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ILLINOIS' MANDATORY MINIMUM AND DETERMINATE SENTENCE LAW : ITS EFFECTS ON CRIME RATES AND JUDICIAL DISPOSITIONS*

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Introduction

One of the most significant legislative decisions in American criminal justice history during the past decades is a shift in crime control policy toward the so – called "Get Tough on Crime" strategy by which a message is conveyed to potential criminals that punishment will be swift, certain, and severe. This conservative reorientation reflected major concern and dissatisfaction with the rehabilitation strategy that, in the past, failed to cope with the crime problem.[1] The sentencing reform movement among state legislatures was brought into play as a series of political responses to widespread popular demands for a more effective crime reduction mechanism and a more accountable and equitable judicial system. In pursuit of this discourse, a more standardized penal structure has been established with some variations from one jurisdiction to another (Blumstein et al, 1983: 1 – 4; Carlson, 1982; Casper, 1984: 233 – 7). The general thrust of this policy is to reduce disparity and unpredictability in sentencing practices via strict, statutorily fixed, determinate sentence requirements so as to make sentences more certain as well as severe for crimes designated as violent.

Illinois is one among a few pioneering states, including California, Indiana, and Maine, that adopted the determinate sentence system as a state apparatus, in then President Gerald Ford's politically symbolic phrase, "to insure domestic tranquility".[2] Effective on February 1, 1978, Illinois' mandatory minimum and determinate sentence law (DSL), also known as Class X law, mandates that sentencing judges provide reasons for selecting particular sentences and that a sentence term for specified offenders be determinate. The Parole and Pardon Board was replaced by the Prison Review Board which is independent of the Department of Corrections and responsible for mandatory supervised release. Moreover, the law restructured the penalty system with a higher minimum prison term for felonies and created the Class X felony. Murder, Class X offenses, and other designated felonies are subject to the mandatory minimum provisions (Aspen, 1978; Schiller, 1978; Tonry and Zimring, 1983: 111 – 2; P.A. 80 – 1099). In principle, felony case dispositions should

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be more predictable and fair, leading to a higher probability of imprisonment and a longer prison sentence imposed and actually served.

Clearly, the mandatory minimum and determinate sentence statutes in various states share several similarities in their goals of crime reduction guided by the utilitarian principles of deterrence and incapacitation (Cullen and Gilbert, 1982: 208 – 12; Cohen and Tonry, 1983: 307). This study will address this issue by asking a very basic question: Has the Illinois DSL crime reduction strategy actually reduced the crime rate?

A recent national study by the National Research Council Panel on Sentencing Research notes that the institution of procedural innovations has resulted in a large scale impact on the personnel system operation and case disposition outcomes. Among other things, the Panel highlights: "1) adaptive behavior by personnel in the criminal justice system, 2) changes in patterns of case flow, and 3) their effects on sentence severity and disparity" (Blumstein et al, 1983: 28). Given these possibilities, the Panel posits that certain features of the laws and the tensions they bring about may result in numerous practical implementation problems which may undermine their desired effect (Blumstein et al, 1983: 279). Accordingly, this study is devoted to determining whether such implementation problems have existed and how they have affected felony dispositions by evaluation of Illinois DSL experience as a case study.

The DSL Crime Reduction Strategy and Its Implementation Problems

Concerns with humanity and rehabilitation have a long history of development, along with the invention of penitentiaries and a decline in inhumane types of corporal and capital punishment. The indeterminate sentencing laws (ISLs) have been disapproved in many American states after decades of stability. As the Panel on Sentencing Research reports, "Between 1975 and January 1982, 11 states abolished parole release for the majority of offenders, 17 states established administrative rules for release decisions (e.g. parole guidelines), more than 30 states passed mandatory minimum sentence laws and, in almost every state, judges experimented with guidelines to structure their own sentencing decisions" (Blumstein et al 1983: 61).

There are several dissimilarities between the DSLs and ISLs in their key characteristics. These contrasting elements are crucial in understanding changes in the pattern of sentencing behavior which may occur as the system shifts from the ISL to the DSL in emphasis. First, the ISL rehabilitative approach sustained humanity and our faith in rehabilitation. Criminal procedures had sought to be individualized and treatment prescribed on the basis of needs and conditions which vary greatly among individuals viewed as sick (Blumstein et al, 1983: 60; Cullen and Gilbert, 1982: 9 – 13). On the contrary, the DSL punitive approach revives the philosophy of punishment in which offenders should be punished according to, as von Hirsch's (1976: 66) principle of "commensurate deserts" suggests, the gravity of crimes committed. We do so not only because lengthy incarceration removes the convicts from society so that they can do no harm to the innocents (incapacitative effect) but also because doing so, to a certain extent, deters would – be criminals (deterrent effect).[3]

Second, heavy reliance upon judicial and correctional authorities to identify and treat a group of offenders on the basis of their needs and circumstances is a major feature of the ISLs. As such, this source of vast discretionary power means freedom to select appropriate sanctions,

either probation, work release, or parole release, with minimal accountability. Under the present system, discretion is strictly regulated and reduced as a means by which disparities and discriminatory practices can be minimized and the criminal justice system becomes more accountable to the public. Consequently, legal sanctions, as the DSL supporters argue, become more certain and fair.

Finally, both rehabilitative and punitive models have been confronted with practical issues in such areas as the court overload crisis, the prison overcrowding threat, and the soaring crime rate. Difficulties in their implementation, however, seem to be similarly distributed. How these problems are handled in everyday case processing in response to various circumstances and statutory constraints before and during the course of the DSLs varies greatly across jurisdictions. Under the ISL, plea negotiations have been widely used to reduce court caseloads (Eisenstein and Jacob, 1977; Maynard, 1984 : 166–7). At present, elimination of lenient sentences for certain serious offenses may impact guilty plea decisions, a crucial factor in caseload reduction. Probation, work release, and early parole may be granted not on the basis of rehabilitation but perhaps as a tool to control prison population. When these options are restricted and prison problems are threatening, judges who think that offenders would be better off staying outside the prison may turn to the last resort, a reluctance to convict them (Loftin et al, 1983: 295–303; Cohen and Tonry, 1983).

Along with this policy shift in favor of the punitive model come a large number of empirical studies testing deterrent effects of criminal sanctions at the aggregate as well as perceptual levels. The fundamental assumption of deterrence is that "most people, most of the time, are responsive to incentives and disincentives, including anticipated pleasures and pains" (van den Haag, 1985: 186; Bentham, 1977). Proponents of the DSL crime reduction strategy are convinced that the "Get Tough" crime policy deters potential offenders from committing criminal acts. One of their arguments has been articulated with frequent reference to this very explicit causal relationship "The larger the ratio of the rewards (material and nonmaterial) of noncrime to the rewards (material and nonmaterial) of crime, the weaker the tendency to commit crimes" (Wilson, 1983; Wilson and Herrnstein, 1985: 61). The choice for crime reduction strategies, in this case the DSLs, is associated with an attempt to increase the rewards of noncrime (legitimate acts) by means of increasing the probability and severity of punishment reflected in the mandatory minimum and determinate sentence provisions.

A large number of deterrence studies have employed variation in legal sanctions as they are actually imposed, particularly their certainty and severity, to explain and predict variations in crime rates cross–sectionally. While most studies report a lower crime rate for a jurisdiction with a higher score on sanction measures in support for deterrence, Nagin (1978) reveals major inadequacies of these studies, one of which is measurement problems. For instance, regression of the ratio of arrest or incarceration to crime counts on the rate of crime relative to the population size yields biased deterrence estimates. The argument follows that while an increased volume of crime counts in one jurisdiction decreases its ratio of arrest to crime, it increases the ratio of crime to population in the same jurisdiction, other things being equal. Furthermore, while it is intended to measure the effect of increased arrest rates on crime, the reverse relationship is frequently the case: a rise in the crime rate reduces apprehension capacities (see also Geerken and Gove, 1977).

The provocative analytical results of Erhlich's (1975) work suggesting that eight potential murder victim lives could have been saved for each execution in an average year during 1933–69

have been questioned by his opponents (Bowers and Pierce, 1975; Passell and Taylor, 1978; Klein et al, 1978). In their reanalysis of Erhlich's data, they uncovered several possibilities that biased his analysis. For example, the homicide rates during the early years of FBI – UCR establishment were collected from fewer reporting agencies relative to the number of participants in the more recent years. Therefore, lower homicide rates in the 1930s are simply a function of fewer reporting agencies. There is also another possibility that the negative relationship comes from opposing trends in homicide rate and actual execution time series included in his model.

Another approach addresses the operation of sanction threats as a deterrent mechanism at the individual level. The survey data collected from university students by Waldo and Chiricos (1972) and Silberman (1976) offer moderate support for the deterrence theory. It has been argued that the perception of sanction certainty may affect, to a moderate degree, the extent to which a person commits criminal and delinquent activities. Conversely, the data suggest that the perceived severity of sanctions has no influential role in deterrence.

Two other studies by Tittle (1977) and Grasmick and Bryjak (1980) report conflicting results. While there is no association between perception and behavior in Tittle's data, Grasmick and Bryjak find interaction between sanction certainty and severity in determining criminal behavior. Perceived sanction severity has an effect only at a high level of certainty. Similar findings were found among Canadian high school students in Ontario (Teevan, 1976). Note that, when a relatively strong research design such as a panel study is used (i.e. Paternoster et al., 1983a, 1983b; Thomas and Bishop, 1984), this proposition no longer holds.

A great deal of deterrence researchers including those reviewed above have encountered criticisms that their findings which support their deterrence stance came about mainly as a result of various sources of bias in the analysis. The literature reviewed above suggests that the deterrence theory upon which the policy reasons were based lacks coherent theoretical persuasion. However rejection of this dominant theory is still premature because various theoretical assumptions which permit its testing and invalidation have often been violated (Williams and Hawkins, 1986 : 557 – 8). The Panel's careful review of both state and city level evaluations raises several issues which pertain to the implementation aspect of the laws. In several cases, including Alaska's plea bargaining restrictions, mandatory minimum statutes in New York, Massachusetts, and Michigan, Minnesota's presumptive sentencing guidelines, and California's determinate sentencing law, statutory alterations in evaluated jurisdictions have been overwhelmed with practical problems at various stages of sentencing procedures (Cohen and Tonry, 1983: 338 – 42).

Factors inhibiting effectiveness of the DSLs are numerous. One important factor is the behavioral and attitudinal reactions of courtroom workgroups whose functional goals are geared toward caseload reduction and certainty in case dispositions (Eisenstein and Jacob, 1977: 227 – 64; Blumstein et al, 1983: 48 – 52). Frequently, the goals of courtroom workgroup participants run counter to the thrust of the DSLs. Moreover, workgroup resistance and adaptation through technical expertise to circumvent the DSL provisions may occur due to a belief that they are either normatively undesirable or practically inconvenient and/or in conflict with the functional goals to be pursued in the plea negotiation process (Casper, 1984 : 233). Finally, while researchers are interested in evaluating DSL impact on already limited prison capacities, perceptions and anticipations of this foreseeable overcrowding crisis as well as other external pressures can contribute to an increase in some form of circumvention. Given these possibilities, the DSL effects on courtroom

routine operations would produce undesirable consequences which in turn undermine the ultimate goals of the laws (Blumstein et al, 1983: 278 – 82).

An Intervention Analytic Framework for Evaluation of Various Statutory Effects

Interrupted time – series quasi – experiments (Campbell and Stanley, 1966; Cook and Campbell, 1979; Glass et al, 1975) have been used increasingly to treat several plausible threats to the internal validity of evaluation results. Treatment of major problems, such as history, maturation, and seasonal fluctuations and trends, which bias the analysis of time series data, often lead to analytical complication. One significant contribution to social science research is the comprehensive work of Box. Jenkins, and Tiao (Box and Tiao, 1965 and 1975; Box and Jenkins, 1976) who developed a general class of intervention analytic models. Social scientists benefit from this innovation as an approach by which they can minimize "major threats to statistical conclusion validity" in quasi – experimental evaluation studies (Cook and Campbell, 1979: 39 – 50). The guiding principles of falsification they advocate and their view toward types of quantitative effect provide a wide variety of capabilities for testing hypotheses associated with various forms of theoretically postulated change. Generally speaking, this intervention analytic perspective lends itself to the study of the impact of legal or other innovations on social processes (i.e. Campbell and Ross, 1968; Albritton, 1977 and 1979; Deutsch and Alt, 1977; Ross, 1982; Wagenaar, 1983).

The intervention analytic technique is of great importance particularly when both intervention effects and statistical correction of time – serial dependence require simultaneous specification and estimation. This technique provides an opportunity for evaluators to test intervention effects of the particular forms their theory suggests and to evaluate the plausibility of other alternative types of effect.

Based upon Cook and Campbell's tridimensionality of intervention effects (Cook and Campbell, 1979: 208 – 9), one can distinguish 1) a step level or intercept change from a change in the post – test slope, 2) a continuous vs. discontinuous effect, and 3) an instantaneous vs. delayed effect. Occasionally, one may discover a situation under which the observed effect exhibits a mixed type. At first glance, the data suggest that the initial impact of the treatment wears off rapidly, conforming to an abrupt, temporary type (Figures 1(a) and (b)). When the effect does not disappear entirely, the remaining effect at some new equilibrium level is referred to as a residual effect (models (c) and (d) in Figure 1) Another possibility is a mixed type similar to a slope change in the post – test series but marked with an abrupt initial discontinuity of some varying magnitude (model 1(h)).

A general class of intervention analytic models for evaluation of policy impact on posttreatment – outcome time series as presented in Figure 1 reflects Cook and Campbell's first two dimensions of change and Box and Tiao's treatment of a residual effect. To avoid repetition, models for delayed effects are left out intentionally. To simplify the matter, the intervention analytic method is based upon this very basic relationship (McDowall et al, 1980 : 13) :

$$Y_t = I_t + N_t \tag{1}$$

where Y_t is an outcome indicator measured prior to and after the treatment as a time series, N_t denotes the noise component with a set of parameters describing the time series structure, and I_t

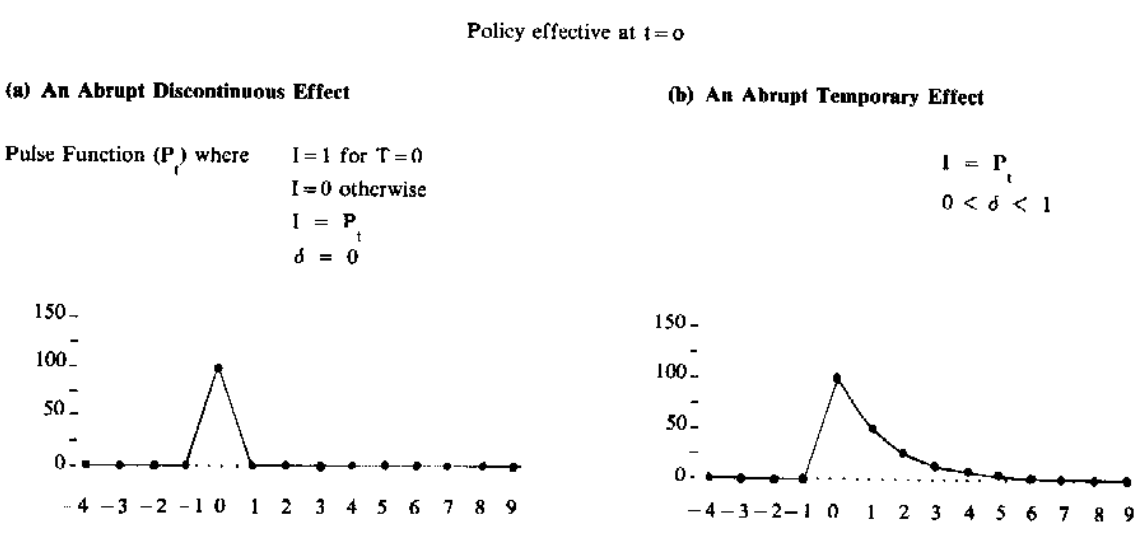
represents the intervention component specified as a pulse, step, or ramp function for corresponding impact types (a) through (h).

An abrupt pattern of impact onset is illustrated in models (a) through (e) and (h), in contrast with a gradual form of model (f) and (g). The magnitude of the delta (δ) in model (f) : $\{\omega/(1-\delta B)\}S_t$, reflects whether the true effect occurs abruptly or develops gradually from the initial impact (ω). The larger the delta, the longer the transitional period before the effect is fully felt. For model (b): $\{\omega/(1-\delta B)\}P_t$, the initial effect becomes more persistent as the delta increases and it decays rapidly as the delta approaches zero (McCleary and Hay, 1980: 158, 167). Specifications for model (c) and (d): $\{\omega_1/(1-\delta B)\}\ P_t + \omega_2 S_t$ are useful to test a residual effect (ω_2). When the treatment affects not only the intercept (level) but also the slope of the posttreatment outcomes, model (h): $\omega_1 S_t + \omega_2 R_t$ is available for hypothesis testing.[4] In this case, the initial rise of this model is equal to $\omega_1 + \omega_2$ followed by a successive increment equal to a constant ω_2.

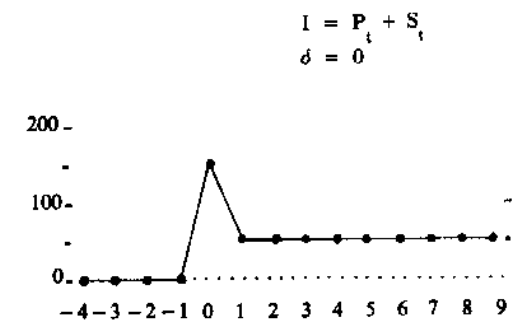
Criminal offenses per 100,000 residents for seven Illinois Uniform Crime Report (I – UCR) index categories are used to evaluate the efficacy of the law as an outcome variable.[5] The data collected in this study cover the period between January 1972 and December 1985. There are 73 monthly observations prior to the intervention month (February 1978) and 95 months in the postintervention period for murder, manslaughter, robbery and rape. Battery and assault combined series (other personal violence) is composed of 132 months ending in December 1982.[6] For both the State of Illinois and the City of Chicago, the crime rate is measured as a monthly aggregate total of reported offenses relative to the population size. By this, the effect of the population factor is controlled. Although many other socioeconomic and demographic factors are not directly treated, statistical correction in principle is intended to cope with all unknown rival causes.

Figure 1

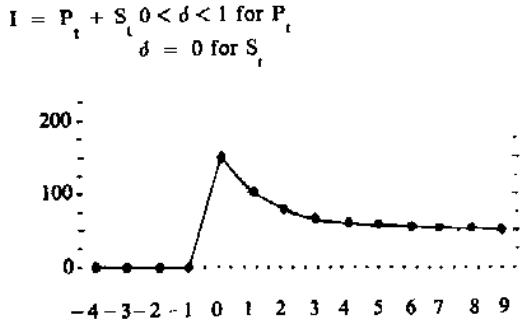
A General Class of Intervention Analytic Models for Evaluation of Policy Effects on Posttreatment Outcome Indicators



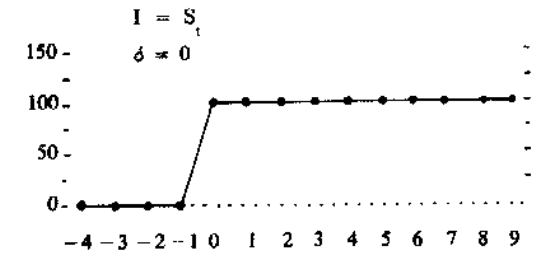
(c) An Abrupt Discontinuous Impact with a Residual Effect



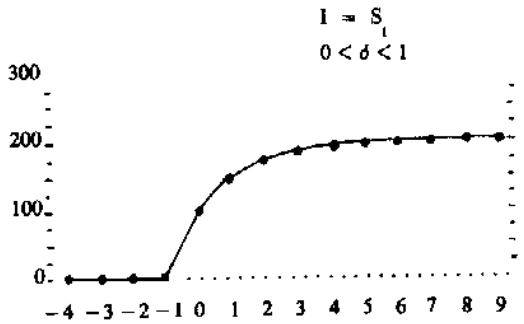
(d) An Abrupt Temporary Impact with a Residual Effect



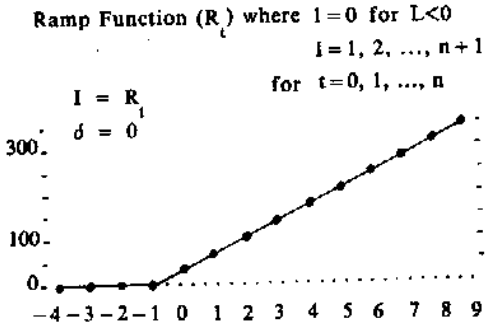
(e) An Abrupt Permanent Effect



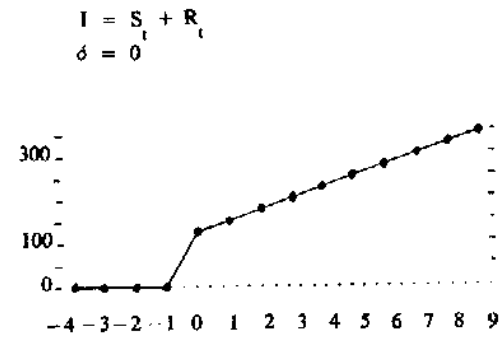
(f) A Gradual Permanent Effect



(g) A Constant Cumulative (Slope) Effect



(h) An Abrupt Continuous and Cumulative Effect



Source: Box and Tiao (1975 : 72); Cook and Campbell (1979: 208 – 9).

An abrupt permanent effect of the DSL on crime is hypothesized and tested with these outcome indicators. This basic hypothesis corresponds to model (e) of Figure 1 which addresses this simple relationship:

$$Y_t = \omega S_t + N_t \tag{2}$$

For the Illinois' murder series (Y_t) which is identified as an ARIMA (1, 0, 0) stationary process,[7] the noise component includes a level (μ) about which the series fluctuates, an autoregressive parameter (ϕ_1) of first order, and time independent errors (a_t). In this case, $N_t = \mu + \{1/(1-\phi_1 B)\}a_t$. Thus, the intervention analytic model of equation (2) becomes:[8]

$$Y_t = \omega S_t + \mu + \{1/(1-\phi_1 B)\}a_t \tag{3}$$

Illinois' armed robbery forms a complex series identified as an ARIMA (2, 1, 0) $(1, 0,0)^{12}$ second – order regular and first – order seasonal autoregressive process which requires only a regular first – order differencing to induce stationarity. Thus, $N_t = \{1/(1-\phi_1 B-\phi_2 B^2)(1-\phi_{12}B^{12})(1-B)\}\, a_t$ for this series. The remaining series are identified as ARIMA (0, 1, 1) $(0, 1, 1)^{12}$ first – order regular and seasonal moving average processes where $N_t = \{(1-\theta_1 B)\ (1-\Theta_{12}B^{12}) / (1-B)(1-B^{12})\}a_t$. In the case of the rape series, which is a trending process, the trend parameter θ_0 which represents the slope of its upward trend is included in the numerator of the noise component.

For many series whose results fail to indicate a permanent long – term effect, an alternative explanation one should seek to rule out is the argument that the DSL impact not found as persistent over the long run may in fact have a substantial instantaneous effect but only on a very short term basis (i.e. Phillips, 1980; McFarland, 1983). To test a short term deterrent effect of the DSL intervention, model (b) of Figure 1 with the specification:

$$Y_t = \{\omega/(1-\delta B)\}P_t + N_t \tag{4}$$

is applied to the same data. Since the abrupt discontinuous or temporary pattern is empirically falsified, the results are not reported here to avoid repetition.

Multiple indicators are used to analyze changes in felony case dispositions in the Circuit Courts of Illinois. The ratios of those convicted and sentenced to prison to total felony dispositions are employed for hypothesis testing. In addition, annual total, rate per 10,000 reported felonies, and prison use rate (percent of imprisonment to conviction)[9] are analyzed for comparison and increased reliability of the results. The court data set has 20 annual observations from 1965 to 1984,[10] which is considered sufficiently long relative to the data used in most recent studies. The pre – DSL period includes 13 years under the indeterminate sentence system and 5 years of which the 1973 Illinois Unified Code of Corrections (UCC) has been in place. For measuring the long – term effects, the present study relies mainly upon changes in these multiple indicators during the 7 – year implementation of the DSL provisions relative to the system performance prior to and during the 1973 UCC system improvement efforts. Finally, testing the long – term effects of various types benefits largely from the intervention analytic models (e) through (h) and their specifications presented in Figure 1.

DSL Effects on Crime Rates

Recent evaluations at state and city levels concluded, with similar results, that the DSLs have failed to serve as an effective deterrent, at least in Massachusetts, Michigan, and Florida (Deutsch and Alt, 1977; Hay and McCleary, 1979; Carlson, 1982; Loftin et al, 1983 and 1984). Evaluators have tested both short – term and long – term deterrent effects of the laws in these implementing states and have reached very similar conclusions. The present study employs the crime rate measured as units per 100,000 residents in order to make the volume of crime more comparable over time relative to the population size.

In their interrupted time series analysis of the impact of Arizona's mandatory minimum sentence statute, McPheters et al (1984) reported that there has been a significant reduction in armed robbery associated with the 1974 statutory revisions. Moreover, they conducted a paired t – test of 24 months before and after the 1974 intervention using the data from these two major Arizona cities and another five Sun Belt cities. Three out of five cities where the laws have been unchanged also experienced a decline in armed robberies even though the change was not statistically significant. By contrast, there has been a slight increase in the other two comparison cities. They also found that the admission rates for armed robberies went up during the post – 1974 period.

Consider that the intervention was introduced during the period when the nation's robbery rates had reached a record breaking peak. The national figures for monthly average robbery rate per 100,000 population have been in decline from 17.4 in 1974 and 18.2 in 1975 to 16.3 in 1976, 15.6 in 1977, and 15.9 in 1978, respectively (Curtis, 1985: 230). The pattern of armed robbery offenses in the two Arizona cities conforms to the national pattern above. The volume of armed robberies had reached its peak in 1974 and 1975 and returned to a lower level. Whatever caused the 1976 – 78 decline in national robbery rates would also explain a reduction in Arizona's armed robberies.

The analysis of four major crime categories which include homicide, robbery, other personal violence (battery and assault), and rape in this study yields results similar to those reported elsewhere indicating that the deterrent effect of the DSLs is doubtful. The evaluation for Illinois and Chicago in Tables 1 and 2 differ only in the magnitudes of policy impact estimates. The noise structure for individual series is expressed as an ARIMA (p, d, q) (P, D, Q)^{s} stochastic model whose AR and MA parameters must satisfy stationarity and invertibility criteria, respectively. For instance, the estimate of $\phi_1 = .48$ for Illinois' murder series is well within the required range between -1 and 1 for a stationary process. For the armed robbery series, the size of $\phi_2 = -.27$ is less than unity in absolute value and when adding or subtracting the value of $\phi_1 = -.44$, it remains less than unity. The series is also seasonally stationary for the same reason. All the regular and seasonal MA parameters less than unity are invertible. A nonsignificant Q statistic indicates that the analysis results in an adequate intervention model with a "white noise" process in its residuals (Box and Jenkins, 1976: 50, 58, 291).

The disaggregation of homicide into murder and manslaughter of Class M and X felonies, respectively, is advantageous to the present study. Penalty for the capital crime of murder was already severe (14 years minimum with no maximum); thus, the mandatory minimum range under the new law (20 – 40 years for murder and 40 – 80 years if committed with aggravation) is perhaps no different from what had existed prior to the intervention (P.A. 80 – 1099). Treatment of both murder and manslaughter as one homicide category, as in recent studies, could bias the evaluation.

Table 1
Deterrent Impact of the 1978 DSL Policy Implementation on Criminal Offenses (per 100,000 residents) in Illinois During 1972 – 85[a]

Criminal Offenses	ARIMA (p, d, q) (P, D, Q)[s] Identification	Autoregressive Moving Average with (s.e.)	Impact Estimates[b] with (s.e.) ω	Diagnostic Statistics[c] R^2	Q/df
Homicide					
Murder (N = 167)	(1, 0, 0)	μ = .83 (.03) ϕ_1 = .48 (.07)	−.028 (.039)	.24	20.–/22
Manslaughter (N = 155)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_1 = .68 (.06) Θ_{12} = .56 (.07)	−.158 (.072)	.49	21.1/22
Robbery					
Armed (N = 153)	(2, 1, 0) $(1, 0, 0)^{12}$	ϕ_1 = −.44 (.08) θ_2 = −.27 (.08) Φ_{12} = .39 (.07)	−2.543 (1.48)	.67	29.6/21
Unarmed (N = 155)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_1 = .61 (.06) Θ_{12} = .74 (.06)	−.895 (.833)	.75	18.9/22
Assault & Battery					
Armed (N = 119)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_1 = .67 (.07) Θ_{12} = .77 (.06)	−.236 (.406)	.61	19.8/22
Unarmed (N = 119)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_1 = .66 (.07) Θ_{12} = .81 (.06)	.157 (.791)	.70	25.4/22
Rape (N = 155)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_0 = .008 (.003) θ_1 = .72 (.06) Θ_{12} = .82 (.05)	.199 (.321)	.62	17.1/21

[a] For assault & battery, 1972 – 82.

[b] The impact estimates of an "abrupt permanent" (step function) type associated with the law are not statistically significant at $p < .01$.

[c] Q statistic less than 33.92 with 22 degrees of freedom indicates a white noise process in the model residuals.

Table 2
Deterrent Impact of the 1978 DSL Policy Implementation on Criminal Offenses (per 100,000 residents) in Chicago During 1972 – 85[a]

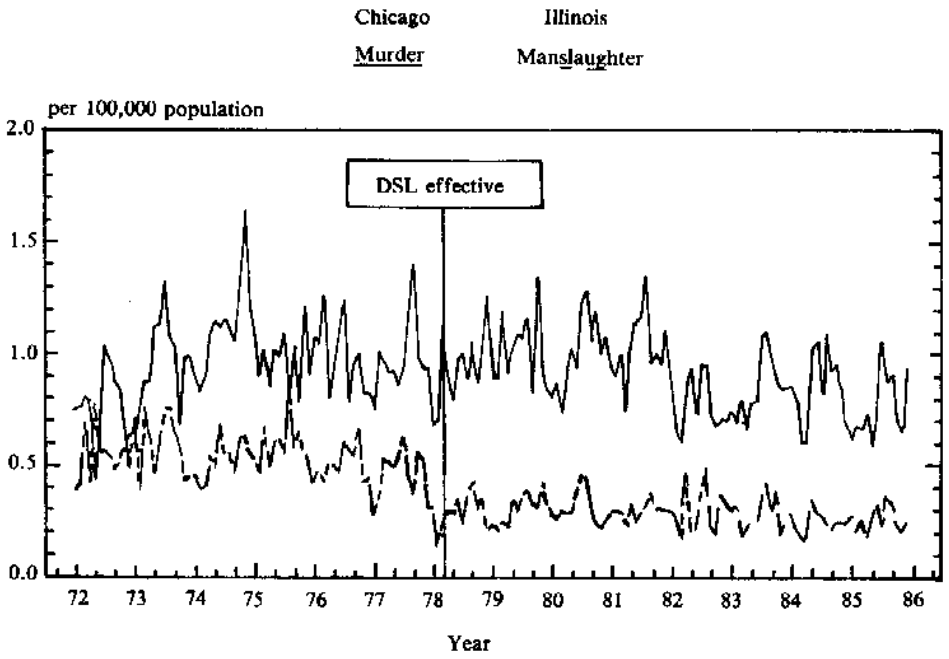
Criminal Offenses	ARIMA (p, d, q) (P, D, Q)[s] Identification	Autoregressive Moving Average with (s.e.)	Impact Estimates[b] with (s.e.) ω	Diagnostic Statistics[c] R^2	Q/df
Homicide					
Murder (N = 167)	(1, 0, 0)	μ = .96 (.04) ϕ_1 = .48 (.07)	– .052 (.048)	.24	20.9/22
Robbery					
Armed (N = 153)	(2, 1, 0) $(1, 0, 0)^{12}$	ϕ_1 = – .54 (.08) θ_2 = – .30 (.08) Φ_{12} = .31 (.08)	– 5.917 (3.25)	.62	23.2/21
Unarmed (N = 155)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_1 = .62 (.06) Θ_{12} = .74 (.06)	– 1.442 (1.28)	.75	25.2/22
Assault & Battery					
Armed (N = 119)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_1 = .76 (.06) Θ_{12} = .75 (.06)	– .022 (.412)	.59	13.7/22
Unarmed (N = 119)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_1 = .72 (.06) Θ_{12} = .84 (.06)	.023 (.849)	.65	17.1/22
Rape (N = 155)	(0, 1, 1) $(0, 1, 1)^{12}$	θ_0 = .011(.004) θ_1 = .73 (.06) Θ_{12} = .80 (.05)	.318 (.463)	.45	14.8/21

[a] For assault & battery, 1972 – 82.

[b] The impact estimates of an "abrupt permanent" (step function) type associated with the law are not statistically significant at $p < .01$.

[c] Q statistic less than 33.92 with 22 degrees of freedom indicates a white noise process in the model residuals.

Figure 2 (a)
Homicides, 1972 – 85



A significant reduction in manslaughter alone may result in a decline in the homicide category as a whole, even though there is no change in murder at all.

We cannot claim, as Tables 1 and 2 illustrate, that a decline in the rate of murder found in Illinois or in Chicago alone is different from a normal fluctuation (Figure 2(a)). Interestingly, however, murders (.52 per 1 million residents per month) have been reduced more in the City of Chicago than in Illinois (.28 per 1 million residents per month) as a whole. A separate analysis of the manslaughter series (attempted murder and manslaughter which are eligible for Class X penalty) shows a larger decline of 1.58 incidents per every million population per month statewide. One may interpret this as that treatment of homicides other than murder as Class X offenses may result in a reduced number of gun – related incidents. Although one could have rejected the null hypothesis at $p < .05$, our test using a more conservative criterion ($p < .01$) in order to reduce the chance of rejecting a true hypothesis (Type I error), particularly when the number of observations is quite large, fails to provide strong favorable evidence for the deterrence hypothesis.[11] Furthermore, if this is an indication of deterrence, we would expect a systematic pattern of decline in other Class X offenses with confidence at an acceptable level.

Figure 2 (b)
Chicago Robberies, 1972 – 85

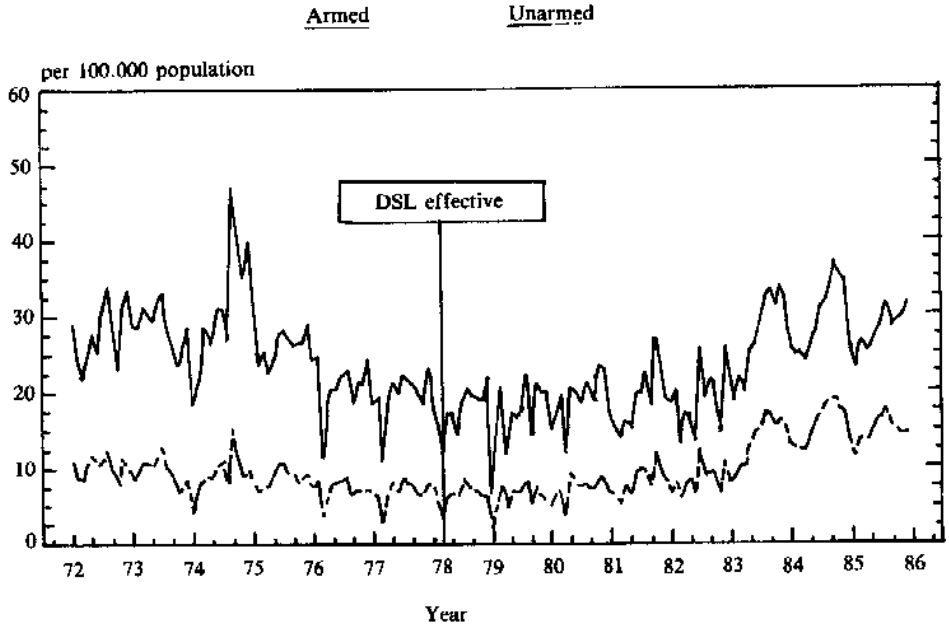
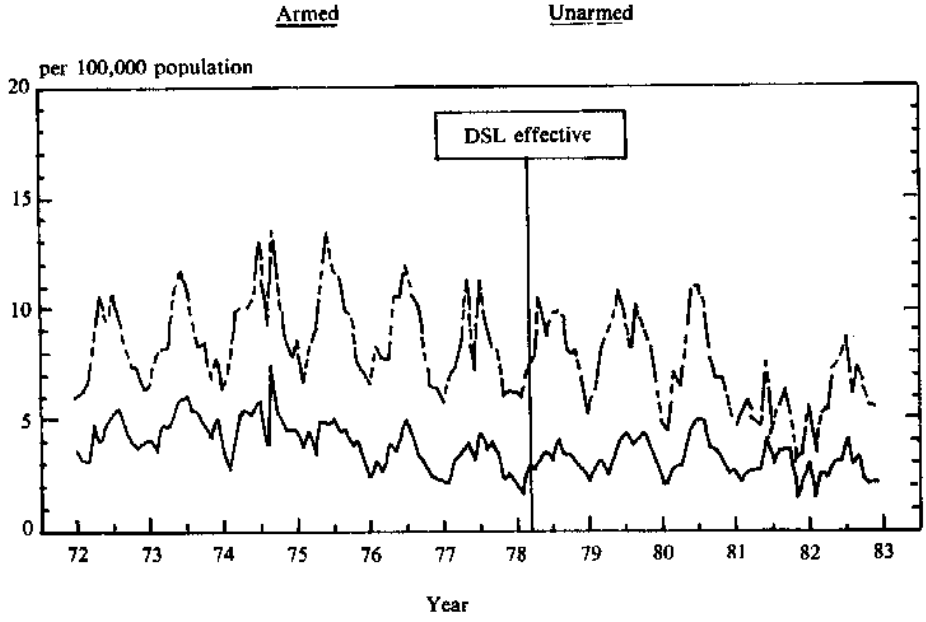


Figure 2 (c)
Other Personal Violence
(Assault and battery) in Chicago, 1972 – 82



Both armed and unarmed robbery rates in Figure 2(b) are in decline, though without an indication of interruption in these two time series, during the period of the DSL implementation. A smaller magnitude of the effect on the non – Class X, unarmed robbery category corresponds to a lesser increase in the penalty. Its impact on the unarmed robbery series is moderate. The impact estimate for armed robbery is larger in magnitude but this drop is not found statistically significant at $p < .01$ on the basis of the size of the obtained t value (-1.72). About 9 unarmed robberies per million residents a month were reduced in Illinois and about 14 for Chicago. The figure for Illinois' armed robbery indicates that, on the average month after the DSL intervention, there have been 25 incidents per million residents less than before. The decrease in Chicago's incidents per million residents is more than double (nearly 60).

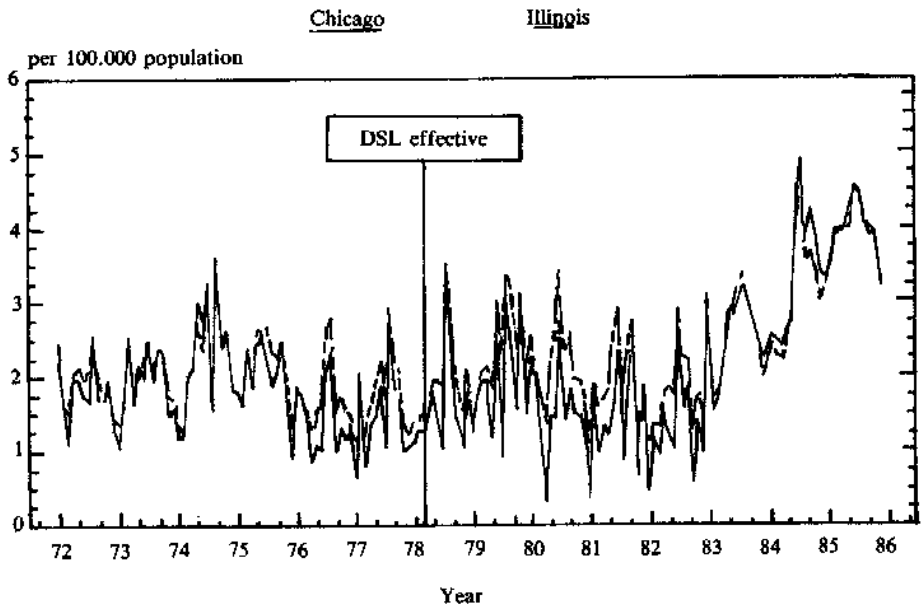
The decline in armed assault and battery incidents estimated for Illinois ($\omega_0 = -.236$) as well as Chicago ($\omega_0 = -.022$) is very slight and statistically nonsignificant. The slight increase in the unarmed assault and battery comparison series is also nonsignificant for Illinois ($\omega_0 = .157$) as well as for Chicago ($\omega_0 = .023$) (Figure 2(c)). The interpretation that the intervention increases criminal offenses under these categories is implausible. However, if the law deters armed robbers, it could have affected other types of crime in a more systematic fashion. Conversely, it appears that the decline in Illinois' armed robbery rate is largely due to the unusual peak toward the end of 1974 (see Figure 2(b)), the year when the whole nation experienced widespread high crime problems. The 1976 – 78 level is much lower, similar to the national figures. If the DSL does not deter robberies, the armed robbery rate from 1979 to 1982 would have gone up. The national figures for monthly average robbery rates per 100,000 population reported for this period rose from 17.7 in 1979 to 20.3 in 1980, 20.9 in 1981, and 19.3 in 1982, respectively (Curtis, 1985: 230).

There are numerous factors that distort official crime statistics. In general, the recording routine and any change in police personnel that affects it on the one hand, and the reporting of crimes committed on the other, are two major sources of distortion. An intimate relationship between a rape victim and a sex offender prior to the alleged attack and social embarrassment, among other things, distort rape reports to the police (Nettler, 1984: 38 – 40). The reported rape rates, one would argue, "may not necessarily reflect actual differences in the incidence of crime; rather, they may merely reflect differences caused by variations in citizen reporting of crime to the police and/or by police recording of crime for inclusion in the UCR" (Green, 1987 : 74).

A slight increase in the rape series during the DSL years in Figure 2(d) reflects a change in rape reporting as well as a change in the legal definition particularly after 1983. According to the I – UCR crime data, both estimates for the rape series are positive in direction but nonsignificant in magnitude ($\omega_0 = .199$ for Illinois and $\omega_0 = .318$ for Chicago). Strictly speaking, we cannot claim that these changes actually exist.

All in all, empirical evidence based upon the present study has led us to conclude, as consistent with the final report of the Panel on Research on Deterrent and Incapacitative Effects (Blumstein et al, 1978), that the "Get Tough on Crime" strategy has failed to prove effective in producing deterrent and incapacitative effects.

Figure 2 (d)
Rape, 1972 – 85



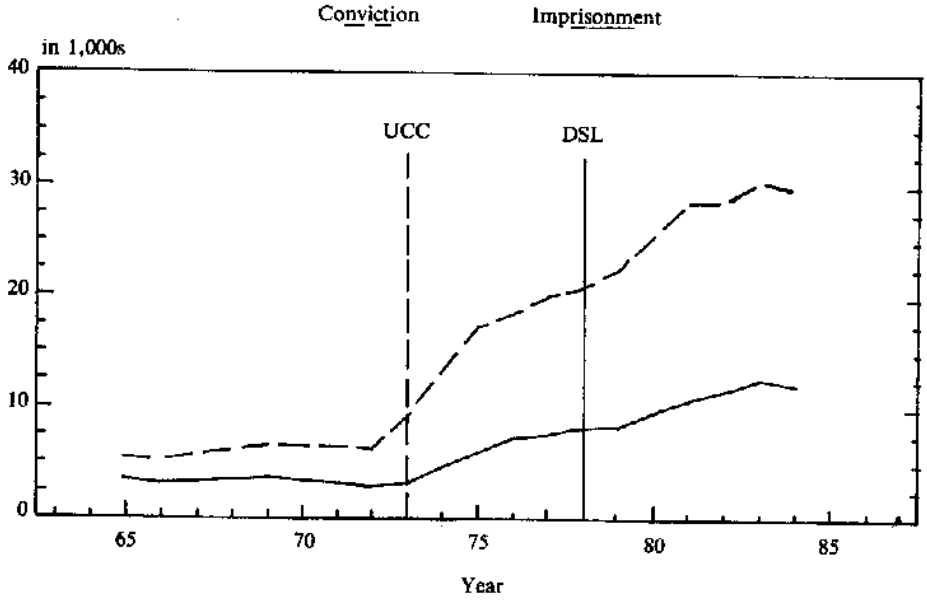
DSL Effects on Felony Dispositions

Implementation of the DSLs has created widespread tension among criminal justice participants and practical difficulties in various forms and conditions. From Illinois' experience, what can we learn about the DSL crime reduction strategy with respect to its impact on sentencing outcome indicators?

As Figure 3(a) illustrates, the annual figures for the Circuit Courts of Illinois' conviction and imprisonment grow rapidly prior to the DSL statute. Clearly, the growth is associated with the 1973 UCC statutory revisions intended to devise "an efficacious and economical sanction" which provides offenders an opportunity for rehabilitation. Probation and conditional discharge, no longer defined as a suspended sentence, became alternative sentences. Another UCC innovation was periodic imprisonment (work release) available to be imposed as a sentence (Pusateri and Scott, 1972 : 62, 70). These newly established sentencing alternatives are major factors that account for the rapid growth in conviction in response to increased felony arrests.

Table 3 indicates that annual conviction rates trend upward steadily with an increment of 2,754 convictions per year (column 2), whereas imprisonment figures increase significantly at a much lower rate of 948 a year. During the DSL period, lenient sentencing alternatives such as probation, conditional discharge, and work release, are prohibited and no less than the prescribed minimum prison term is mandatory for a Class X or other designated felonies (Par. 1005 – 5 – 3 (c) (2)). With these DSL requirements, the conviction figures have been in decline with a rate of nearly 1,400 per year and so have the imprisonment figures with a rate of 330 a year (column 4) relative to their prior upward trends as reported above.

Figure 3 (a)
Annual Conviction and Imprisonment in the Circuit Courts of Illinois, 1965 – 84



The same pattern of statutory effects can be found in the Circuit Court of Cook County according to the figures displayed in Table 4. There has been an increase of 1,862 convictions associated with the 1973 UCC statute followed by a decrease of 971 from what would have been the case without the DSL since 1978. It is estimated that the imprisonment figures rise about 685 annually since 1973 and then fall about 260 annually since 1978 from the level they would have reached otherwise. While the estimate for Illinois' DSL impact on imprisonment is perhaps due to chance, this figure is statistically significant at a very high (99%) confidence level.

Controlling for reported felonies, the analysis produces similar results. For conviction in Figure 3 (b), there is an annual increase of 45 per 10,000 felony incidents associated with the UCC law accompanied by an annual decline of about 30 units since the DSL has been in place. Relative to the pre – 1973 decline of slightly less than 8 a year (column 8), UCC imprisonment rates accumulate annually at a rate of 22 units. Following the enactment of the new law, the imprisonment rates deviate from the previous trend falling at a rate of 7.4 units a year.

The time – series presentation of the effects of the two consecutive criminal justice reforms in Figure 3 (a) and (b) supports the above interpretation. This impact type conforms to a constant cumulative effect, model (g) of Figure 1 (Cook and Campbell, 1979 : 208). The impact estimates are obtained from specifying both interventions as a ramp function discussed earlier.

Figure 3 (c) shows that Illinois' pre – UCC conviction and imprisonment (percent of felony dispositions) series trend downward with a slope of 2% (Table 3 column 8). The conviction series then trends upward with a constant of 3.15% (column 2) due mainly to the UCC rehabilitation strategy. The initial drop of about 3.4%[12] in the imprisonment series in 1973 was followed by an annual 2.8% increase until the end of the rehabilitation era. This combined type corresponds to an abrupt,

Table 3

Policy Impact of Illinois' 1973 Unified Code of Corrections (UCC) and 1978 Determinate Sentencing Law (DSL) on Felony Dispositions in the Circuit Courts of Illinois, 1965 – 84

Sentencing Outcome Indicator	1973 UCC Effect		1978 DSL Effect						
	Step [1]	Slope [2]	Step [3]	Slope [4]	R^2 [5]	Q^a (df = 5) [6]	ARIMA (p, d, q) [7]	Pre – UCC Trend[b] θ_0 [8]	Auto-regressive Θ_1 [9]
Conviction									
Annual Total (1,000's)	–	2.754 (5.98)**	–	–1.394 (–2.31)*	.99	10.6	0, 1, 0	–	–
Per 10,000 Felonies	–	45.052 (4.89)**	–	–29.973 (–2.49)*	.98	8.7	0, 1, 0	–	–
Percent of Defendants		3.150 (3.99)**	–15.766 (–7.04)**	–	.88	8.2	1, 1, 0	–1.986 (.61) –3.24**	–.481 (.20) –2.42*
Imprisonment									
Annual Total (1,000's)	–	0.948 (4.49)**	–	–0.330 (–1.19)	.98	7.9	0, 1, 0	–	–
Per 10,000 Felonies	–	22.355 (3.59)**	–	–7.397 (–1.19)	.95	9.1	0, 1, 0	–7.627 (4.02) –1.90*	–
Percent of Defendants	–6.374 (–5.45)**	2.845 (6.61)**	–6.861 (–5.78)**	–	.97	3.3	1, 1, 0	–2.049 (.33) –6.12**	–.502 (.17) –2.96*
Prison Use									
Percent of Convictions	–10.772 (–6.51)**	2.397 (3.08)*	1.078 (.65)	–	.97	5.6	0, 1, 0	–2.146 (.60) –3.60**	–

* T – ratio is statistically significant at $p < .05$.

** T – ratio is statistically significant at $p < .01$.

a $Q < 11.1$ with 5 df indicates that the analysis results in a white noise process in the model residuals.

b Pre – UCC trend terms not significant at $p < .05$ are not included in the noise component.

Table 4

Policy Impact of Illinois' 1973 Unified Code of Corrections (UCC) and 1978 Determinate Sentencing Law (DSL) on Felony Dispositions in the Circuit Court of Cook County, 1965–84

Sentencing Outcome Indicator	1973 UCC Effect		1978 DSL Effect						
	Step [1]	Slope [2]	Step [3]	Slope [4]	R^2 [5]	Q^a (df = 5) [6]	ARIMA (p, d, q) [7]	Pre–UCC Trend[b] θ_0 [8]	Auto-regressive Θ_1 [9]
Conviction									
Annual Total (1,000's)	–	1.862 (6.81)**	–	−0.971 (−2.71)*	.99	10.5	0, 1, 0	–	–
Percent of Defendants	8.031 (2.34)*	–	−33.465 (−9.73)**	–	.91	1.8	0, 1, 0	–	–
Imprisonment									
Annual Total (1,000's)	–	0.685 (12.29)**	–	−0.258 (−3.44)**	.99	2.8	1, 1, 0	–	−.675 (.23) −2.98*
Percent of Defendants	−13.622 (−3.77)**	–	−13.949 (−3.86)**	–	.88	2.3	0, 1, 0	–	–
Prison Use									
Percent of Convictions	−27.640 (−7.65)**	–	1.244 (.34)	–	.92	2.7	0, 1, 0	–	–

* T–ratio is statistically significant at $p < .05$.

** T–ratio is statistically significant at $p < .01$.

a $Q < 11.1$ with 5 df indicates that the analysis results in a white noise process in the model residuals.

b Pre–UCC trend terms not significant at $p < .05$ are not included in the noise component.

Figure 3 (b)

Conviction and Imprisonment Rates in the Circuit Courts of Illinois, 1965 – 84

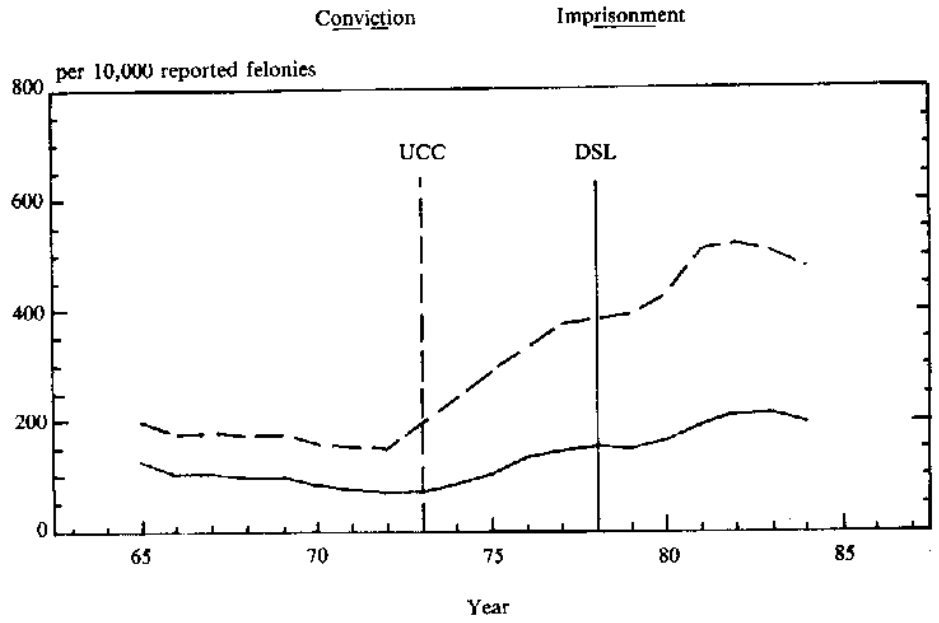
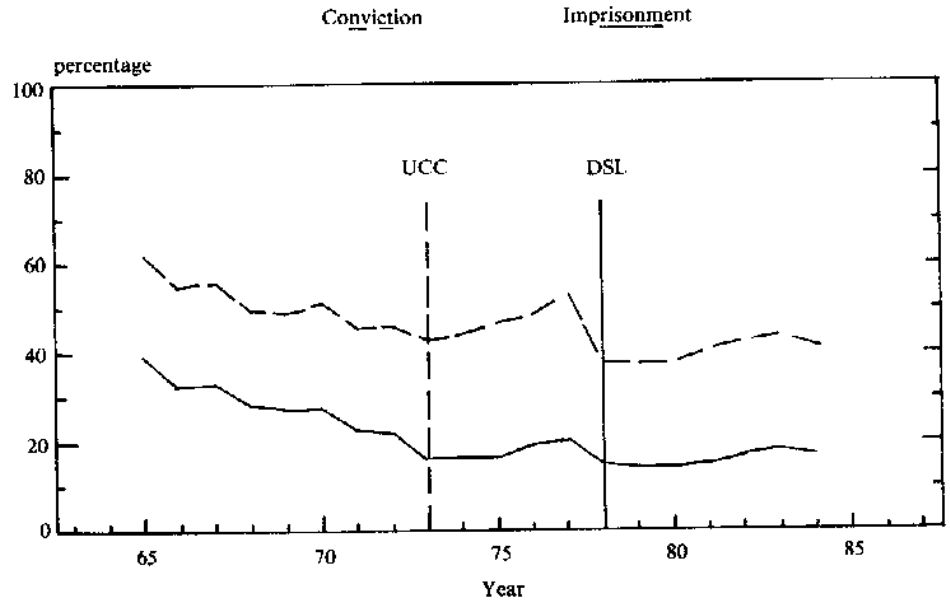


Figure 3 (c)

Sentencing Outcome among Felony Dispositions in the Circuit Courts of Illinois, 1965 – 84



continuous (step) and cumulative (slope) effect illustrated in Figure 1 (h). Both conviction and imprisonment indicators do drop abruptly and permanently with the estimates of nearly 16% and 7% of annual felony dispositions throughout the DSL period, respectively.

The statutory effects on Cook County's sentencing outcome for felony defendants reflected in Figure 3 (d) are striking. The UCC rehabilitation strategy raised the conviction level to 8% over the years but at the same time reduced the likelihood of imprisonment more than 13.5% among defendants disposed of with felony charges (Table 4 column 1). This implies a dramatic rise in application of sentencing alternatives other than imprisonment, particularly probation, conditional discharge, and work release to dispose of felony cases. Since the imposition of these alternatives was prohibited upon the conviction of Class X or other specified felonies (P.A. 80 – 1099), there has been a tremendous drop in both conviction (33.5%) and imprisonment (14%) indicators, doubling the figures for Illinois (column 3). The reason is obvious in that the Cook County Court is more sensitive and responsive to various conditions the statutory revisions have brought about affecting the routine operation of courtroom workgroups, their procedural and functional norms, and case processing technicalities.

The likelihood of prison sentences imposed among convictions (prison use rate) widely employed to reflect the punitiveness of the court system had been in decline (about 2% each year) in Illinois prior to 1973. This indicator then dropped sharply nearly 11% before trending upward again with a rate of 2.4% every year since 1973 (compare Figure 3 (e) with Figure 1 (h)). Associated with the UCC law, Cook County's prison use rate dropped more than 27.5 percentage points. This figure is somewhat misleading because a set of sentencing alternatives including probation, conditional discharge, and work release were counted for the first time as convictions due to the 1973 UCC provisions. The change in the legal definition of sentences, in Cook and Campbell's (1979 : 212) terminology "instrumentation effects," seriously biased these estimates. While the imprisonment series in Figure 3 (d) dropped during the DSL period, the prison use rate stayed at the same previous level because the conviction rate also dropped. Unless this factor is taken into consideration, this finding must be interpreted with extreme caution.

The evaluation of the DSL impact on felony disposition outcome in the Circuit Court of Illinois and Cook County provides one manifestation of its undesired consequence in the form of a continuous cumulative decline in actual conviction and imprisonment counts relative to crime committed. With these two indicators, the DSL effects on imprisonment are not statistically significant for Illinois. The analysis results obtained from the better indicator corroborate the general interpretation that there has been a noticeable step reduction in both conviction and imprisonment among felony dispositions attributable to the unintended effects of the DSL reform. Finally, the reliability of the prison use rate indicator is subject to a change in the legal definition of alternative sentences which makes the evaluation results uninterpretable.

Boland and Sones (1986 : 20) recognize heavy reliance of case dispositions on guilty pleas, stating that "The most common disposition of a felony arrest not rejected or dismissed is a plea of guilty." Among 100 typical felony arrests that result in indictment, 17 charges against defendants are dismissed in court; among those carried forward (81), 68 plead guilty whereas 13 choose to stand trial making the ratio more than 5 guilty pleas to one trial. Out of 13 trials, at least 4 acquittals for several reasons usually result and 9 defendants are found guilty at trial. In most cases, nearly 90% (68 out of 77) of convictions are due to guilty pleas. More than 35% of convicted offenders (28 out of 77) receive probation or other conditions (Boland and Sones, 1986 : 2).

Figure 3 (d)

Sentencing Outcome among Felony Dispositions in the Circuit Court of Cook County, 1965–84

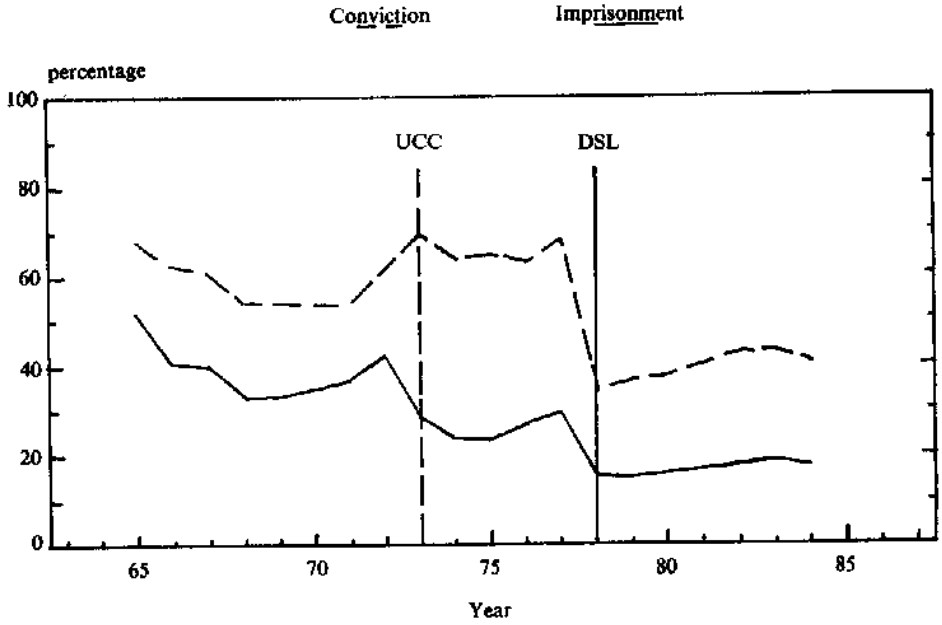
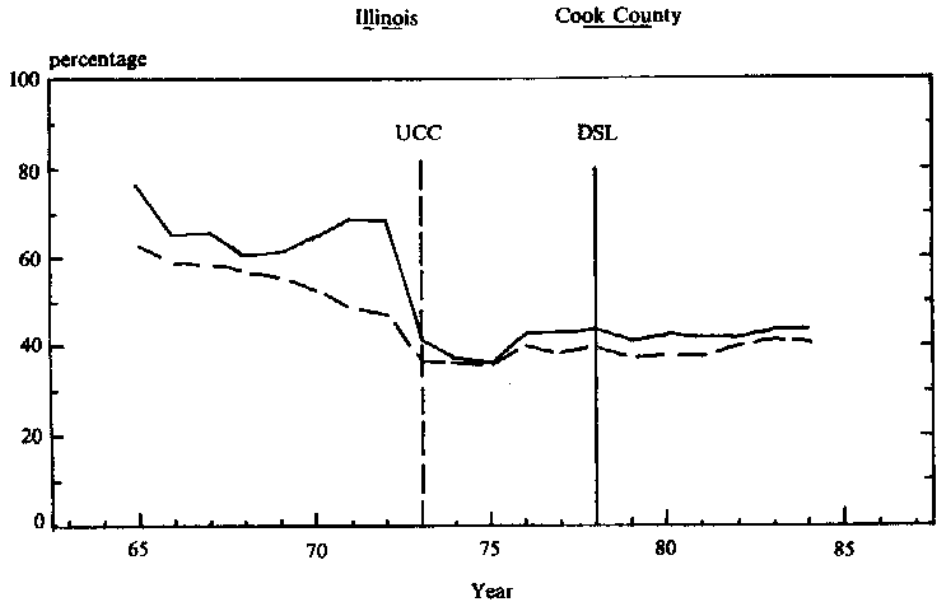


Figure 3 (e)

Prison Use Rate among Felony Convictions in the Circuit Courts of Illinois, 1965–84



Plea bargaining practices are complex and far beyond the scope of discussion here. Proponents view plea bargaining as a resolution of the judicial overload crisis. For many, individualized consideration is an effective tool to achieve substantive justice. Exchange theory posits that the high rate of guilty pleas represents "a system of exchange from which both prosecution and defense obtain benefits" (Maynard, 1984 : 168). For Maynard, negotiations lead to sentencing decisions in either of these three ways : unilateral, bilateral, and compromise. From Eisenstein and Jacob's (1977: 24 – 25) perspective, courtroom workgroup participants share their goals of maximizing justice, caseload reduction, group cohesion, and disposition certainty.

In most cases, a prosecutor appears to be an influential and proactive participant, particularly under the DSL system where judicial discretion on the part of sentencing judges is reduced. In this situation, a shift in discretion from judges to prosecutors may be the case (Cullen and Gilbert, 1982: 219; Cohen and Tonry, 1983 : 340). As such, the proportion of defendants who plead guilty may not be affected provided that prosecutors decide to file charges of felonies less severe than the target offenses, i.e. Class X for Illinois or gun – related offenses for Detroit and Florida. If a great deal of guilty pleas for misdemeanor charges are accepted for Class X offenses committed, we would see a significant drop in the rates of felony guilty pleas. Another possibility involves defendants's decisions either to plead guilty or to stand trial for numerous unknown reasons, mostly related to gains or losses as speculated from negotiation situations.

Figure 3 (f)

Guilty Pleas among Felony Dispositions in the Circuit Courts of Illinois, 1965 – 84

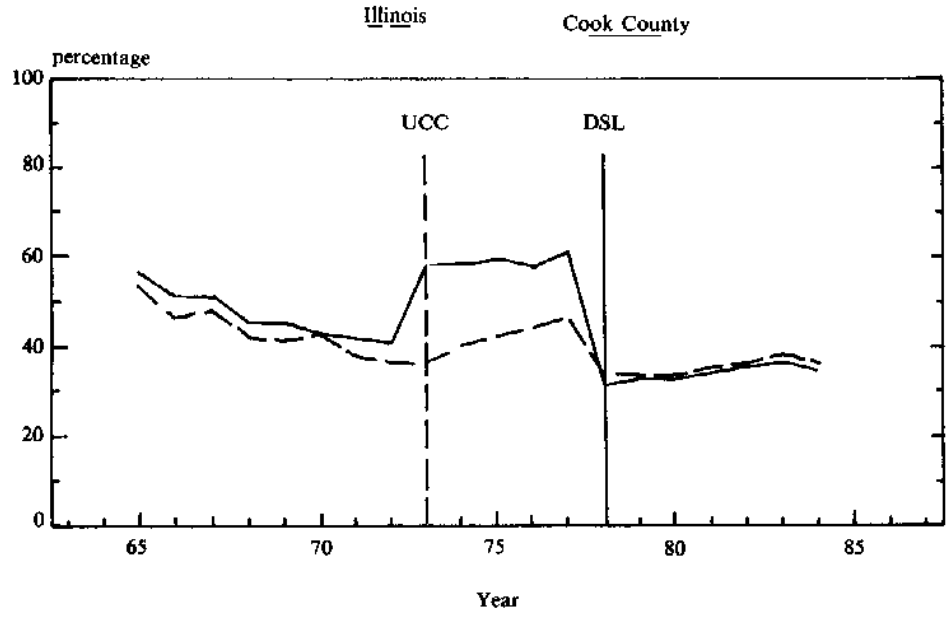


Table 5

Policy Impact of Illinois' 1973 Unified Code of Corrections (UCC) and 1978 Determinate Sentencing Law (DSL) on Felony Guilty Pleas in the Circuit Courts of Illinois and Cook County, 1965 – 84

Sentencing Outcome Indicator	1973 UCC Effect		1978 DSL Effect						
	Step [1]	Slope [2]	Step [3]	Slope [4]	R^2 [5]	Q[a] (df = 5) [6]	ARIMA (p, d, q) [7]	Pre – UCC Trend[b] θ_0 [8]	Auto-regressive Θ_1 [9]
Illinois Circuits									
Annual Total (1,000's)	–	2.551 (5.72)**	–	– 1.378 (– 2.36)*	.99	8.8	0, 1, 0	–	–
Per 10,000 Felonies	–	42.547 (5.36)**	–	– 29.676 (– 2.85)**	.98	5.6	0, 1, 0	–	–
Percent of Defendants	–	4.309 (7.18)**	– 13.787 (– 9.63)**	– 1.664 (– 2.77)*	.92	6.0	1, 1, 0	– 2.058 (.38) – 5.38**	– .601 (.16) – 3.80**
Cook County Circuit									
Annual Total (1,000's)	–	1.796 (6.50)**	–	– 1.148 (– 3.18)**	.99	10.4	0, 1, 0	–	–
Percent of Defendants	17.252 (15.95)**	2.539 (6.62)**	– 29.090 (– 25.65)**	–	.99	2.8	1, 1, 0	– 1.976 (.30) – 6.69**	– .678 (.17) – 3.92*

* T – ratio is statistically significant at $p < .05$.

** T – ratio is statistically significant at $p < .01$.

a $Q < 11.1$ with 5 df indicates that the analysis results in a white noise process in the model residuals.

b Pre – UCC trend terms not significant at $p < .05$ are not included in the noise component.

Either several charges of equally serious offenses or the most serious charge will be dropped in a charge negotiation. Sentence leniency is an important factor that accounts for an increase in the likelihood that offenders will plead guilty in sentence bargaining. The evidence of specific aggravating factors is sometimes brought up in a fact negotiation (Blumstein et al, 1983 : 43). Generally speaking, defendants plead guilty for more lenient sentences (Boland and Sones, 1986 : 23). A decline in the level of this key incentive affecting the proportion of dispositions by guilty pleas would manifest its effects with a lower conviction rate during the DSL implementation. Equally important is another possible result that "judges will dismiss charges and acquit defendants in order to avoid imposition of sentences they believe are unduly harsh" (Cohen and Tonry, 1983 : 342). Scholars present empirical evidence that case dismissals did actually increase in Wayne county, Michigan during the DSL years (Loftin et al, 1983 : 295).

Table 5 presents results which help explain how the 1973 UCC and 1978 DSL statutes have brought about drastic changes in the pattern of felony dispositions discovered in the preceding analysis. The effect of the laws on guilty pleas corresponds to a higher pre – DSL conviction rate and a lower post – DSL rate statewide and in Cook County (compare Figures 3 (f) with 3 (c) and (d)).

The DSL effects on the percent of felony dispositions by guilty pleas take a form of model (h) in Figure 1 with a step reduction of about 14% plus an additional 1.7% progressive decline (Table 5) in Illinois. For Cook County, the estimate of the DSL effects on guilty pleas more than doubles, 29 percentage points lower than would have been otherwise. This sharp fall has persisted throughout the past seven years of its implementation. Also, negative effects of the DSL statute can be found in guilty plea indicators measured in both absolute and relative terms.

Conclusion

Of great significance in Illinois criminal justice history are two sweeping statutory changes in the area of crime control policy, both of which have occurred in the seventies. The 1973 UCC rehabilitative model relied heavily upon vast discretion on the part of the judicial and correctional authorities in identifying offenders whose potential for rehabilitation is high and thus eligible for more lenient sentences in conjunction with individualized treatment for correctional and therapeutic purposes. In sharp contrast, the premise of the 1978 DSL, the punitive model, is that determinacy in sentencing which enables us to "get tougher" on violent criminals can by no means be accomplished without strict control and reduction of judicial discretion in sentence selection under a more structured penal system. Evidently, both of these penal policy decisions have resulted in a large scale and long-term impact upon routine case processing and sentencing practices.

This study has evaluated the effects of the DSL revisions on major violent crimes. Reported here were results consistent with empirical findings in the literature indicating that crime rates have not been affected, to the extent one can claim with confidence, by the deterrent and incapacitative properties of the law. A general conclusion one can draw from Illinois' experience is that the DSL statute as a crime countermeasure has not been effective in deterring violent crimes. The findings also imply that a decline in the guilty plea rate has intensified the overload crisis and workgroup tensions which in turn, in addition to prison overcrowding and other external threats, reduce the system's capability to convict and incarcerate violent criminals. Such intensity of crisis from the workgroup members' point of view means that the system would be overwhelmingly burdened with a greater number of cases unnecessarily tried that would have been otherwise pled guilty. Where this perception is greatly internalized among key participants, the extent to which they are driven to resort to legal technicality, for example early dismissals of weak cases, as a means to mitigate the crisis and perhaps to prevent the system from collapse appears to increase. Undoubtedly, the reduction in the rate of conviction as well as imprisonment has been much greater in the Circuit Court of Cook County than in the Circuit Courts of Illinois as a whole.

Serious problems arise, as appears to be the case in Illinois and perhaps in other implementing jurisdictions when the intent of these legislative decisions, accompanied by a set of values and philosophical emphases, is in conflict with another set of functional goals highly valued in practice. Furthermore, it seems reasonable to assert that changes in disposition pattern here reflect the way in which conflict between the two competing goals is handled. Where practical objectives prevail, technical expertise is employed to circumvent statutory requirements which, in their judgment,

are normatively undesirable and/or unnecessarily inconvenient. What we have learned from Illinois' experience is the complexity of situations under which the features of the DSL have become a key factor that undermine the ultimate goals of the law. There is still more to learn about the practical issues in sentencing and means by which implementation problems can be minimized. Finally, while decisions regarding what form of remedial action to be pursued require further research, the new direction in which American penal policy should be reoriented is rather unclear for the near foreseeable future.

However, restrictions imposed upon our attempt to generalize the findings for Illinois' experience remain an issue. The nature of this individual state quasi-experimental design rules out numerous threats to its internal validity. In order to maximize the internal validity of its evaluation results, the design must sacrifice its external validity which permits evaluators to generalize their findings. Given minimized constraints for generalization as a goal, future research innovation should be directed toward a development of a comparative design that permits a pooled intervention analysis of both implementing and comparison jurisdictions in a single study.

END NOTES

1. See Wilson (1975), van den Haag (1975), von Hirsch (1976), and Blumstein et al (1983: 61-67) for a review of the intellectual attack on rehabilitation and see also Cullen and Gilbert (1982) and Currie (1985) in their defense of rehabilitation, humanity, and proposal for a new direction.

2. President Ford advocated the "Get Tough" crime control policy to insure domestic tranquility as explicitly expressed in his remark, according to Cullen and Gilbert (1982 : 102) "Strict, legislatively - fixed, determinate sentencing is the solution to the nation's crime problem: Make more sentencing mandatory and, therefore punishment more certain for those convicted of violent crimes." See also Illinois Crinimal Sentencing Commission's 1982 Report.

3. For von Hirsch (1976 : 38), general deterrence means "the effect that a threat to punish has, in inducing people to refrain from prohibited conduct." Andenaes (1974 : 34) argues that criminal sanctions produce three basic kinds of preventive effects: fear of legal consequences, moral inhibitions, and habitual law - abiding conduct. One important type of legal consequence of incarceration is its incapacitative effect as a result of "isolating an identified offender from the larger society, thereby preventing him or her from committing crimes in that society" (Blumstein et al, 1978 : 3). Another distinctive concept, specific deterrence, pertains to the effect of previous punishment in preventing recidivism among released ex-offenders (Hagan, 1985 : 302).

4. See Mandell and Bretschneider (1987) for applications of this intervention model. However, their treatment of the noise component is inadequate as compared to the Box-Jenkins technique.

5. For consistency of the data, battery and assault categories are examined according to the I-UCR Reporting Offense Codes sheet in order to avoid problems which may arise from a change in the official definition.

6. The data for 1983-85 are not consistent with the earlier period and thus excluded from the analysis. The data for manslaughter in Chicago not available at the time are excluded.

7. To say that the murder series is stationary means that "the overall behavior of the observations remains the same over time" (Tiao, 1985 : 86). A series is nonstationary when it has no true level because it either drifts or trends. A drifting process is unpredictable in its mean level over time. By contrast, a trending series behaves in a more predictable fashion with its stochastic fluctuations around a linear slope.

8. See Box and Tiao (1975) and Tiao (1985: 87, 107) for the general class of intervention analytic models. Letting $(1-\phi_1 B)\, Y_t = Y_t - \phi_1 Y_{t-1}$, multiplication of equation (3) with $(1-\phi_1 B)$ yields:

$$Y_t - \phi_1 Y_{t-1} = \mu + \omega (S_t - \phi_1 S_{t-1}) + a_t$$

or equivalently,

$$z_t = \omega S_t + a_t$$

where $z_t = (1-\phi_1 B)(Y_t - \mu)$ and $S_t = S_t - \phi_1 S_{t-1}$.

9. See Ekland–Olson et al (1983) for the discussion of these sentencing outcome indicators and their use. An average or median of actual time served which reflects the severity of criminal sanctions was not available at that time. For this preliminary analysis, these multiple indicators appear to be adequate well within the scope of this study.

10. Administrative Office of the Illinois Courts' **Annual Reports to the Supreme Court of Illinois,** 1965–84 provides the information on felony case dispositions in the Circuit Courts of Illinois and Cook County. The data on reported I – UCR index offenses are based upon Illinois Department of State Police's **Crime in Illinois** of various years.

11. The obtained t ratio is -2.19 which would have passed the test at $p < .05$ because it exceeds the critical value (1.645) with more than 120 degrees of freedom. Setting the rejection criterion at $p < .01$ (critical value of 2.326), we would conclude that the result fails the test. See J. Johnston (1985 : 548) for the t distribution table.

12. The initial change due to the law is a product of $\omega_1 + \omega_2$ which by substitution of their values ($\omega_1 = -6.374$ and $\omega_2 = 2.845$) is equal to 3.4%.

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