

The Impact of the Severity of Punishment on Drug Use and Drug Dealing: Implications for Florida Sentencing Reform Proposals

Author: Jeffrey Cece, M.S.

January 30, 2012

TABLE OF CONTENTS:

I.	Introduction.....	1
II.	Different Types of Deterrent Effects.....	2
III.	Overall Empirical Status of Deterrence Theory.....	2
IV.	General Deterrence of Drug Users/Possessors.....	2
V.	General Deterrence of Drug Dealing.....	4
VI.	Specific Deterrence of Drug Dealing.....	6
VII.	The Prevalence of the User-Dealer.....	7
VIII.	Specific Deterrence of Drug Offenders (Including Both Users/Possessors and Dealers)....	9
IX.	Incapacitating Drug Use with Incarceration.....	11
X.	Incapacitation and Replacement of Drug Dealers.....	12
XI.	The Impact of Incarceration on Drug Prices and Consumption.....	14
XII.	Evidence on the Impact of Mandatory Minimums.....	14
XIII.	Comparative Studies of Cost-Effectiveness and Return on Investment.....	15
XIV.	Implications for Proposals to Reduce Penalties for Drug Offenses.....	17

I. INTRODUCTION

In the context of budget deficits and widespread public support for reforms that make prisons more cost-effective, a broad coalition of business leaders and criminal justice practitioners in Florida are calling for evidence-based reforms that enhance public safety.¹ Florida's Smart Justice Coalition recommends that lawmakers revisit mandatory minimums and "revise prison penalties for low-level drug offenses...[that] trigger state incarceration for relatively small quantities of drug and low dollar amounts."² As the box below highlights, numerous religious leaders have also adopted official positions supporting the repeal of mandatory minimum prison sentences.³

Any proposals to reduce penalties must clearly demonstrate that they will not undermine public safety by increasing drug use or drug selling. A variety of different proposals to reduce the severity of prison sentences for certain drug offenses have been identified by the Florida Senate Committee on Criminal Justice (see Interim Report 2010-109 and 2012-116), the Office of Program Policy Analysis and Government Accountability (see Report No. 12-02), and legislators (see Senate Bill 732/House Bill 561). The findings from the scientific studies summarized in this paper are relevant to all of these proposals.

This paper attempts to answer several important empirical questions: Does the perceived threat of severe punishment deter potential drug users or dealers (i.e., general deterrence)? Does actually applying severe punishment to drug users or dealers deter them from using or selling again (i.e., specific deterrence)? Are drug users incapable of consuming drugs behind bars (i.e., incapacitation)? Does incarcerating a drug dealer prevent drug sales or do replacement dealers merely offset any incapacitation effect?

By focusing on the observable consequences of implementing penalties of varying severity for drug offenses, this report neglects other important issues that are worthy of consideration. For example, proportionality and consistency are central sentencing principles and values that may be undermined by a sentencing system that punishes mere possession of 44 hydrocodone tablets with the same 25-year mandatory prison sentence that applies to lewd molestation of a child under the age of 12 years old.⁴ A discussion of whether severe penalties for drug crimes are just or morally justified is beyond the scope of this paper. This review merely attempts to inform policymakers about whether severe penalties actually live up to the expectation that they keep a lid on drug offenses.

Florida law enforcement organizations have not endorsed any recent proposals for revising prison sentences for drug offenses, perhaps believing that, as a representative from the Florida Sheriffs Association said, "The threat of minimum mandatory sentences does in fact deter drug dealers and users."⁵ Since no supporting scientific evidence was presented, this claim probably reflects the widespread assumption that severe penalties deter crime. Furthermore, after observing that arrests and prison admissions for trafficking have generally increased over time in the face of increasingly severe penalties, a Florida Senate Criminal Justice Committee report concluded that, "it is uncertain if mandatorics have a deterrent value beyond the incapacitation of those serving them."⁶ It is time to

Religious Groups that Officially Support Repealing Mandatory Minimums:

U.S. Conference of Catholic Bishops
National Council of Churches
United Methodist Church
Evangelical Lutheran Church in American
National Baptist Convention, USA, Inc.
National Baptist Convention of America, Inc.
Presbyterian Church (USA)
National Missionary Baptist Convention
Progressive National Baptist Convention
Episcopal Church
Union for Reform Judaism
American Baptist Churches in the USA
United Church of Christ
Unitarian Universalist Association
Church of the Brethren Witness
Mennonite Central Committee U.S.
American Friends Service Committee
Prison Fellowship Ministries
Church Women United

expand the scope of this inquiry and determine whether severe sanctions, particularly those in the form of minimum mandatory prison terms, actually reduce or deter drug offenses.

II. DIFFERENT TYPES OF DETERRENT EFFECTS

Formal punishment via the criminal justice system might prevent crime through three different mechanisms: general deterrence, specific deterrence, and incapacitation. General deterrence refers to the effect of the threat of punishment on actual and potential offenders in the general public. Specific deterrence refers to the reduction in reoffending that is thought to follow from the *experience* of actually being punished. Incapacitation refers to the crimes averted by physically isolating offenders during the period of incarceration.⁷ In other words, “A deterred offender is able to commit crime but chooses not to, whereas an incapacitated offender would choose to commit crime but is unable to do so.”⁸

The deterrent effect is thought to be a function of the probability that the punishment will be imposed and the severity of the punishment:

Severity alone, however, cannot deter. There must also be some possibility that the sanction will be incurred if the crime is committed. For that to happen, the offender must be apprehended, usually by the police. He must next be charged and successfully prosecuted, and finally sentenced by the judiciary. None of the successive stages in processing through the criminal justice system is certain. Thus, another key concept in deterrence theory is the certainty of punishment.⁹

Given the important relationship between the certainty of punishment and the severity of punishment, empirical findings related to certainty (like the probability of arrest for drug use and drug selling) will be mentioned as needed. However, the central focus of this review is the scientific research on the severity of punishments.

III. OVERALL EMPIRICAL STATUS OF DETERRENCE THEORY

Researchers have studied the overall magnitude of the relationship between the severity of punishment and crime across a large body of existing research. A recent meta-analysis of 40 empirical studies, which generated a total of 200 effect size estimates, found that the effects of the severity of punishment on crime are generally weak and insignificant. A specific analysis of drug and alcohol offenses revealed that the average effect size of the severity of punishment is not even in the predicted direction. This means that the severity of punishment is actually associated with an *increased* likelihood of drug and alcohol offenses.¹⁰

IV. GENERAL DETERRENCE OF DRUG USERS/POSSESSORS

According to deterrence theory, individuals who consider using drugs will weigh the expected rewards of using against the subjectively perceived risk of punishment. Individuals should choose not to use when the expected legal risks outweigh the expected rewards. One way to explore this theory is to see if there is a correlation between people’s perceptions of legal risks and their self-reported drug use.

Researchers surveyed 321 students at Florida State University and found that the perceived severity of punishment for marijuana use was only weakly related to admitted use and that the relationship was

not statistically significant.¹¹ A longitudinal study of 300 freshmen at Florida State University and 262 high school students found that, after controlling for social disapproval and moral commitment to the rules, the deterrent effect of the perceived severity of legal punishment for marijuana use was weak and not statistically significant.¹²

An early review of perceptual deterrence studies like those mentioned above found that the average correlation between perceived certainty of punishment and marijuana use is weak, as is the average strength of the relationship between the perceived severity of punishment and marijuana use. Even these small effects are probably inflated because many studies measure severity in ways that include formal and informal non-legal sanctions.¹³ A more recent review of the perceptual deterrence literature concluded that “deterrence theory is at best a partial explanation of drug use decisions...[the] effects [of deterrence variables] are quite modest in size, generally accounting for 5 to 10 percent of the variance in marijuana use reported in perceptual deterrence surveys.”¹⁴

Since a severe punishment is contingent on being arrested and convicted, one reason why severity is so inconsequential is because the probability of arrest and conviction is so low. Only about 3% to 6% of marijuana users are arrested each year.¹⁵ However, the risk of arrest *per joint consumed* is trivial – about 1 arrest for every 11,000-12,000 joints.¹⁶ Furthermore, even if one was convicted of felony marijuana possession, the likelihood of receiving a prison or jail term is only about 50%.¹⁷ Overall, it is estimated that users of cocaine, heroin, and methamphetamine risk serving only about 1.5 days in prison per year of use. Marijuana users face a risk of no more than one hour in prison per year of use.¹⁸

Of course, as far as general deterrence is concerned, the objective risk of imprisonment for drug use only really matters to the extent that it influences the subjective perceptions of individuals who contemplate using drugs. Researchers have attempted to link subjective perceptions to actual statutory penalties and have found that public perceptions of penalties for marijuana possession are very uninformed and inaccurate. Research indicates that, on average, nearly one-third of the population does not know what the maximum penalty is for marijuana possession in their state. About 30% of people living in a decriminalized state still erroneously report that a jail term is the maximum penalty imposed. Six percent of the population believes that a mandatory jail term is the maximum offense for possession of an ounce, even though no U.S. state imposes mandatory jail time for low-level possession offenses.¹⁹ In light of the limited awareness and inaccurate understanding of penalties among citizens, penalty modifications should have only modest effects – a finding which is supported by multiple lines of evidence.

A decade ago, in order to understand the impact of reducing or eliminating penalties for possession of marijuana on consumption, researchers reviewed the American experience with decriminalization in about 12 states in the 1970s, the formal policy of non-enforcement for possession and sale of small quantities in the Netherlands, and penalty reductions in South Australia and the Australian Capital Territory. They concluded that “there is reasonable, though not indisputable, evidence that the removal of criminal penalties for personal possession does not increase use of marijuana or more dangerous drugs. In particular, it does not seem to affect adolescent use rates.”²⁰ This conclusion was echoed by the National Research Council, which found that “existing research seems to indicate that there is little apparent relationship between severity of sanctions prescribed for drug use and prevalence or frequency of use.” The National Research Council argues that, “Other factors, including the perceived benefits of drug use, fear of health-related risks, and informal social controls, may have a more significant influence on decisions about using drugs than legal deterrence. As in the case of underage

alcohol and tobacco use, current enforcement may have a stronger effect on where people carry or use drugs, rather than on whether they do so.”²¹

In 2008, the Global Cannabis Commission conducted an international review of policy impact studies conducted in the United States, Australia, Portugal, the United Kingdom, the Netherlands, Italy, and Switzerland. The Commission found that, “Measures to reduce penalties or to decriminalize possession and use have been adopted in numerous jurisdictions without an upsurge in use.” The Commission observed that “as long as the illegality of cannabis is maintained, the laws and sanctions which apply seem to have, at most, a relatively modest impact on rates of cannabis use. In a number of examples, trends in cannabis use appear to be independent of the penalties which apply. It is likely that...other non-legal factors such as social, economic and cultural trends, some of which exert their influence across state and national boundaries, have a far greater impact on cannabis use than the penalties which apply in a particular jurisdiction to that very small proportion of users who are ever arrested.”²²

Another team of international experts published a comprehensive review of the evidence in 2010. They found that, “The evaluative record seems fairly consistent for cannabis. There is no clear-cut case in which a reduction in the form or enforcement of the prohibition on use or possession resulted in a substantial change in consumption of the drug. There are a number of cases where there was no measurable change in consumption from such a policy change.”²³

The World Health Organization gathered directly comparable data on marijuana use from 17 different countries and found that, despite having some of the most severe penalties, the United States ranked first with the highest prevalence of lifetime marijuana use. In the Netherlands, where adults are not punished for possessing or consuming small amounts of marijuana, the rate of cannabis use is about half of the U.S. rate. International variation in the consumption of marijuana is arguably more influenced by factors like religiosity, family stability, disposable income, and the assumption of adult roles than it is by the enforcement of prohibitions and the severity of penalties.²⁴ While multiple lines of evidence reviewed above indicate that the severity of penalties for use or possession has little or no impact on consumption, it is important to determine whether the same conclusion applies with regard to sales and distribution.

V. GENERAL DETERRENCE OF DRUG DEALING

Before assessing the impact of perceived risks on drug selling, it is helpful to understand the actual risk of arrest and imprisonment for selling. About 1.5 million people are arrested for drug law violations each year and about 375,000 of these are arrested for drug distribution. There are about 2 billion retail drug sales per year, suggesting an arrest risk of about 1 arrest for every 5,000 sales. Since roughly half of arrests for drug distribution lead to a conviction, the conviction risk per sale is even smaller – about 1 in 10,000. These figures are roughly comparable to the annual risk of dying in an automobile crash.²⁵

Of those convicted of drug trafficking nationwide in state courts in 2004, about 28% received probation, 30% were sentenced to jail, and 39% were sentenced to prison.²⁶ The average maximum sentence for traffickers sentenced to prison is 60 months, compared to 7 months for those sentenced to jail.²⁷ Depending on assumptions about how much of this time is actually served, a dealer may serve only about 1 or 2 hours behind bars per sale.²⁸

Clearly the risk of incarceration per transaction is extremely small. The perceptions of drug sellers reflect these small risks. A study of 40 dealers in St. Louis concluded that, “Certainty of punishment, not

severity, is foremost in sellers' minds, and many offenders continue to believe that they will never be caught."²⁹ Research conducted with over 450 dealers in the San Francisco Bay Area revealed that "almost none" believed that increased penalties would have any impact on their selling.³⁰ Another study used a survey to obtain risk perception data from over 750 inner-city minority youths from Boston, Chicago, and Philadelphia who had sold drugs in the past month. At the time they were dealing, 71% assessed the chance of getting arrested as low, 77% assessed the chance of getting convicted (conditional on arrest) as low, and 65% assessed the chance of going to prison (conditional on conviction) as low. Overall, about 47% assessed the risk of all three events as low.³¹ In another study, researchers interviewed 34 crack-dealing and 16 non-dealing black juveniles in Tampa and found that less than half of both groups perceived a high risk of arrest for selling crack cocaine (44% of dealers and 43% of non-dealers). Only 52% of dealers perceived a high risk of a long prison term for selling crack, compared to 31% of non-dealers.³²

One researcher spent 6 years studying 65 dealers and smugglers in Southern California and found that they "enjoyed the element of risk in their work," "reveled in the thrill-seeking," and "lived for the moment." Many were characterized by a sense of invulnerability. They commonly felt "inordinately safe" within a "protective shell." They generally ignored the risks they were taking and used a series of rationalizations to mitigate paranoia when it occasionally occurred.³³

A study of about 50 dealers operating at various Southern California colleges found that they "did not perceive the police as a serious threat to their drug activities or way of life in general." They exhibited an "overall nonchalant view of law enforcement" and "largely perceived law enforcement as a negligible threat and more of an inconvenience than an obstacle."³⁴ Likewise, after five years of ethnographic fieldwork with Colombian drug traffickers, one researcher found that cocaine importers and distributors "feel unthreatened by criminal laws and police investigations or they accept them or ignore them as given, natural risks inherent to the illegal business."³⁵

Interviews were also conducted with 34 convicted drug smugglers in federal prisons, most of whom had smuggled drugs into Florida through the Caribbean. Most had "convinced themselves that the odds were in their favor" (which they are) and believed that their chances of being apprehended were "very slim." In fact, most estimated their actual chance of being arrested at "much lower than 50 percent," well below the threshold needed to deter them. Researchers found that the gap between their perceived chance of arrest and the actual chance of arrest "is large enough that it has little or no deterrent effect." Smugglers perceived that the chances of conviction were "even slimmer."

Most smugglers "had no idea about the likely penalties for drug smuggling" and "figured that sentences would be finite and relatively short." They also reported that "their state of mind during the execution of a smuggling event was one of confidence" and that they tried to put thoughts about the risks they were taking "as far away from their minds as possible." The size of the potential financial rewards helped them to minimize any concerns about apprehension and incarceration. The element of risk may even reinforce smuggling. Thrill-seeking, while not the primary motivation for smuggling, was still "a welcome attribute of drug smuggling and was an important part of the drug smuggling subculture."³⁶

Severe penalties appear even less likely to deter drug selling (and using) in light of the kinds of personality traits and cognitive biases that drug sellers likely exhibit. Drug dealing disproportionately attracts individuals who are impulsive, low in self-control, and predisposed to focus on the immediate future rather than the long run. Drug sellers are also likely to suffer from a bias toward unrealistic optimism about their personal risk of experiencing negative events.³⁷ They tend to view getting caught

as a matter of bad luck or of simply being in the wrong place at the wrong time.³⁸ Since such a high fraction of drug sellers are also active drug users, intoxication is also likely to impair rational deliberation and planning.³⁹ To the extent that drug sellers are impulsive, present-oriented, overconfident, and impaired by drugs, the threat of severe punishment will have little impact on whatever weighing of risks and rewards they engage in.⁴⁰

VI. SPECIFIC DETERRENCE OF DRUG DEALING

Specific deterrence refers to the reduction in reoffending (or recidivism) that is thought to follow from the experience of actually being punished. Employing a unique study design, researchers tracked recidivism, defined as rearrest on any criminal charge within 4 years of disposition, among 1,003 defendants charged with felony drug offenses (distribution and possession with intent to distribute) who were randomly assigned to judges with varying sentencing tendencies. Results indicated that offenders assigned by chance to receive prison time and those assigned by chance to receive no prison time were arrested at similar rates. At best, variations in prison and probation time had no detectable effect on rates of rearrest among drug offenders. At worst, after excluding any incapacitation effect, punishment increased the probability of reoffending among drug offenders.⁴¹

Another study compared the recidivism rates of 487 offenders arrested for drug sales who were eligible for diversion to a residential treatment program. A subgroup of nonparticipants, who either declined treatment or were rejected in the screening process, were subjected to prosecution. About 85% of these nonparticipants received prison terms or jail sentences, 9% had the charges dismissed, 5% received non-incarcerative sentences (i.e., probation), and 1% were acquitted after trial. Of those offenders who opted to participate in treatment, about 68% successfully completed treatment and had the charges against them dismissed, while the remaining 32% left treatment before completion and subsequently were prosecuted on the original drug sale charges and sentenced to prison. There were statistically significant differences in rearrest rates between nonparticipants, treatment completers, and treatment failures over the 3-year follow-up period. Recidivism rates were the highest among the two groups that were incarcerated; about 52% of the treatment failures (who served 556 days in prison on average) were rearrested, as were about 47% of nonparticipants (the vast majority of whom were sentenced to prison or jail). In comparison, only 23% of the treatment completers were rearrested.⁴²

Other research examined the effects of incarceration and drug treatment on recidivism among 263 drug-addicted defendants who were arrested for drug sales and who agreed to participate in a residential drug treatment program in exchange for deferred prosecution. Of these, 182 successfully completed treatment and the remaining 82 failed treatment and were prosecuted and sent to prison. Recidivism was defined as the first official rearrest within the 3-year period following either treatment completion or prison release. The effect of imprisonment on recidivism was estimated for both treatment completers and failures because all subjects were detained in jail for at least some period during the pre-admission screening period. After controlling for other known determinants of recidivism, results indicated that the number of days spent behind bars was associated with a slight *increase* in the odds of being rearrested. Even though this criminogenic effect was not statistically significant, it still clearly demonstrates that there is no deterrent effect from imprisonment. The length of time in treatment, on the other hand, was significantly associated with a reduction in recidivism even after controlling for other variables. A 100-day increase in treatment length decreased the odds of being rearrested by 461%.⁴³

VII. THE PREVALENCE OF THE USER-DEALER

Several important studies have examined the impact of punishment on drug offenders as a general group – without separating drug users from drug sellers. Before discussing studies that report findings for drug users and sellers together in the same group, it is important to justify this approach by documenting the considerable overlap between drug using and drug selling.

Selling drugs is an “intrinsic” and “almost universal” part of the social life many drug users.⁴⁴ At some time in their lives, individuals at nearly all levels of drug use have at some point sold or shared drugs. The most active street-level and middle-level dealers – those who deal as their primary source of income – are likely to be daily drug users. Frequent and occasional users may deal in order to obtain consistent supplies or obtain larger quantities at a reduced price. Users may buy more than they need and sell or share a portion with other using friends, but they are unlikely to be operating commercial enterprises.⁴⁵

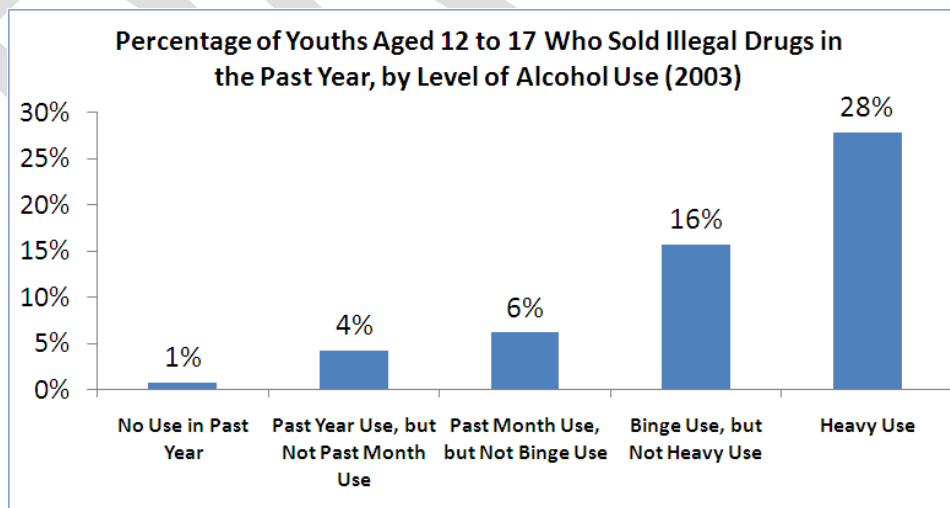
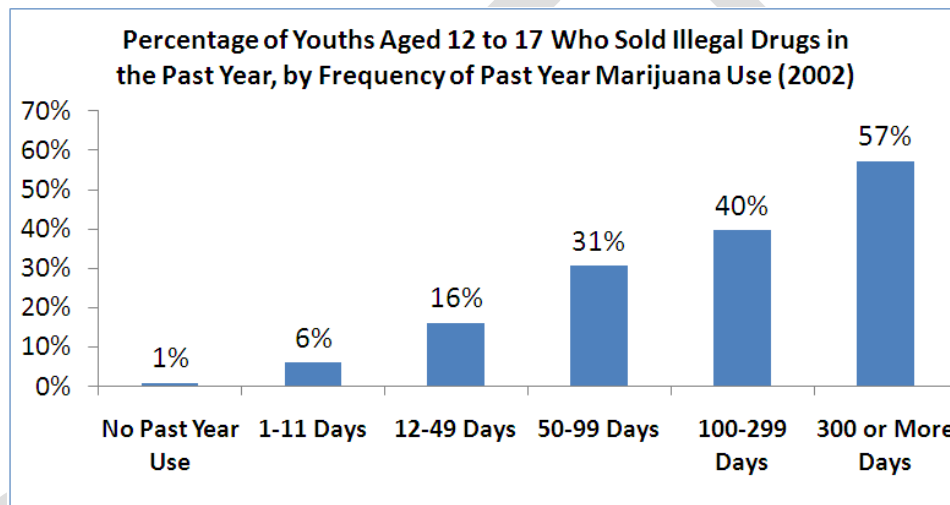
Interviews with a nationally representative sample of inmates in state correctional facilities reveal how common drug use, addiction, and impairment are among traffickers. Approximately 70% of state inmates incarcerated for drug trafficking reported using drugs in the month before their offense, 42% reported using at the time of their offense, and 25% reported committing their offense to get money for drugs.⁴⁶ In comparison to leaders/organizers and middle men, lower-level participants, including roughly 1 out of 3 retail sellers and peripheral role offenders, are the most likely to report being motivated by a desire to get money to obtain drugs for personal use.⁴⁷

Furthermore, 63% of drug offenders in state prisons (which includes both possession and trafficking offenders) meet the diagnostic criteria for drug dependence or abuse.⁴⁸ Looking specifically at inmates in state jails, as opposed to state prisons, 52% of jail inmates convicted of drug trafficking were under the influence of alcohol or other drugs at the time of their offense and about 70% meet the diagnostic criteria for drug dependence or abuse.⁴⁹ Furthermore, approximately 9% of veterans in state prisons and 45% of veterans in federal prisons are serving time for drug trafficking.⁵⁰ Veterans exposed to trauma in combat may become dependent on drugs as they cope with psychological distress and physical pain.⁵¹ Drug dependence, among other things, may contribute to their involvement in drug trafficking.

Interviews with over 380 adolescent inner-city males in the District of Columbia revealed that about 50% of those who had used illegal drugs in the past year had also sold drugs.⁵² Research involving over 500 adolescent males in Pittsburg found that about 62% of those who had ever dealt drugs were also illegal drug users and that using illegal drugs on two or more occasions increased the odds of drug dealing by 5.5 times.⁵³ Interviews with probationers in Northern Virginia revealed that about 90% of offenders who sold drugs also used drugs.⁵⁴ A study of over 450 dealers in the San Francisco Bay Area found that “regular drug users and drug dealers are the same people.”⁵⁵ Likewise, researchers in Florida conducted on-street interviews with over 600 active delinquents in 20 neighborhoods within Miami-Dade County and found that they had universal experience using drugs and near universal involvement in drug selling. Virtually all (98%) of the males in their sample, and 83% of females, had engaged in a drug sale at least once in their lifetime.⁵⁶ Furthermore, the Florida Legislature’s Office of Program Policy Analysis and Government Accountability analyzed 1,200 offenders admitted to Florida prisons for opioid trafficking in Fiscal Year 2010-11 and found 65% of these offenders needed substance abuse treatment.⁵⁷

The 2010 Florida Youth Substance Abuse Survey (FYSAS), which estimates the prevalence of illicit drug use and illegal drug sales among Florida students, found that 9.5% of high schoolers aged 18 and older reported selling illegal drugs in the past year. Illicit drug use among these young adults is clearly associated with illegal drug selling: 29.7% of current illicit drug users report selling, compared to only 2.6% of those who are not illicit drug users.⁵⁸

In 2009, the National Survey on Drug Use and Health (NSDUH) found that 3.2% of youths aged 12 to 17 nationwide reported that they sold illegal drugs in the past year.⁵⁹ An analysis of earlier NSDUH data revealed that the percent of youth engaging in drug selling rises with increasing frequency of past-year marijuana use. As the graph below indicates, only about 1% of those who did not use marijuana in the past year sold illegal drugs, compared to 57% of those who used marijuana on 300 or more days in the past year.⁶⁰ A similar relationship exists between drug selling and alcohol use. Using data from the 2003 NSDUH, the graph below shows that only about 1% of youths who did not consume alcohol in the past year sold illegal drugs, compared 28% of those who were heavy alcohol users.⁶¹



Clearly drug selling is closely associated with a drug using lifestyle – a lifestyle which can change in response to drug treatment. Drug treatment decreases drug selling by reducing the urgent need for

money and drugs, motivating users to distance themselves from the subculture of users and dealers, and by increasing the perceived costs associated with selling.⁶² In the United States, a 5-year, multisite evaluation of the impact of drug treatment on thousands of users found that, in addition to reducing drug use, treatment also reduces drug selling by 78%.⁶³ These findings were replicated in the United Kingdom in a similar longitudinal, multisite evaluation of over 400 users. At the 4 to 5 year follow-up period, there was a statistically significant 83% decrease in drug selling among methadone patients and a statistically significant 64% decrease in drug selling among residential patients.⁶⁴

These findings indicate that treatment, despite traditionally being categorized as a demand reduction intervention, should properly be considered a supply reduction intervention as well. In fact, according to the National Research Council, “it was an explicit strategy of major multimodality treatment programs in the early 1970s to reduce local heroin supplies by recruiting user-dealers into treatment.”⁶⁵ Furthermore, *Florida’s Drug Control Strategy* asserts that “supply reduction is not the exclusive domain of law enforcement” and that “substance abuse treatment providers are essential to reducing the availability of drugs,” in part because when user-dealers are recruited into treatment “the number of potential drug suppliers is diminished along with the ability of the black market to meet demand.”⁶⁶

VIII. SPECIFIC DETERRENCE OF DRUG OFFENDERS (INCLUDING BOTH USERS/POSSESSORS AND DEALERS)

One study analyzed over 6,800 cocaine arrestees in New York City between 1983 and 1986, comparing rearrest rates by the type of sanction imposed at sentencing among those convicted of drug sales and drug possession. The percentage of offenders rearrested for drug possession after being sanctioned with more than a year in prison (15%) was virtually indistinguishable from the percentage of offenders rearrested for drug possession after being sanctioned with probation (14%). This indicates that severe sanctions in the form of long prison sentences are no more effective than probation in deterring drug possession offenses. The highest rearrest rates were specifically found among drug sellers rearrested for drug selling. Among sellers rearrested for selling, the probability of rearrest actually *increased* with sanction severity. The weak effects of sanction severity on rearrest rates were still evident even after controlling for background factors and prior record. After introducing these controls, the adjusted rearrest rates for drug sale offenses were exactly the same for those sentenced to over a year in prison as they were for those whose charges were dismissed or discharged. The adjusted rearrest rates for drug possession offenses were almost exactly the same for those sentenced to over a year in prison as they were for those sentenced to probation. The author of this study concluded that drug crimes appear to be behaviors that are “insensitive to the severity of criminal sanction” and that any reductions in the frequency of rearrest among drug offenders are unrelated to the severity of the sanction they receive and “might easily be achieved by chance.”⁶⁷

Researchers at Florida State University analyzed recommitments (via probation or incarceration) to the Florida Department of Corrections among a sample of 4,398 individuals whose initial primary offense involved drugs. About half of these offenders were eventually recommitted to DOC control. They found that time served during the prior sentence was not a significant predictor of recommitments. This lack of evidence for a specific deterrent effect was a robust finding that was consistent across alternative specifications of the statistical model. However, they did find that imprisonment was more likely to deter recidivism for drug crimes than probation. Another important finding was that people convicted of drug possession were less likely to recidivate than people convicted of other drug crimes (trafficking, smuggling, production, delivery, and distribution) and people convicted of non-drug crimes. This suggests that drug offenders with no record of crimes against persons or property are different

from drug offenders who have committed these predatory crimes (violent and property offenses) and that it is important to distinguish between the two. Looking at nearly 46,000 people arrested for drug possession in Florida in 1987, 76% had no previous arrests for violent felonies and over 90% had no previous arrests for stolen property offenses. The researchers concluded that the “indiscriminate” imposition of severe sentences on nonviolent drug offenders is “inefficient” because it increases the risks associated with releasing other high-rate, predatory offenders early.⁶⁸

Other researchers have compared recidivism rates among felony offenders sentenced to prison with the recidivism rates of offenders placed on probation, looking specifically at drug offenders (typically convicted of possession with intent to deliver or simple possession). In contrast to the predictions of deterrence theory, drug offenders sentenced to prison were more likely to be rearrested and were rearrested more quickly than those placed on probation, after controlling for the offenders’ background characteristics, criminal record, and predicted probability of incarceration. The recidivism rate among drug offenders sentenced to prison was 82%, compared to 43% among those sentenced to probation. By the end of the 4-year follow-up period, only 35% of drug offenders sentenced to probation had been charged with a new offense, compared to 80% of the drug offenders sentenced to prison.⁶⁹ A later, more detailed analysis, found that incarceration was particularly likely to increase recidivism among drug and drug-involved offenders with higher stakes in conformity (i.e., those with jobs, spouses, dependent children, or a high school diploma). Specifically, 69% of high-stakes drug and drug-involved offenders sentenced to prison were rearrested and charged with a new crime, compared to 47% of high-stakes drug and drug-involved offenders placed on probation. Drug offenders who entered prison with a job, a spouse, and children, may have left prison estranged from their family members, unemployed, and unemployable. For example, research shows that employers advertising entry-level job openings are less than half as likely to call back applicants who reported having a felony cocaine trafficking conviction and having served time in prison.⁷⁰ One researcher observes that, “Rather than serving as a more effective deterrent for offenders with stronger bonds to conventional society, incarceration may have transformed high-stakes offenders into low-stakes offenders with little to lose as a result of a new arrest.”⁷¹

Another study examined recidivism rates among 3,328 drug offenders who met eligibility criteria for diversion to an outpatient treatment program (because they had no prior felony convictions for any drug offense, no prior misdemeanor conviction for any drug offense within the past year, no other felony charges pending, and were not previously diverted to treatment). Recidivism was defined in as a subsequent arrest for any charge other than a moving traffic violation. The average observation period was more than 5 years. Recidivism rates were the highest among offenders who, despite being eligible for diversion, did not enter treatment and were subsequently prosecuted; 52% were rearrested. Approximately 43% of offenders who entered treatment but dropped out before completion (and were prosecuted) were rearrested, compared to 22% of those who entered and successfully completed treatment. After controlling for offender and offense characteristics, offenders with some exposure to treatment (regardless of completion) experienced a statistically significant increase in time to rearrest, compared to those who failed to enter treatment and were prosecuted. The magnitude of this effect translates to a net 197% increase in the average time to rearrest for offenders who entered treatment.⁷²

Finally, a study of the impact of lengthy prison sentences on the recidivism rates of 1,905 drug offenders over a 6 year follow-up period found that the length of time spent behind bars for the initial drug offense has no significant effect on recidivism (after accounting for the length of time spent outside of prison during the follow-up period). Spending more time behind bars for the initial drug offense actually increases the probability of recidivism (when recidivism is measured in terms of the number of days of

imprisonment to which a person is sentenced for a reconviction). Looking specifically at reconvictions for drug offenses, the severity of punishment has no significant effect on reconvictions for new drug offenses.⁷³

IX. INCAPACITATING DRUG USE WITH INCARCERATION

Incapacitation refers to the crimes averted by physically isolating offenders during the period of incarceration.⁷⁴ In other words, “A deterred offender is able to commit crime but chooses not to, whereas an incapacitated offender would choose to commit crime but is unable to do so.”⁷⁵ Only a very small fraction of the entire population of illicit drug users is in prison for violating drug possession laws, so incapacitation probably does not substantially reduce drug consumption. For example, it can be inferred that at most only about 15-20% of all potential cocaine demand in the U.S. is incapacitated by confinement.⁷⁶ This estimate might be high considering the fact that prisoners can still access and consume drugs while behind bars. For example, drug tests performed on about 1,000 hair specimens from a random sample of inmates in five Pennsylvania prisons found that nearly 11% tested positive for an illicit drug.⁷⁷ The Florida Department of Corrections performed 73,741 random drug tests on inmates during Fiscal Year 09-10. Nearly 2% (or 1,381 tests) were positive for at least one drug. Another 5,631 tests were conducted on a “for cause” basis – 1,122 of these (or nearly 20%) were positive for at least one drug.⁷⁸

Any attempt to substantially reduce drug consumption by incarcerating (and thereby presumably incapacitating) drug users would probably be impractical in light of how much that would cost. Approximately 7.4% of Floridians aged 18 and older (or 1,030,000 individuals) used an illicit drug in the past month.⁷⁹ If *only 10%* these users were arrested and incarcerated for the average sentence length (which is 1.8 years for inmates with drug possession as the primary offense), at an average cost of \$20,000 per year (which excludes the additional cost of prison construction), it would cost the state of Florida over \$3.7 billion.⁸⁰

Since it is true that some drug users also commit more serious offenses, it is tempting to assume that imprisoning drug offenders would avert more serious crimes. However, the empirical evidence raises serious doubts about this supposition. Drug offenders are less likely than average offenders to commit index crimes (murder, manslaughter, assault, robbery, rape, automobile theft, burglary, and larceny). Research shows that incarcerating a drug offender for 1 additional year would prevent (through incapacitation) only 1 index offense. In contrast, imprisoning a nondrug offender for 1 additional year would prevent (through incapacitation) 1.4 to 1.6 index crimes.⁸¹ Furthermore, with regard to Florida offenders in particular, recall that 76% of the nearly 46,000 people arrested for drug possession in Florida in 1987 had no previous arrests for violent felonies and over 90% had no previous arrests for stolen property offenses.⁸² And according to a more contemporary analysis conducted by the Florida Senate Committee on Criminal Justice, only about 8% of the 3,036 offenders sentenced to Florida prisons for the primary offense of cocaine possession in Fiscal Year 2007-08 had an additional conviction for a property crime (including any burglary offense, petit theft, or grand theft).⁸³

The most efficient way of suppressing crime using scarce prison capacity is to ensure that high-rate violent and property offenders are incapacitated instead of drug offenders. Imposing severe prison sentences on drug offenders increases the risks associated with releasing more dangerous offenders early. Researchers have found that on average, for every two new drug offenders sent to prison, one represents a real increase in the prison population and the other displaces an existing prisoner who is released early. Additionally, a 10 percentage point increase in the share of new prison commitments on

drug charges reduces the median time served for murder by 7.6 months and the time served for other crimes by about 2 to 6 months.⁸⁴ At best, the dramatic increase in drug incarceration between 1980 and 2000 was associated with a 1 – 3% reduction in violent and property crime – benefits which are unlikely to outweigh the considerable costs associated with the massive surge in incarceration.⁸⁵

X. INCAPACITATION AND REPLACEMENT OF DEALERS

It is also unlikely that lengthy sentences for drug dealers directly reduce drug selling (or, by extension, drug consumption) through incapacitation because of substantial replacement effects. Incapacitating offenders should prevent crimes that would have been committed by the offender if they were free. This is true for certain offenses like predatory crimes (violent and property offenses), but not for other offenses, particularly transactional crimes like drug dealing. Imprisoning a burglar directly prevents burglary and imprisoning a rapist directly prevents rape, but taking drug dealers off the streets does not directly prevent drug selling in the same way. The labor market in active drug markets makes incapacitation ineffective because removing one dealer creates a niche for a new supplier or for the expansion of effort (e.g., hours of work) by an existing supplier.⁸⁶ Incarcerated drug dealers are replaced because their customers become available to other dealers. But there is nothing about deterring or incapacitating one predatory offender that encourages another to take his place. For example, there is no comparable mechanism that links incarcerating one rapist with increased activity by other rapists. And robbers and burglars do not compete for street corners to use as mugging locations or houses to break into as directly as drug dealers compete for the same customer. The supply of victims (houses to burglarize or victims to rob) is generally so unlimited that predators do not have to fight with one another for access. Drug dealers, on the other hand, directly compete with one another for a greater share of lucrative illicit drug markets.⁸⁷

Dealer replacement is facilitated by the fact that retail dealing may pay better and command more respect than other kinds of unskilled labor or crime. Furthermore, drug dealing does not generally require any special skills. In fact, “most drug dealing is what is called pure brokerage activity; a dealer at one level simply buys drugs from a supplier, repackages the drugs into smaller unit sizes, and sells them on to between five and twenty customers. Producing crack from powder cocaine is not much harder than making soup. Even the large-scale drug ‘labs’ used to produce methamphetamine, heroin, and cocaine base use technology more akin to a moonshiner’s backyard still than a modern pharmaceutical factory. So incarcerating a dealer who had been selling five kilograms per year does not reduce consumption by anything close to five kilograms per year.”⁸⁸

But would catching the leader of a drug trafficking organization (or “kingpin”) disrupt supply enough to actually reduce availability and consumption? This is improbable, at least with regard to most major drug markets. The drug distribution systems for the established and mature drug markets in cocaine/crack, heroin, methamphetamine, and marijuana are highly competitive and highly decentralized – no one is in control. And most people in the network only know the identity of those with whom they interact directly.⁸⁹ This means that they are generally not vulnerable to disruption by decapitation. In fact, instead of a cartel, organization, syndicate or firm, it is better to think of drug markets as being served by cross-connected networks of individuals and small, independent enterprises. Each drug dealer is connected (laterally as well as vertically) with many other dealers who are likewise connected to other dealers. It is estimated that in any given year about 1 to 2 million people in the U.S. are involved in some way in distributing illegal drugs.⁹⁰ About half a million of these are incarcerated in prisons or jails, where they often form new connections with other drug producers, smugglers, or distributors or are recruited into gangs (only to face seriously diminished opportunities for legitimate

employment upon release). These redundant interconnections make the network system highly resilient, adaptable, and resistant to disruption. Whether law enforcement officials succeed in eliminating a key player or an entire organization, it will have little impact on the ability of the network to meet demand. Individuals who are killed or incarcerated are easily replaced and active participants will access multiple alternative suppliers and rapidly increase supply.⁹¹ It is time to confront the fact that as long as there are buyers willing to buy, there will be an “effectively unlimited” supply of potential dealers ready to meet demand and the incapacitation effect of imprisoning a dealer will be close to zero.⁹²

Furthermore, filling prison cells with drug dealers rather than violent or property offenders tends to increase rates of violent crime and property crime. This is because drug dealers are less likely than violent or property offenders to commit violent or property offenses. On average, imprisoned burglars and robbers have higher rates of violent and property offenses than drug dealers.⁹³ The estimated average arrest rates for violent felonies by burglars and robbers are always higher than those of drug traffickers.⁹⁴ One study found that the average arrest rate for *any previous nondrug felonies* among imprisoned burglars and robbers was about 45% higher than the rate for imprisoned drug traffickers. These findings clearly indicate that “incapacitation effects would be enhanced by reducing the time served by imprisoned drug traffickers to permit longer terms served by imprisoned robbers and burglars.”⁹⁵

Incarcerating drug distributors instead of violent offenders is similarly counterproductive considering that, among state prisoners nationwide, only about 18% of importers, 25% of wholesalers, and 25% of retail sellers have a prior conviction for a violent offense (as an adult or juvenile).⁹⁶ And since many of the violent acts committed by dealers are related to their role in the illicit market, violent acts committed by their replacements will probably occur to more or less the same extent.

The Florida Department of Law Enforcement’s Statistical Analysis Center examined the criminal histories of over 1,300 individuals who were convicted of drug trafficking (in 1999 or 2000) and sentenced to prison in Florida and had a documented arrest prior to the date of conviction. Only about 33% of imprisoned traffickers with a criminal history had a prior arrest for a violent crime and only about 37% had a prior arrest for a property crime. The prevalence of prior arrests for violent and property crimes among convicted traffickers is about 50% less than the prevalence among those convicted of drug possession or sale. This probably reflects the fact that individuals convicted of drug trafficking are subject to mandatory minimum prison terms that apply regardless of their criminal history.⁹⁷

The Florida Legislature’s Office of Program Policy Analysis and Government Accountability analyzed 1,200 offenders admitted to Florida prisons for opioid trafficking in Fiscal Year 2010-11. They found that 84% never convicted a violent offense, 81% has no prior history of offenses involving drug sales or trafficking, and 74% had never been in prison before. Furthermore, 65% of these offenders needed substance abuse treatment and 61% were assessed to be at low risk of recidivism. Out of the 1,200 offenders examined, 310 meet all of these criteria and could be diverted to treatment. If only half of these 310 offenders were diverted from prison and successfully completed a treatment program, the total costs avoided over a 3-year period would be about \$6 million.⁹⁸

It is time to acknowledge that locking up a drug dealer or trafficker in a cell that might otherwise hold a rapist or burglar imposes a significant opportunity cost. Since their cells could instead be holding more dangerous offenders, the large-scale imposition of lengthy sentences for drug dealers undermines public safety.⁹⁹

XI. THE IMPACT OF INCARCERATION ON DRUG PRICES AND CONSUMPTION

Substantial dealer replacement helps explain why the dramatic increase in the number of cocaine dealers in prison nationwide failed to increase the price of cocaine.¹⁰⁰ Locking up drug dealers should affect drug use because the greater the risk of apprehension and incarceration, the more money drug dealers will demand as compensation for those risks. As a result, consumers must pay higher prices, and higher prices suppress the use of drugs (even addictive drugs like tobacco and cocaine). Be this as it may, cocaine prices (in inflation-adjusted dollars) have fallen by more than two-thirds and the average retail price of cocaine 2007 was the lowest on record, *even as the ratio of arrests and prisoners to tons of cocaine sold has multiplied tenfold or more.*¹⁰¹ In light of these trends, it is not surprising that a national study found that the impact of prison commitment rates per drug arrest (a proxy measure for severity) on cocaine prices was mixed and not statistically significant. Between 1985 and 1996, the impact of increasing the probability of going to prison for a drug offense ranged between a 1% reduction and 4% increase in cocaine prices.¹⁰²

XII. EVIDENCE ON THE IMPACT OF MANDATORY MINIMUMS

Systematic empirical evaluations of the impact of mandatory penalties over the past 30 years have reached the same conclusion: “Mandatory penalty laws have not been credibly shown to have measurable deterrent effects for any save minor crimes such as speeding or illegal parking or for short-term effects that quickly waste away.” Governments in many countries have directed advisory committees or national commissions to study the deterrent effects of criminal penalties. The consensus conclusion of these expert government advisory bodies is that increasing penalties does not significantly reduce the incidence of crime. The vast majority of reviews of the scientific literature also reach the conclusion that “no credible evidence demonstrates that increasing penalties reliably achieves marginal deterrent effects.” Evaluations and impact assessments “generally conclude that deterrent effects cannot be shown to be associated with passage and implementation of mandatory penalty laws.”¹⁰³

One of the most relevant and comprehensive evaluations of mandatory penalties addressed New York’s Rockefeller Drug Laws, which mandated lengthy prison sentences for drug offenses and limited plea bargaining. This evaluation found that penalties had no effect on drug use or drug-related crime. Furthermore, the severity of the penalties caused practitioners to try and avoid applying the mandatory sentences in cases where they were too draconian. Felony drug arrests, indictment rates, and conviction rates all declined. However, for those who were convicted, the likelihood of being incarcerated and the average length of prison term increased. Overall, the likelihood of being incarcerated for a drug felony was about the same after the law as before. In the wake of the law, the number of trials tripled and the average case processing time doubled.¹⁰⁴

Another study evaluated the impact of California’s Three Strikes law on drug-related offenses. Researchers tested for immediate and delayed deterrent effects on drug crimes and found no evidence of deterrence. There was also no evidence of an incapacitation effect on drug crimes. Despite finding support for deterrence and incapacitation effects with regard to other types of crime, drug offenses are “immune from the threat of three strikes.” The results demonstrate that the severe penalties administered under the law are “remarkably ineffective” at impacting drug offenses.¹⁰⁵

Although many mandatory minimums were enacted to increase severity, they were also intended to decrease disparities by reducing judicial discretion. However, studies show that harsher punishments are disproportionately applied to minority offenders. A longitudinal study of the impact of mandatory

minimum prison terms and sentencing enhancements for drug crimes on prison admission rates in five states (Alabama, California, Illinois, New Jersey, and Texas) found that the adoption of each mandatory term was associated with 59 more black men being admitted to prison for drug offenses, while having no effect on drug admission rates for white men. The adoption of each sentencing enhancement was associated with 26 per 100,000 more black men being admitted to prison for drug offenses, but only 3 per 100,000 more white men being admitted. These racial disparities in mandatory terms and sentencing enhancements were both statistically significant.¹⁰⁶

All states have some form of habitual offender law. The most recognizable are probably the kind known as “three strikes” laws. In Florida, offenders are subject to enhanced prison terms if they designated as a “habitual felony offender” by having at least two prior felony convictions within the past 5 years. Depending on the degree of the felony, habitual felony offenders can be sentenced to life in prison and are ineligible for release for 15 years (first degree), sentenced to up to 30 years in prison and are ineligible for release for 10 years (second degree), or be sentenced to up to 10 years in prison and are ineligible for release for 5 years (third degree).¹⁰⁷

Researchers examined the impact of race on the likelihood of being sentenced as a habitual offender among 9,690 eligible males sentenced to prison in Florida in the early 1990s. After controlling for prior record, crime seriousness, and other relevant variables, black defendants charged with drug offenses were 3.6 times more likely to be sentenced as habitual offenders than similarly eligible nonblacks. The vast majority (94%) of drug offenders sentenced as habitual offenders were black. Compared to similar nonblacks, blacks are 2.7 times more likely to be sentenced as a habitual offender for drug possession and drug dealing and 6.2 times more likely to be sentenced as a habitual offender for drug trafficking.¹⁰⁸

Later this analysis was extended to 1,103 female inmates admitted to the Florida prisons who were eligible for sentencing under the habitual offender statute, nearly half (48%) of whom were sentenced for drug-related offenses. Of those sentenced for drug-related offenses, black females were more than 9 times more likely to be sentenced under the habitual offender statute than white females. The high odds ratio reflects the fact that virtually all (96%) of the women sentenced as habitual offenders with a drug-related offense were black.¹⁰⁹

Researchers again revisited these earlier studies by exploring the application of the habitual offender sentence enhancement among 236,673 eligible male and female offenders in Florida between 1994 and 2002 (in the wake of newer, more punitive sentencing policies and guidelines). While racial/ethnic minorities were more likely to be sentenced as habitual offenders for all offense types (violent, property, and drug offenses), the greatest disparities found were for drug offenses. Compared to white drug offenders, the odds of being designated as a habitual offender were 36% greater for black drug offenders and 51% greater for Hispanic drug offenders (after controlling for offense seriousness, prior record, and other factors).¹¹⁰

XIII. COMPARATIVE STUDIES OF COST-EFFECTIVENESS AND RETURN ON INVESTMENT

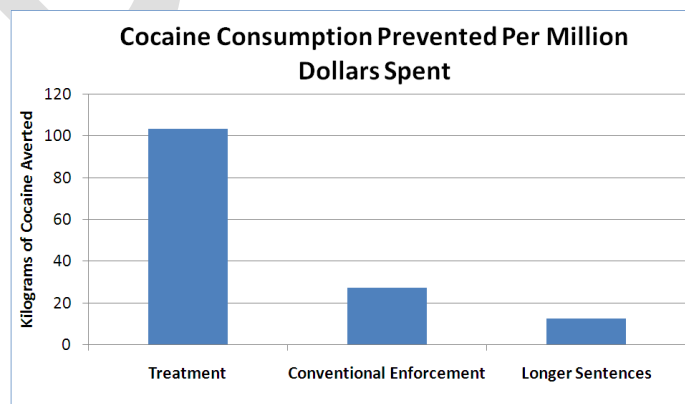
According to the Florida Department of Corrections, there were 19,414 inmates in Florida prisons serving time for a primary drug offense on June 30, 2010. The average sentence length for these drug offenders is 6.4 years. At an annual average cost of \$20,000 to house one inmate (which excludes the additional cost of prison construction), Florida will spend over \$2.4 billion keep these drug offenders behind bars.¹¹¹ Does spending money in this way produce a return on investment in the form of improved public safety or reduced drug consumption? How does the incarceration of drug offenders

compare to other interventions (like incarcerating violent offenders or providing substance abuse treatment to addicts) in terms of cost-effectiveness or return on investment?

Researchers evaluated the cost-effectiveness of various supply-reduction and demand-reduction programs at reducing cocaine consumption and reducing the societal costs of cocaine consumption (in terms of crime and lost productivity). They examined the impact of three supply-side interventions (source-country control, interdiction, and domestic enforcement) and one demand-side intervention (outpatient and residential treatment programs). The impact of cocaine seizures and asset seizures was considered under the umbrella of “domestic enforcement” along with the impact of incarcerating drug dealers. Incarcerating dealers impacts cocaine consumption in two ways: through an incapacitation effect (whereby demand is directly reduced because dealers are also commonly users who will use less while in prison) and through higher prices (because the threat of incarceration should cause dealers to seek more compensation for the risks they take).¹¹²

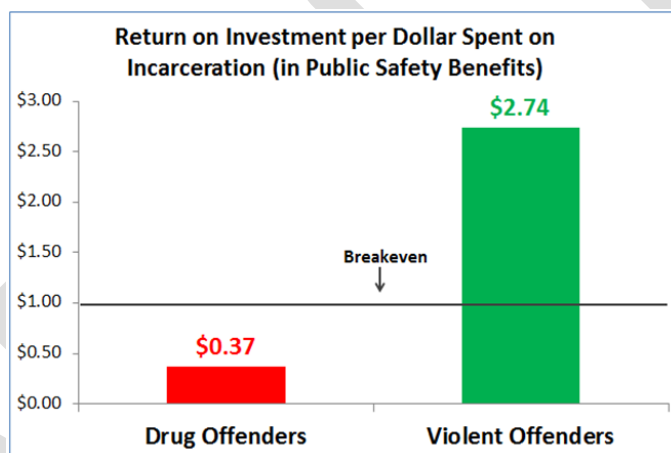
Domestic enforcement costs 7.3 times as much as treatment to achieve the same reduction in consumption. Ranking these programs in terms of how cost-effective they are at averting the societal costs of crime and lost productivity due to cocaine use, they estimate that only 15 cents are saved in societal costs per dollar spent on source-country control, 32 cents are saved per dollar spent on interdiction, and 52 cents are saved per dollar spent on domestic enforcement. In contrast, treatment programs are the only intervention that actually saves money. The costs of crime and lost productivity are reduced by \$7.46 for every dollar spent on treatment.¹¹³

Another study estimated how cost-effective extending prison sentences is, relative to other control strategies, at reducing drug consumption, drug-related crime, and revenue through the cocaine market. Results show that “mandatory minimum sentences are not justifiable on the basis of cost-effectiveness at reducing cocaine consumption, cocaine expenditures, or drug-related crime.” As depicted in the figure below, spending a million dollars (in 1992 dollars) to extend mandatory minimum lengths for typical dealers would reduce U.S. cocaine consumption by almost 13 kilograms. In contrast, spending a million dollars on conventional enforcement to arrest, confiscate the assets of, prosecute, and incarcerate more dealers (for prison terms of conventional length) would reduce cocaine consumption by over 27 kilograms. By far the most cost-effective approach is treating heavy drug users, which reduces cocaine consumption by over 100 kilograms. These findings demonstrate that long sentences for dealers do reduce drug use (by inflating drug prices), but they are a remarkably inefficient and cruel way of achieving this outcome. Clearly treating heavy users is a far more cost-effective and humane way of reducing drug use.¹¹⁴



Researchers also estimated the criminality of prisoners entering three state prisons and the public safety benefits achieved by incarcerating different kinds of offenders. While incarceration was cost-beneficial for most offenders, it was not cost-beneficial for drug offenders. They found that “the imprisonment of large numbers of drug offenders is not a cost-effective use of public resources. At least some prison beds currently occupied by drug offenders would be better reserved for high-rate property and violent offenders.” In light of their results, they assert that policy makers “need to revisit mandatory-minimum drug laws that are increasing prison populations without demonstrably and cost-effectively increasing public safety.”¹¹⁵

Similar findings have been reported with drug offenders in other studies. An analysis by the Washington State Institute for Public Policy found that incarcerating drug offenders yields a *negative* return on investment. As the chart below indicates, for every dollar (in 2001 dollars) spent on incarcerating drug offenders, the return on investment was only \$0.37. In contrast, every dollar invested in incarcerating violent offenders yields \$2.74 in public safety benefits. This study also found evidence that the incarceration of drug offenders is subject to diminishing returns. The return on investment of \$0.37 in 2001 was down from \$0.98 in 1990.¹¹⁶



A similar study using a cohort of over 6,500 drug offenders in New York also found that incarceration produced a negative return on investment. For every dollar spent incarcerating drug offenders released in 2005, New York received only about \$0.29 in benefits. Conservative estimates indicate that New York lost almost \$1.5 billion incarcerating over 6,500 drug offenders. If costs to the offenders and their families (in terms of lost wages and household productivity) are included, total losses exceed \$3.3 billion.¹¹⁷ Another study in Hawaii likewise found that the benefit of incarcerating about 200 drug offenders (\$16.8 million) was less than the cost (\$32.5 million), yielding a net loss for Hawaii of about \$15.6 million.¹¹⁸

XIV. IMPLICATIONS FOR PROPOSALS TO REDUCE PENALTIES FOR DRUG OFFENSES

All of the evidence reviewed above indicates that the proposals contained in Florida SB/ HB 561, as well as the penalty reductions contemplated by the Florida Senate Committee on Criminal Justice (Interim Report 2010-109 and 2012-116) and the Office of Program Policy Analysis and Government Accountability (Report No. 12-02), will reduce the costs of incarceration, save taxpayers money, enhance public safety, without having any measurable impact of the prevalence of drug use and dealing.

- ¹ Public Opinion Strategies. (2010). *National Research of Public Attitudes on Crime and Punishment*; Cross Target. (2011). *March 17-21 1,000 Likely Florida Voters*. Retrieved from www.rightoncrime.com/wp-content/uploads/2011/03/Florida-Poll.pdf.
- ² Collins Center for Public Policy. (2010). *Smart Justice – Findings and Recommendations for Florida Criminal Justice Reform*. Retrieved from www.collinscenter.org/resource/resmgr/smart_justice/justice_report_-_final_edit.pdf.
- ³ Interfaith Drug Policy Initiative. *Sentencing Reform*. Retrieved from <http://idpi.us/compassion/resources/denominations-policy-positions/sentencing-reform>.
- ⁴ The Florida Senate Committee on Criminal Justice. (2009). *A Policy Analysis of Minimum Mandatory Sentencing for Drug Traffickers* (Interim Report 2010-109).
- ⁵ Bousquet, S. (2011). Florida Reconsiders Minimum Mandatory Sentences for Nonviolent Crimes. *The Miami Herald*. Retrieved from www.miamiherald.com/2011/04/06/2154365/florida-reconsiders-minimum-mandatory.html.
- ⁶ The Florida Senate Committee on Criminal Justice. (2009). *A Policy Analysis of Minimum Mandatory Sentencing for Drug Traffickers* (Interim Report 2010-109).
- ⁷ Apel, R. & Nagin, D. S. (2011). General Deterrence: A Review of Recent Evidence. In J. Q. Wilson & J. Petersilia (Eds.), *Crime and Public Policy* (p. 411-436). New York, NY: Oxford University Press; Stafford, M. C. & Warr, M. (1993). A Reconceptualization of General and Specific Deterrence. *Journal of Research in Crime and Delinquency*, 30, 123-135.
- ⁸ Owens, E. G. (2009). More Time, Less Crime? Estimating the Incapacitative Effect of Sentence Enhancements. *Journal of Law and Economics*, 52, 551-579.
- ⁹ Apel, R. & Nagin, D. S. (2011). General Deterrence: A Review of Recent Evidence. In J. Q. Wilson and J. Petersilia (Eds.), *Crime and Public Policy* (p. 411-436). New York, NY: Oxford University Press.
- ¹⁰ Pratt, T. C., Cullen, F. T., Blevins, K. R., Daigle, L. E., & Madensen, T. D. (2006). The Empirical Status of Deterrence Theory: A Meta-Analysis. In F. T. Cullen, J. P. Wright, & K. R. Blevins (Eds.), *Taking Stock: The Status of Criminological Theory* (p. 367-395). New Brunswick, NJ: Transaction Publishers.
- ¹¹ Anderson, L. S., Chiricos, T. G., & Waldo, G. P. (1977). Formal and Informal Sanctions: A Comparison of Deterrent Effects. *Social Problems*, 25, 103-114.
- ¹² Paternoster, R., Saltzman, L. E., Waldo, G. P., & Chiricos, T. G. (1983). Estimating Perceptual Stability and Deterrent Effects: The Role of Perceived Legal Punishment in the Inhibition of Criminal Involvement. *The Journal of Criminal Law and Criminology*, 74, 270-297.
- ¹³ Paternoster, R. (1987). The Deterrent Effect of the Perceived Certainty and Severity of Punishment: A Review of the Evidence and Issues. *Justice Quarterly*, 4, 173-217.
- ¹⁴ MacCoun, R. J. & Reuter, P. (2001). *Drug War Heresies: Learning from Other Vices, Times, & Places*. New York, NY: Cambridge University Press.
- ¹⁵ Gettman, J. (2009). *Marijuana Arrests in the United States (2007): Arrests, Usage, and Related Data*. Retrieved from www.drugscience.org/Archive/bcr7/Gettman_Marijuana_Arrests_in_the_United_States.pdf.
- ¹⁶ Kilmer, B., Caulkins, J. P., Pacula, R. L., MacCoun, R. J., & Reuter, P. H. (2010). *Altered State? Assessing How Marijuana Legalization in California Could Influence Marijuana Consumption and Public Budgets*. Santa Monica, CA: RAND Corporation.
- ¹⁷ King, R. S. & Mauer, M. (2006). The War on Marijuana: The Transformation of the War on Drugs in the 1990s. *Harm Reduction Journal*, 3.
- ¹⁸ Caulkins, J. P. & Sevigny, E. L. (2005). How Many People Does the U.S. Imprison for Drug Use, and Who Are They? *Contemporary Drug Problems*, 32, 405-428.
- ¹⁹ MacCoun, R., Pacula, R. L., Chiqui, J., Harris, K., & Reuter, P. (2009). Do Citizens Know Whether Their State Has Decriminalized Marijuana? Assessing the Perceptual Component of Deterrence Theory. *Review of Law and Economics*, 5, 347-371.
- ²⁰ MacCoun, R. J. & Reuter, P. (2001). *Drug War Heresies: Learning from Other Vices, Times, & Places*. New York, NY: Cambridge University Press.
- ²¹ National Research Council. (2001). *Informing America's Policy on Illegal Drugs: What We Don't Know Keeps Hurting Us*. Washington, DC: National Academy Press.
- ²² The Beckley Foundation. (2008). *Cannabis Policy: Moving Beyond the Stalemate* (The Global Cannabis Commission Report). Retrieved from www.beckleyfoundation.org/pdf/BF_Cannabis_Commission_Report.pdf.
- ²³ Babor, T., Caulkins, J., Griffith, E., Fischer, B., Foxcroft, D., Humphreys, K., Obot, I., Rehm, J., Reuter, P., Room, R., Rossow, I., & Strang, J. (2010). *Drug Policy and the Public Good*. New York: Oxford University Press.
- ²⁴ Degenhardt, L., Chiu, W., Sampson, N., Kessler, R. C., Anthony, J. C., de Girolamo, G., Gureje, O., Huang, Y., Karam, A., Kostyuchenko, S., Lepine, J. P., Mora, M. E. M., Neumark, Y., Ormel, J. H., Pinto-Meza, A., Posada-Villa, J., Stein, D. J., Takeshima, T., & Wells, J. E. (2008). Toward a Global View of Alcohol, Tobacco, Cannabis, and Cocaine Use: Finding from the WHO World Mental Health Surveys. *PLoS Medicine*, 5(7), 1-14.
- ²⁵ Caulkins, J. P. & MacCoun, R. J. (2005). Analyzing Illicit Drug Markets When Dealers Act with Limited Rationality. In F. Parisi and V. L. Smith (Eds.), *The Law and Economics of Irrational Behavior* (p. 315-338). Stanford, CA: Standard University Press.
- ²⁶ U.S. Department of Justice, Bureau of Justice Statistics. (2004). *State Court Sentencing of Convicted Felons, 2004 Statistical Tables* (NCJ 217995). Table 5.47. Retrieved from www.albany.edu/sourcebook/pdf/t5472004.pdf.
- ²⁷ U.S. Department of Justice, Bureau of Justice Statistics. (2004). *State Court Sentencing of Convicted Felons, 2004 Statistical Tables* (NCJ 217995). Table 5.48. Retrieved from www.albany.edu/sourcebook/pdf/t5482004.pdf.
- ²⁸ Caulkins, J. P. & MacCoun, R. J. (2003). *Limited Rationality and the Limits of Supply Reduction*. Center for the Study of Law and Society Faculty Working Papers.
- ²⁹ Jacobs, B. (1999). *Dealing Crack: The Social World of Street Corner Selling*. Dexter, MI: Northeastern University Press.
- ³⁰ Blum, R. (1971). Drug Pushers: A Collective Portrait. *Society*, 8, 18-21.
- ³¹ Viscusi, K. W. (1986). The Risk and Rewards of Criminal Activity: A Comprehensive Test of Criminal Deterrence. *Journal of Labor Economics*, 4, 317-340.
- ³² Dembo, R., Hughes, P., Jackson, L., & Mieczkowski, T. (1993). Crack Cocaine Dealing by Adolescents in Two Public Housing Projects: A Pilot Study. *Human Organization*, 52, 89-96.

- ³³ Adler, P. (1985). *Wheeling and Dealing: An Ethnography of an Upper-Level Drug Dealing and Smuggling Community*. New York: Columbia University Press.
- ³⁴ Mohamed, A. R. & Fritsvold, E. D. (2010). *Dorm Room Dealers: Drugs and the Privileges of Race and Class*. Boulder, CO: Lynne Rienner Publishers, Inc.
- ³⁵ Zaitch, D. (2002). *Trafficking Cocaine: Colombian Drug Entrepreneurs in the Netherlands*. The Netherlands: Kluwer Law International.
- ³⁶ Decker, S. H. & Chapman, M. T. (2008). *Drug Smugglers on Drug Smuggling: Lessons from the Inside*. Philadelphia, PA: Temple University Press.
- ³⁷ Caulkins, J. P. & MacCoun, R. J. (2003). *Limited Rationality and the Limits of Supply Reduction*. Center for the Study of Law and Society Faculty Working Papers; Caulkins, J. P. & MacCoun, R. J. (2005). Analyzing Illicit Drug Markets When Dealers Act with Limited Rationality. In F. Parisi and V. L. Smith (Eds.), *The Law and Economics of Irrational Behavior* (p. 315-338). Stanford, CA: Standard University Press; Kleiman, M. A. R., Caulkins, J. P., & Hawken, A. (2011). *Drugs and Drug Policy: What Everyone Needs to Know*. New York, NY: Oxford University Press.
- ³⁸ Ekland-Olson, S., Lieb, J., & Zurcher, L. (1984). The Paradoxical Impact of Criminal Sanctions: Some Microstructural Findings. *Law and Society Review*, 18, 159-178.
- ³⁹ Caulkins, J. P. & MacCoun, R. J. (2003). *Limited Rationality and the Limits of Supply Reduction*. Center for the Study of Law and Society Faculty Working Papers; Caulkins, J. P. & MacCoun, R. J. (2005). Analyzing Illicit Drug Markets When Dealers Act with Limited Rationality. In F. Parisi and V. L. Smith (Eds.), *The Law and Economics of Irrational Behavior* (p. 315-338). Stanford, CA: Standard University Press.
- ⁴⁰ Kleiman, M. A. R. (2009). *When Brute Force Fails: How to Have Less Crime and Less Punishment*. Princeton, NJ: Princeton University Press.
- ⁴¹ Green, D. P., & Winik, D. (2010). Using Random Judge Assignments to Estimate the Effects of Incarceration and Probation on Recidivism Among Drug Offenders. *Criminology*, 48, 357-387.
- ⁴² Dynia, P. & Sung, H. (2000). The Safety and Effectiveness of Diverting Felony Drug Offenders to Residential Treatment as Measured by Recidivism. *Criminal Justice Policy Review*, 11, 299-311.
- ⁴³ Sung, H. (2003). Differential Impact of Deterrence vs. Rehabilitation as Drug Interventions on Recidivism After 36 Months. *Journal of Offender Rehabilitation*, 37, 95-108.
- ⁴⁴ Hunt, D. E. (1991). Stealing and Dealing: Cocaine and Property Crimes. In *NIDA Research Monograph*, 110, 139-150.
- ⁴⁵ Hunt, D. E. (1990). Drugs and Consensual Crimes: Drug Dealing and Prostitution. In M. Tonry & J. Q. Wilson (Eds.), *Drugs and Crime* (p. 159-202). Chicago, IL: The University of Chicago Press; Hunt, D. E. (1991). Stealing and Dealing: Cocaine and Property Crimes. In *NIDA Research Monograph*, 110, 139-150.
- ⁴⁶ U.S. Department of Justice, Bureau of Justice Statistics. (2007). *Drug Use and Dependence, State and Federal Prisoners, 2004*. (NCJ 213530). Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/dudsfp04.pdf>; U.S. Department of Justice, Bureau of Justice Statistics. (1993). *Survey of State Prison Inmates, 1991*. (NCJ 136949). Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/SOSPI91.PDF>.
- ⁴⁷ Sevigny, E. L. & Caulkins, J. P. (2004). Kingpins or Mules: An Analysis of Drug Offenders Incarcerated in Federal and State Prisons. *Criminology and Public Policy*, 3, 401-434.
- ⁴⁸ U.S. Department of Justice, Bureau of Justice Statistics. (2007). *Drug Use and Dependence, State and Federal Prisoners, 2004*. (NCJ 213530). Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/dudsfp04.pdf>
- ⁴⁹ U.S. Department of Justice, Bureau of Justice Statistics. (2005). *Substance Dependence, Abuse, and Treatment of Jail Inmates, 2002*. (NCJ 209588). Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/sdatij02.pdf>.
- ⁵⁰ U.S. Department of Justice, Bureau of Justice Statistics. (2007). *Veterans in State and Federal Prison, 2004*. (NCJ 217199). Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/vsfp04.pdf>.
- ⁵¹ Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2007). *The NSDUH Report: Serious Psychological Distress and Substance Use Disorder Among Veterans*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- ⁵² Altschuler, D. M. & Brounstein, P. J. (1991). Patterns of Drug Use, Drug Trafficking, and Other Delinquency Among Inner-City Adolescent Males in Washington, D.C. *Criminology*, 29, 589-622.
- ⁵³ Van Kammen, W. B. & Loeber, R. (1994). Are Fluctuations in Delinquent Activities Related to the Onset and Offset in Juvenile Illegal Drug Use and Drug Dealing? *Journal of Drug Issues*, 24, 9-24.
- ⁵⁴ Li, S. D., Priu, H. D. & MacKenzie, D. L. (2000). Drug Involvement, Lifestyles, and Criminal Activities Among Probationers. *Journal of Drug Issues*, 30, 593-620.
- ⁵⁵ Blum, R. (1971). Drug Pushers: A Collective Portrait. *Society*, 8, 18-21.
- ⁵⁶ Inciardi, J. A., Horowitz, R. & Pottieger, A. E. (1993). *Street Kids, Street Drugs, Street Crime: An Examination of Drug Use and Serious Delinquency in Miami*. Belmont, CA: Wadsworth, Inc.
- ⁵⁷ The Florida Legislature's Office of Program Policy Analysis and Government Accountability. (2012). *Opinions Are Mixed About Sentencing Laws for Painkiller Trafficking* (Report No. 12-02).
- ⁵⁸ Analysis conducted by Hal Johnson, Managing Epidemiologist at the Florida Department of Children and Families on March 24, 2011.
- ⁵⁹ Substance Abuse and Mental Health Services Administration. (2010). *Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings*. SMA 10-4586. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- ⁶⁰ Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2004). *The NSDUH Report: Marijuana Use and Delinquent Behaviors Among Youths*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- ⁶¹ Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2005). *The NSDUH Report: Alcohol Use and Delinquent Behaviors Among Youths*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- ⁶² Reuter, P. & Pollack, H. (2006). How Much Can Treatment Reduce National Drug Problems. *Addiction*, 101, 341-347.
- ⁶³ U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. (1997). *The National Treatment Improvement Evaluation Study Final Report*. Retrieved from www.icpsr.umich.edu/files/SAMHDA/NTIES/NTIES-PDF/ntiesfnl.pdf.
- ⁶⁴ Gossop, M., Marsden, J., Stewart, D., & Kidd, T. (2003). The National Treatment Outcome Research Study (NTORS): 4-5 Year Follow-Up Results. *Addiction*, 98, 291-303.

- ⁶⁵ National Research Council. (2001). *Informing America's Policy on Illegal Drugs: What We Don't Know Keeps Hurting Us*. Washington, DC: National Academy Press.
- ⁶⁶ Executive Office of the Governor, Office of Drug Control. (2009). *Florida's Drug Control Strategy*. Retrieved from http://drugcontrol.flgov.com/pdfs/Florida_Drug_Control_Strategy_2009.pdf.
- ⁶⁷ Fagan, J. A. (1994). Do Criminal Sanctions Deter Drug Crimes? In D. L. MacKenzie & C. D. Uchida (Eds.), *Drugs and Crime: Evaluating Public Policy Initiatives* (p. 188-214). Thousand Oaks, CA: Sage Publications, Inc.
- ⁶⁸ Benson, B. L., Rasmussen, D. W. & Zuehlke, T. W. (1993). An Economic Analysis of Recidivism among Drug Offenders. *Southern Economic Journal*, 60, 169-183.
- ⁶⁹ Spohn, C., & Holleran, D. (2002). The Effect of Imprisonment on Recidivism Rates of Felony Offenders: A Focus on Drug Offenders. *Criminology*, 40, 329-357.
- ⁷⁰ Pager, D. (2003). The Mark of a Criminal Record. *American Journal of Sociology*, 108, 937-975.
- ⁷¹ Spohn, C. (2007). The Deterrent Effect of Imprisonment and Offenders' Stakes in Conformity. *Criminal Justice Policy Review*, 18, 31-50.
- ⁷² Hepburn, J. R. (2005). Recidivism Among Drug Offenders Following Exposure to Treatment. *Criminal Justice Policy Review*, 16, 237-259.
- ⁷³ Odegard, E. & Amundsen, A. (1998). Measuring Special Deterrence Effects on Drug Offenders. *Studies on Crime and Crime Prevention*, 7, 239-258.
- ⁷⁴ Apel, R. & Nagin, D. S. (2011). General Deterrence: A Review of Recent Evidence. In J. Q. Wilson & Petersilia (Eds.), *Crime and Public Policy* (p. 411-436). New York, NY: Oxford University Press; Stafford, M. C. & Warr, M. (1998). A Reconceptualization of General and Specific Deterrence. *Journal of Research in Crime and Delinquency*, 30, 123-135.
- ⁷⁵ Owens, E. G. (2009). More Time, Less Crime? Estimating the Incapacitative Effect of Sentence Enhancements. *Journal of Law and Economics*, 52, 551-579.
- ⁷⁶ Babor, T., Caulkins, J., Griffith, E., Fischer, B., Foxcroft, D., Humphreys, K., Obot, I., Rehm, J., Reuter, P., Room, R., Rossow, I., & Strang, J. (2010). *Drug Policy and the Public Good*. New York: Oxford University Press.
- ⁷⁷ Feucht, T. E. & Keyser, A. (1999). *Reducing Drug Use in Prisons: Pennsylvania's Approach*. National Institute of Justice Journal, 241, 10-15.
- ⁷⁸ Florida Department of Corrections. (2011). *Florida Department of Corrections 2010 Annual Report – Fiscal year 2009-2010*. Retrieved from www.dc.state.fl.us/pub/annual/0910/pdfs/AR_09-10_Final.pdf.
- ⁷⁹ Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2009). *State Estimates of Substance Use from the 2006-2007 National Surveys on Drug Use and Health (SMA 09-4362)*. Retrieved from www.oas.samhsa.gov/2k7/State/Florida.htm.
- ⁸⁰ Florida Department of Corrections. (2011). *2009-2010 Agency Statistics – Drug Offender Admissions*. Retrieved from www.dc.state.fl.us/pub/annual/0910/stats/ia_drug.html; Florida Department of Corrections. *2009-2010 Agency Statistics – Budget Summary (FY 2009-2010)*. Retrieved from www.dc.state.fl.us/pub/annual/0910/budget.html.
- ⁸¹ Owens, E. G. (2009). More Time, Less Crime? Estimating the Incapacitative Effect of Sentence Enhancements. *Journal of Law and Economics*, 52, 551-579.
- ⁸² Benson, B. L., Rasmussen, D. W. & Zuehlke, T. W. (1993). An Economic Analysis of Recidivism among Drug Offenders. *Southern Economic Journal*, 60, 169-183.
- ⁸³ Florida Senate Committee on Criminal Justice. (2009). *Simple Purchase or Possession of Cocaine and Cannabis: Other States' Sentencing Alternatives to Incarceration*. Issue Brief 2010-312. Retrieved from http://archive.flsenate.gov/data/Publications/2010/Senate/reports/interim_reports/pdf/2010-312cj.pdf.
- ⁸⁴ Kuziemko, I. & Levitt, S. D. (2004). An Empirical Analysis of Imprisoning Drug Offenders. *Journal of Public Economics*, 88, 2043-2066.
- ⁸⁵ Kuziemko, I. & Levitt, S. D. (2004). An Empirical Analysis of Imprisoning Drug Offenders. *Journal of Public Economics*, 88, 2043-2066.
- ⁸⁶ Kleiman, M. A. R. (2009). *When Brute Force Fails: How to Have Less Crime and Less Punishment*. Princeton, NJ: Princeton University Press.
- ⁸⁷ Caulkins, J. P. & Heymann, P. B. (2001). How Should Low-Level Drug Dealers be Punished? In P. B. Heymann & W. N. Brownsberger (Eds.), *Drug Addiction and Drug Policy: The Struggle to Control Dependence* (p. 206-238). Cambridge, MA: Harvard University Press.
- ⁸⁸ Kleiman, M. A. R., Caulkins, J. P., & Hawken, A. (2011). *Drugs and Drug Policy: What Everyone Needs to Know*. New York, NY: Oxford University Press.
- ⁸⁹ Babor, T., Caulkins, J., Griffith, E., Fischer, B., Foxcroft, D., Humphreys, K., Obot, I., Rehm, J., Reuter, P., Room, R., Rossow, I., & Strang, J. (2010). *Drug Policy and the Public Good*. New York: Oxford University Press.
- ⁹⁰ Kleiman, M. A. R., Caulkins, J. P., & Hawken, A. (2011). *Drugs and Drug Policy: What Everyone Needs to Know*. New York, NY: Oxford University Press.
- ⁹¹ Babor, T., Caulkins, J., Griffith, E., Fischer, B., Foxcroft, D., Humphreys, K., Obot, I., Rehm, J., Reuter, P., Room, R., Rossow, I., & Strang, J. (2010). *Drug Policy and the Public Good*. New York: Oxford University Press.
- ⁹² Kleiman, M. A. R. (2009). *When Brute Force Fails: How to Have Less Crime and Less Punishment*. Princeton, NJ: Princeton University Press.
- ⁹³ Kleiman, M. A. R. (1997). The Problem of Replacement and the Logic of Drug Law Enforcement. *The Federation of American Scientists (FAS) Drug Policy Analysis Bulletin*, Issue #3.
- ⁹⁴ Cohen, J., Nagin, D., Wallstrom, G., & Wasserman, L. (1998). Hierarchical Bayesian Analysis of Arrest Rates. *Journal of the American Statistical Association*, 93, 1260-1270.
- ⁹⁵ Cohen, J., Nagin, D., Wallstrom, G., & Wasserman, L. (1998). Hierarchical Bayesian Analysis of Arrest Rates. *Journal of the American Statistical Association*, 93, 1260-1270.
- ⁹⁶ Sevigny, E. L. & Caulkins, J. P. (2004). Kingpins or Mules: An Analysis of Drug Offenders Incarcerated in Federal and State Prisons. *Criminology and Public Policy*, 3, 401-434.
- ⁹⁷ Florida Department of Law Enforcement, Statistical Analysis Center. (2006). *Florida Drug Offenders: A Comparison of Individuals Receiving State Prison Versus State Supervision, 1999-2000*. Retrieved from www.fdle.state.fl.us/Content/getdoc/2ae4c97c-00f7-42b6-aa1b-b4f0d367a61c/drug_offenders_1999_2000.aspx.
- ⁹⁸ The Florida Legislature's Office of Program Policy Analysis and Government Accountability. (2012). *Opinions Are Mixed About Sentencing Laws for Painkiller Trafficking* (Report No. 12-02).

-
- ⁹⁹ Boyum, D. & Reuter, P. (2005). *An Analytic Assessment of U.S. Drug Policy*. Washington, DC: The AEI Press; Kleiman, M. A. R. (2009). *When Brute Force Fails: How to Have Less Crime and Less Punishment*. Princeton, NJ: Princeton University Press; Kleiman, M. A. R. (1997). The Problem of Replacement and the Logic of Drug Law Enforcement. *The Federation of American Scientists (FAS) Drug Policy Analysis Bulletin*, Issue #3.
- ¹⁰⁰ Kleiman, M. A. R. (1997). The Problem of Replacement and the Logic of Drug Law Enforcement. *The Federation of American Scientists (FAS) Drug Policy Analysis Bulletin*, Issue #3.
- ¹⁰¹ Institute for Defense Analyses. (2008). *The Price and Purity of Illicit Drugs: 1981-2007*. IDA Paper P-4332; Reuter, P. (2008). *Assessing U.S. Drug Policy and Providing a Base for Future Decisions*. Testimony for the Joint Economic Committee, June 19, 2008.
- ¹⁰² Kuziemko, I. & Levitt, S. D. (2004). An Empirical Analysis of Imprisoning Drug Offenders. *Journal of Public Economics*, 88, 2043-2066.
- ¹⁰³ Tonry, M. (2009). The Mostly Unintended Effects of Mandatory Penalties: Two Centuries of Consistent Findings. In M. Tonry (Ed.), *Crime and Justice: A Review of Research, Volume 38* (p. 65-114). Chicago, IL: University of Chicago Press.
- ¹⁰⁴ Tonry, M. (2009). The Mostly Unintended Effects of Mandatory Penalties: Two Centuries of Consistent Findings. In M. Tonry (Ed.), *Crime and Justice: A Review of Research, Volume 38* (p. 65-114). Chicago, IL: University of Chicago Press.
- ¹⁰⁵ Ramirez, J. R. & Crano, W. D. (2003). Deterrence and Incapacitation: An Interrupted Time-Series Analysis of California's Three-Strikes Law. *Journal of Applied Social Psychology*, 33, 110-144.
- ¹⁰⁶ Schlesinger, T. (2011). The Failure of Race Neutral Policies: How Mandatory Terms and Sentencing Enhancements Contribute to Mass Racialized Incarceration. *Crime and Delinquency*, 57, 56-81.
- ¹⁰⁷ See Florida Statute 775.087.
- ¹⁰⁸ Crawford, C., Chiricos, T., & Kleck, G. (1998). Race, Racial Threat, and Sentencing of Habitual Offenders. *Criminology*, 36, 481-511.
- ¹⁰⁹ Crawford, C. (2000). Gender, Race, and Habitual Offender Sentencing in Florida. *Criminology*, 38, 263-280.
- ¹¹⁰ Crow, M. S. & Johnson, K. A. (2008). Race, Ethnicity, and Habitual-Offender Sentencing: A Multilevel Analysis of Individual and Contextual Threat. *Criminal Justice Policy Review*, 19, 63-83.
- ¹¹¹ Florida Department of Corrections. (2011). *2009-2010 Agency Statistics – General Characteristics of Population*. Retrieved from www.dc.state.fl.us/pub/annual/0910/stats/ip_general.html; Florida Department of Corrections. *2009-2010 Agency Statistics – Budget Summary (FY 2009-2010)*. Retrieved from www.dc.state.fl.us/pub/annual/0910/budget.html.
- ¹¹² Rydell, C. P. & Everingham, S. S. (1994). *Controlling Cocaine: Supply Versus Demand Programs*. Santa Monica, CA: RAND.
- ¹¹³ Rydell, C. P. & Everingham, S. S. (1994). *Controlling Cocaine: Supply Versus Demand Programs*. Santa Monica, CA: RAND.
- ¹¹⁴ Caulkins, J. Rydell, C. P., Schwabe, W. L., & Chiesa, J. (1997). *Mandatory Minimum Drug Sentences: Throwing Away the Key or the Taxpayers' Money?* Santa Monica, CA: RAND.
- ¹¹⁵ Piehl, A. M., Useem, B., & Dilulio, J. J. (1999). *Right-Sizing Justice: A Cost-Benefit Analysis of Imprisonment in Three States*. Civic Report No. 8. Center for Civic Innovation at the Manhattan Institute. Retrieved from www.manhattan-institute.org/pdf/cr_08.pdf.
- ¹¹⁶ Washington State Institute for Public Policy. (2003). *The Criminal Justice System in Washington State: Incarceration Rates, Taxpayer Costs, Crime Rates, and Prison Economics*. Retrieved from www.wsipp.wa.gov/rptfiles/SentReport2002.pdf.
- ¹¹⁷ Przybylski, R. (2009). *Correctional and Sentencing Reform for Drug offenders: Research Findings on Selected Key Issues*. RKC Group.
- ¹¹⁸ Lengyel, T. E. & Brown, M. (2009). *Everyone Pays: A Social Cost Analysis of Incarcerating Parents for Drug Offenses in Hawaii*. Retrieved from www.realcostofprisons.org/materials/Everybody_Pays_full.pdf.