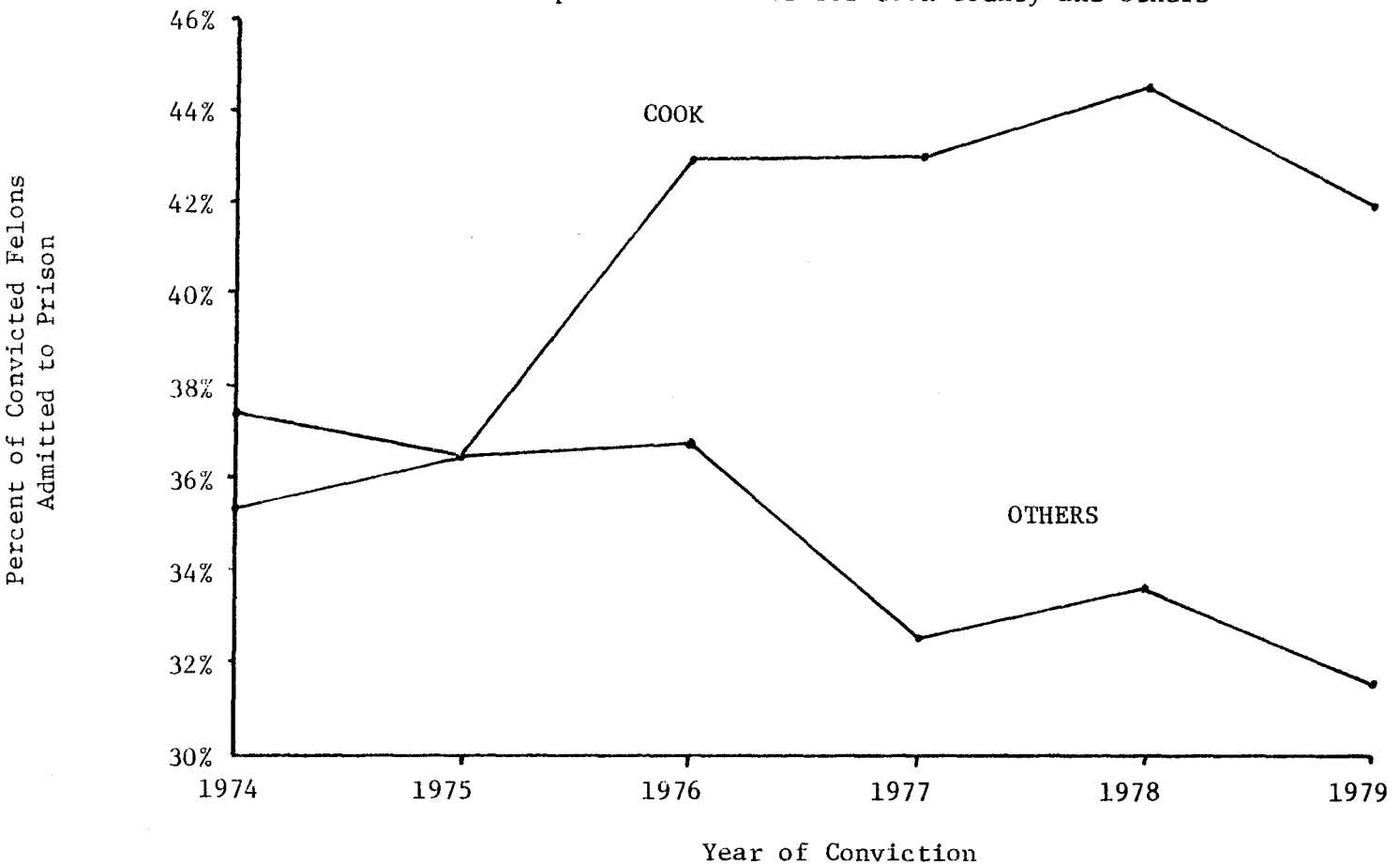
sentencing an offender to imprisonment under the new law, and thus were less willing to use such a sentence. On the other hand, maybe judges were under the impression that the new procedures were too harsh and so they attempted to use other sentencing alternatives whenever possible. Unfortunately, there is no information available concerning the cognitive and motivational factors which may have influenced judges at the time in question, and the above hypothesis remains a possible explanation for the decrease in the rate of imprisonment in 1979.

Additional information was sought from the statistician for the Administrative Office of the Illinois Courts. He assured the author that no changes in the courts' reporting system or his own data analyses occurred during 1978 or 1979. He had no suggestions as to alternative explanations for the results.

By looking at a graph of the imprisonment rate data over time (see Figure 3), further doubt is cast upon the hypothesis that the change in imprisonment rate between 1978 and 1979 was due solely (or even largely) to the enactment of HB 1500. For Cook, the graph indicates a stable imprisonment rate for the first two years followed by a large increase in the rate from 1975 to 1976, followed by stable rate once again, with the beginning of a downturning of the graph in 1979. However, because 1979 is only one data point representing the potential impact of HB 1500, it is also possible that 1979 demonstrates merely a short term fluctuation of a stable imprisonment rate. The graph for Others indicates a stable or slightly increasing imprisonment rate

Figure 3.

Imprisonment Rates for Cook County and Others



followed by a sharp decline in 1977. Similar to the 1979 data for Cook, the rate for 1979 for Others may indicate a downturning in the graph or it may actually be part of a stable rate which began in 1977.

The conclusion that must be made at this time is that the decreases in the imprisonment rates for Cook County and Others reflect real changes, but the causes remain unclear. These findings provide evidence against the suggestion that the design of HB 1500 was influenced by the philosophy of mandatory sentencing (i.e., certainty of punishment is more important than severity of punishment). If the philosophy of mandatory sentencing had influenced HB 1500, a greater percentage of offenders would have been imprisoned in 1979 than in 1978.

Uniformity in Sentencing

The final area investigated in this study concerned uniformity in sentencing in terms of the imprisonment rate between counties. The difference in the imprisonment rate between Cook County and all other counties combined increased in 1976 and 1977 by 6.1% and 4.4%, respectively. In 1978 only a moderate increase in this difference was found (0.2%), and in 1979 the trend reversed itself and the difference in imprisonment rates had decreased by 0.7%. Although not conclusive, these findings suggest that HB 1500 may have had the effect of increasing the uniformity of imprisonment rates between Cook County and all other counties. This conclusion, however, should be made only with caution. If the data concerning imprisonment rate are confounded by some--as yet--unidentified factor unrelated to the long term effect of HB 1500 (such as the judges' possible hesitancy to impose determinate

prison sentences with which they were not yet familiar), then the analysis of uniformity of imprisonment rates between counties would also be affected. In addition, the evidence for uniformity is based on only one data point. A more definite conclusion can only be made when more data become available.

Contributions of This Study

The analyses of time served indicated that HB 1500 had a differential impact upon time served depending upon the seriousness of the offense. Offenders convicted of the most serious offenses--murder, rape and armed robbery--served longer periods of time in prison under HB 1500. Less serious offenders--voluntary manslaughter, burglary, robbery, aggravated battery, forgery and theft--served shorter periods of time in prison after the enactment of HB 1500.

In terms of sentencing offenders to prison, decreases in the imprisonment rate were found for Cook County, as well as all other counties in Illinois combined. However, due to the availability of only one data point after the enactment of HB 1500, these changes cannot be attributed to HB 1500 at this time. The imprisonment rate was also used to assess uniformity of sentencing, and it was found that HB 1500 may have been responsible for decreasing the discrepancy between Cook County and all other counties (i.e., increasing uniformity).

Due to restrictions on the data and the author's limited access to the data, the conclusions have been presented as tentative. Adjustments were made to the data, when it was possible, to correct for

biases and when adjustments were not possible, estimates of the impact of the biases were discussed. Some of these problems encountered are not uncommon to research in applied settings. Research in any applied setting (particularly any setting as complicated as that of the criminal justice system) will always be made more difficult by the complexity of the system studied and the inability to control a variety of variables. Though not definitive, as described above, the current study does provide information concerning the impact of HB 1500. The significance of this information should not be underrated. The criminal justice system is in constant motion. Decisions are made and new laws and procedures are enacted based, at least in part, on available research information. Even when relevant information is not available, actions will be taken due to the need (many times) for decision-making in a limited time frame. This is especially true in the area of determinate sentencing where new laws are currently being considered in many states and the need for information concerning existing determinate sentencing systems is great. Thus, it is far better to develop limited information, than to abandon the attempt due to the obstacles involved or the lack of time to do a comprehensive assessment.

Aside from the information developed, an important contribution of this evaluation was the development of a method of comparing time served for inmates sentenced indeterminately and determinately. The use of regression analysis for predicting indeterminate times served based on variables related to offenders who have been sentenced determinately and the use of an estimated determinate time served is

especially helpful in assessing the projected impact of determinate sentencing laws soon after they are enacted. This method can be used in other states which have recently adopted determinate sentencing laws.

Suggestions for Future Evaluations of Determinate Sentencing

The technique developed in this thesis can be improved in a number of ways. Other evaluators (in Illinois and elsewhere) must address three major problems encountered in this study when conducting their evaluations. First of all, the poor reliability of the data was a major concern and necessitated limiting the data to only those offenders who were convicted of one offense. This limitation was made because the possibility existed that when an offender was convicted of more than one offense, the variables used to calculate time served could have been matched to the wrong offense. However, a computer program has recently been developed at the Illinois Department of Corrections which, when run with the data file, would eliminate the need for restricting data to offenders convicted of only one offense by matching the variables related to time served with the proper offense.

Second, a variable which is likely to be highly correlated with time served--number of prior convictions--was not used to develop the prediction equations because of the original design of the study (see Note 15). Including this variable should improve the accuracy of the equations used to develop the IND comparison group.

Third, in using release data of offenders sentenced

indeterminately in developing the prediction equations, the bias due to the general increase in the number of offenders sentenced over time had the effect of decreasing the predicted IND times served. An estimate of the bias was used to judge the potential impact of the bias. However, the bias can be removed by adjusting the actual distribution of releasees before developing prediction equations. Future evaluators in Illinois and other states should benefit from such a procedure.

With regard specifically to the evaluation of HB 1500 in Illinois, there are a number of additional ways in which findings from future evaluations can be made more generalizable and more reliable. (1) The reliability of the data in the Corrections Information System (CIS) must be improved. Data input methods at the Illinois Department of Corrections vary depending upon the location at which inmate data are entered. Data input techniques must be systematized and monitored. (The data in the CIS are currently being examined and attempts are being made to improve the reliability of the data.) (2) Comparisons of time served should be extended to all offenses. (3) Uniformity of time served between counties should be assessed as well as uniformity of imprisonment rate, and if possible, a further breakdown of counties beyond Cook County versus all other counties might be useful. (4) With respect to imprisonment rate, developing these data by offense for a number of years would be very useful in order to determine more specifically the impact of the philosophy of mandatory sentencing (i.e., that certainty of punishment is more important than severity of

punishment).

Another improvement can be made with respect to the estimated determinate times served used in this evaluation of HB 1500. One-half of the imposed sentence (plus a correction for revoked good time) was used as an estimate and was based upon the projected impact of day-for-day good time. As more offenders who were given a determinate sentence are released, the actual impact of day-for-day good time (and other types of good time) will be established as real times served become known. This information can be used to develop a better estimate of times served by offenders receiving a determinate sentence under HB 1500.

In addition to quantitative data, the reactions, thoughts and attitudes of a number of groups of people concerned with the criminal justice system could be obtained in assessing HB 1500 and determinate sentencing in other states. Potential respondents would include judges, defense and prosecuting attorneys, Prison Review Board members, inmates, correctional officers and other prison officials.

The possibilities for assessing the impact of HB 1500 and determinate sentencing laws in other states are numerous. Considering the far reaching effect that some of these laws may have on state criminal justice systems, this area of evaluation is an important one. Lawmakers throughout the United States are being asked to enact measures with little knowledge of their effect. In light of this, the need for information is great. Evaluators have an opportunity to make a significant contribution and should not be deterred by the difficulties

that they are certain to encounter.

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APPROVAL SHEET

The thesis submitted by Perry Edelman has been read and approved by the following committee:

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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

12-9-87
Date

Director's Signature