



RESEARCH AND ADVOCACY FOR REFORM



## **Deterrence in Criminal Justice**

### **Evaluating Certainty vs. Severity of Punishment**

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The Sentencing Project is a national non-profit organization engaged in research and advocacy on criminal justice policy issues.

Over the past several decades state and federal incarceration rates have increased dramatically. As a consequence of more punitive laws and harsher sentencing policies 2.3 million people are incarcerated in the nation's prisons and jails, and the U.S. leads the world in its rate of incarceration.

Sentencing systems and incarceration traditionally have a variety of goals, which include incapacitation, punishment, deterrence and rehabilitation. In recent decades, sentencing policy initiatives have often been enacted with the goal of enhancing the deterrent effect of the criminal justice system. Under the rubric of "getting tough on crime," policies such as mandatory minimums, truth in sentencing, and "three strikes and you're out" have been designed to deter with the threat of imposing substantial terms of imprisonment for felony convictions.

While the criminal justice system as a whole provides some deterrent effect, a key question for policy development regards whether enhanced sanctions or an enhanced possibility of being apprehended provide any additional deterrent benefits. Research to date generally indicates that increases in the *certainty* of punishment, as opposed to the *severity* of punishment, are more likely to produce deterrent benefits. This briefing paper provides an overview of criminological research on these relative impacts as a guide to inform future policy consideration.

## CONCEPTUALIZING DETERRENCE

In broad terms punishment may be expected to affect deterrence in one of two ways. First, by increasing the certainty of punishment, potential offenders may be deterred by the risk of apprehension. For example, if there is an increase in the number of state troopers patrolling highways on a holiday weekend, some drivers may reduce their speed in order to avoid receiving a ticket. Second, the severity of punishment may influence behavior if potential offenders weigh the consequences of their actions and conclude that the risks of punishment are too severe. This is part of the logic behind “three strikes,” and “truth in sentencing” policies, to utilize the threat of very severe sentences in order to deter some persons from engaging in criminal behavior.

One problem with deterrence theory is that it assumes that human beings are rational actors who consider the consequences of their behavior before deciding to commit a crime; however, this is often not the case. For example, half of all state prisoners were under the influence of drugs or alcohol at the time of their offense.<sup>1</sup> Therefore, it is unlikely that such persons are deterred by either the certainty or severity of punishment because of their temporarily impaired capacity to consider the pros and cons of their actions.

Another means of understanding why deterrence is more limited than often assumed can be seen by considering the dynamics of the criminal justice system. If there was 100% certainty of being apprehended for committing a crime, few people would do so. But since most crimes, including serious ones, do not result in an arrest and conviction, the overall deterrent effect of the certainty of punishment is substantially reduced. Clearly, enhancing the severity of punishment will have little impact on people who do not believe they will be apprehended for their actions.

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<sup>1</sup> Christopher Mumola. “Substance Abuse and Treatment, State and Federal Prisoners, 1997.” Bureau of Justice Statistics Special Report, 1999.

Economists often come to different conclusions than criminologists on the value of harsher sentences in reducing crime. While criminologists tend to regard various legal threats as the result of a complex and unpredictable process, economists approach the issue along the lines of a rational choice perspective that considers the risk and benefits of engaging in crime; sanctions merely represent the expected price of engaging in criminal behavior. In critiquing this perspective, Michael Tonry, a leading scholar on crime and punishment, contends that “Such research is incapable of taking into account whether and to what extent purported policy changes are implemented, whether and to what extent their adoption or implementation is perceived by would-be offenders, and whether and to what extent offenders are susceptible to influence by perceived changes in legal threats. At the very least, macro-level research on deterrent effects should test the null hypothesis of no effect rather than the price theory assumption that offenders’ behavior will change in response to changes in legal threats.”<sup>2</sup>

Another problem in assessing deterrence is that in order for sanctions to deter, potential offenders must be aware of sanction risks and consequences before they commit an offense. In this regard, research illustrates that the general public tends to underestimate the severity of sanctions generally imposed.<sup>3,4</sup> This is not surprising given that members of the public are often unaware of the specifics of sentencing policies. Potential offenders are also unlikely to be aware of modifications to sentencing policies, thus diminishing any deterrent effect. The absence of such data on awareness of punishment risks makes it difficult to draw conclusions regarding the deterrent effects of sanction levels and prospects. Below we explore these outcomes in greater detail.

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<sup>2</sup> Michael Tonry. “Learning from the Limitations of Deterrence Research” in *Crime and Justice: A Review of Research* edited by Michael Tonry. The University of Chicago Press, 2008.

<sup>3</sup> Kirk R. Williams, Jack P. Gibbs, and Maynard L. Erickson, “Public Knowledge of Statutory Penalties: The Extent and Basis of Accurate Perception,” *Pacific Sociological Review*, 23(1), 1980.

<sup>4</sup> Andrew von Hirsch, Anthony Bottoms, Elizabeth Burney, and P-O. Wikstrom, “Criminal Deterrence and Sentence Severity: An Analysis of Recent Research,” Oxford: Hart Publishing, 1999.

## CERTAINTY VS. SEVERITY OF PUNISHMENT

Criminological research over several decades and in various nations generally concludes that enhancing the certainty of punishment produces a stronger deterrent effect than increasing the severity of punishment. Key findings in this regard include the following:

- The Institute of Criminology at Cambridge University was commissioned by the British Home Office to conduct a review of research on major studies of deterrence. Their 1999 report concluded that "...the studies reviewed do not provide a basis for inferring that increasing the severity of sentences generally is capable of enhancing deterrent effects."<sup>5</sup> In addition, in reviewing macro-level studies that examine offense rates of a specific population, the researchers found that an increased likelihood (certainty) of apprehension and punishment was associated with declining crime rates.<sup>6</sup>
- Daniel Nagin and Greg Pogarsky, leading scholars on deterrence, conclude that "punishment certainty is far more consistently found to deter crime than punishment severity, and the extra-legal consequences of crime seem at least as great a deterrent as the legal consequences."<sup>7</sup>

Similar findings are observed in micro-level studies on deterrence that assess the likelihood of individuals engaging in crime. People who perceive that sanctions are more certain tend to be less likely to engage in criminal activity. Scenario-based research using self-reports that examine the effect of certainty of punishment on individual behavior has shown that as the perceptions of the risk of arrest for petty

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<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Daniel Nagin and Greg Pogarsky. "Integrating Celerity, Impulsivity, and Extralegal Sanction Threats into a Model of General Deterrence: Theory and Evidence," *Criminology*, 39(4), 2001.

theft, drunk driving, and tax evasion increases, individuals report they would be less likely to offend.

Researchers have also compared the relative importance of both certainty and severity as dimensions of punishment. In a 2001 study published in the journal *Criminology*, researchers utilized a sample of college students to assess the likelihood of drinking and driving. The authors found that the certainty of punishment was a more robust predictor of deterrence than severity. Increasing the probability of apprehension by 10% was predicted to reduce the likelihood of drunk driving by 3.5%, while the effect of severity eroded when the effects of certainty and severity were combined.<sup>8</sup>

In another study, researchers compared crime and punishment trends in the U.S., England, and Sweden, and failed to find an effect for severity.<sup>9</sup> The statistical associations were weak and even when there was a negative relationship between severity of punishment and crime rates, the findings were not strong enough to achieve statistical significance. This finding is noteworthy because it reflected varying degrees of punitiveness in the sentencing policies of the three nations.

While most studies suggest that certainty of punishment is related to reductions in crime rates, some researchers speculate that increasing the likelihood of arrest and/or incarceration for both serious and minor offenses could cause sanctions, particularly imprisonment, to be viewed as less stigmatizing.<sup>10</sup> Nagin also emphasizes that sanctions have the potential to erode the deterrent effects of a policy because as he states, “[f]or an event to be stigmatizing it must be relatively uncommon.”<sup>11</sup>

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<sup>8</sup> Ibid.

<sup>9</sup> David Farrington, Paul Langan, Per-Olof H. Wikstrom. “Changes in Crime and Punishment in America, England and Sweden between the 1980s and the 1990s,” *Studies in Crime Prevention*, 3:104-131, 1994.

<sup>10</sup> Paul J. Hirschfield, “The Declining Significance of Delinquent Labels in Disadvantaged Urban Communities,” *Sociological Forum*, 23(3), 2008.

<sup>11</sup> Daniel S. Nagin, “Criminal Deterrence Research at the Outset of the Twenty-First Century,” In *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press, 1998.

## MORE SEVERE SENTENCES FAIL TO ENHANCE PUBLIC SAFETY

The logic behind supporting harsher sentences is simple: locking up people for longer periods of time should enhance public safety. From this view, putting people in prison for years or even decades should prevent offenders from re-offending by incapacitating them and/or deterring would-be-offenders from committing crimes. However, contrary to deterrence ideology and “get tough” rhetoric, the bulk of research on the deterrent effects of harsher sentences fails to support these assertions.<sup>12</sup>

A series of studies have examined the public safety effects of imposing longer periods of imprisonment.<sup>13, 14, 15</sup> Ideally, from a deterrence perspective, the more severe the imposed sentence, the less likely offenders should be to re-offend. A 1999 study tested this assumption in a meta-analysis reviewing 50 studies dating back to 1958 involving a total of 336,052 offenders with various offenses and criminal histories. Controlling for risk factors such as criminal history and substance abuse, the authors assessed the relationship between length of time in prison and recidivism, and found that longer prison sentences were associated with a three percent increase in recidivism. Offenders who spent an average of 30 months in prison had a recidivism rate of 29%, compared to a 26% rate among prisoners serving an average sentence of 12.9 months. The authors also assessed the impact of serving a prison sentence versus receiving a community-based sanction. Similarly, being incarcerated versus

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<sup>12</sup> Anthony Doob and Cheryl Webster, “Sentence Severity and Crime: Accepting the Null Hypotheses,” *Crime and Justice*, 30:143-195, 2003.

<sup>13</sup> Paul Gendreau, T. Little, and Claire Goggin, “A Meta-Analysis of Adult Offender Recidivism: What Works!” *Criminology*, 34(3):575-607, 1996.

<sup>14</sup> Martin A. Levin, “Policy Evaluation and Recidivism,” *Law and Society Review*, 6(1):17-46, 1971.

<sup>15</sup> Lin Song and Roxanne Lieb, “Recidivism: The Effect of Incarceration and Length of Time Served,” Olympia, WA: Washington State Institute of Public Policy, 1993

remaining in the community was associated with a seven percent increase in recidivism.<sup>16</sup>

Researchers also find an increased likelihood that lower-risk offenders will be more negatively affected by incarceration.<sup>17</sup> Among low-risk offenders, those who spent less time in prison were 4% less likely to recidivate than low-risk offenders who served longer sentences.<sup>18</sup> Thus, when prison sentences are relatively short, offenders are more likely to maintain their ties to family, employers, and their community, all of which promote successful reentry into society. Conversely, when prisoners serve longer sentences they are more likely to become institutionalized, lose pro-social contacts in the community, and become removed from legitimate opportunities, all of which promote recidivism.<sup>19</sup>

The Bureau of Justice Statistics has reported on a nationally representative sample of prisoners assessing the impact of time served in prison on recidivism rates. Researchers found that recidivism rates did not vary substantially whether prisoners were released anywhere in the range of six months to five years. While recidivism rates were high in general, they fluctuated in the range of 62-68%, and did not decline significantly for those spending more time in prison.<sup>20</sup> Furthermore, findings from a natural experiment investigating how prisoners respond to the manipulation of prison sentences show that reduced sentences may reduce recidivism rates. The Collective Clemency Bill passed by the Italian Parliament in July 2006 allowed for a three-year sentence reduction for persons who committed their offense prior to May

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<sup>16</sup> Paul Gendreau, Claire Goggin, and Francis T. Cullen, "The Effects of Prison Sentences on Recidivism," Ottawa, Ontario, Canada: Public Works and Government Services Canada, 1999.

<sup>17</sup> Ibid.

<sup>18</sup> *Supra*, note 15.

<sup>19</sup> Thomas Orsagh and Jong-Rong Chen, "The Effect of Time Served on Recidivism: An Interdisciplinary Theory," *Journal of Quantitative Criminology*, 4(2):155-171, 1988.

<sup>20</sup> Patrick Langan and David Levin. "Recidivism of Prisoners Released in 1994," U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2002.

2, 2006.<sup>21</sup> The authors of the study concluded that the sentence commutations significantly reduced the likelihood of recidivating.<sup>22</sup>

## **ECONOMIC COSTS OF MORE SEVERE SENTENCES**

Fiscal crises and a growing emphasis on using evidence-based practices has caused many policymakers to call into question the practicality of current sentencing policies and the overreliance on incarceration. Incarceration is an expensive sanction and sentencing people to longer prison terms has resulted in valuable resources being devoured. It is estimated that federal, state, and local governments are spending \$68 billion annually.<sup>23</sup> A recent economic analysis estimates that reducing the number of incarcerated non-violent offenders by half could save taxpayers \$16.9 billion annually without putting public safety at risk.<sup>24</sup>

Non-violent drug offenders comprise a substantial percentage of the prison population and many studies have suggested that this number could be reduced if more treatment alternatives were available. While there are costs associated with treatment, research indicates that they tend to be far lower than the costs associated with lengthy terms of incarceration that show little evidence of deterring future offenses. For example, a recent study showed that spending on drug treatment in community-based programs versus incarceration yields a higher return on the investment while at the same time improving the life outcomes of drug users. The study concluded that a dollar spent on treatment in prison yields about six dollars of

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<sup>21</sup> The Collective Clemency Bill (2006) states that if a former inmate commits a crime within five years following his release from prison, he or she will be required to serve the remaining sentence suspended by the pardon in addition to the sentence given for the new crime.

<sup>22</sup> Fancesco Drago, Roberto Galbiati, and Pietro Vertova, "The Deterrent Effects of Prison: Evidence from a Natural Experiment," *Journal of Political Economy*, 117(2):257-280 2009.

<sup>23</sup> John Schmitt, Kris Warner, and Sarika Gupta. "The High Budgetary Cost of Incarceration," Center for Economic and Policy Research, 2010.

<sup>24</sup> Ibid.

savings, but a dollar investment in community-based treatment yields nearly \$20 in costs savings.<sup>25</sup>

## CONCLUSION

Existing evidence does not support any significant public safety benefit of the practice of increasing the severity of sentences by imposing longer prison terms. In fact, research findings imply that increasingly lengthy prison terms are counterproductive. Overall, the evidence indicates that the deterrent effect of lengthy prison sentences would not be substantially diminished if punishments were reduced from their current levels. Thus, policies such as California's Three Strikes law or mandatory minimums that increase imprisonment not only burden state budgets, but also fail to enhance public safety. As a result, such policies are not justifiable based on their ability to deter.

Based upon the existing evidence, both crime and imprisonment can be simultaneously reduced if policy-makers reconsider their overreliance on severity-based policies such as long prison sentences. Instead, an evidence-based approach would entail increasing the certainty of punishment by improving the likelihood that criminal behavior would be detected. Such an approach would also free up resources devoted to incarceration and allow for increased initiatives of prevention and treatment.

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<sup>25</sup> Steve Aos, Marna Miller, and Elizabeth Drake, "Evidence-Based Public Policy Options to Reduce Future Prison Construction, Criminal Justice Costs, and Crime Rates," Olympia: Washington State Institute for Public Policy, 2006.



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