3 Costs of Crime

SUMMARY

Some studies have presented evidence suggesting that greater incarceration of offenders could be justified from a benefit-cost standpoint. There is considerable uncertainty, however, in estimating the costs of crime avoided and the number of offenses not committed if more offenders were to be incarcerated. It is unclear whether an increase in Minnesota's relatively low incarceration rate would save more for crime victims and communities than it would cost Minnesota's taxpayers.

In recent years, part of the debate over correctional policy has focused on how the costs of incarceration compare with the costs avoided when offenders are incarcerated. Some policy makers believe that Minnesota is too lenient with offenders, particularly repeat or chronic offenders. They cite Minnesota's relatively low rate of incarceration and suggest that incarcerating more offenders in state prisons or local jails would be worthwhile in spite of the relatively high costs of incarceration paid by the state or local governments. These policy makers say that incarcerating more repeat offenders would provide significant benefits to law-abiding state residents by reducing the amount of crime and the resulting costs borne by crime victims and public agencies.

This chapter examines the extent to which the costs of crime and the costs of incarceration can be measured, compared, and used to make decisions about correctional policy. In particular, we address the following questions:

- **How do Minnesota's incarceration and crime rates compare with those in other states?**
- **To what extent is it possible to measure the costs of crime?**
- **What have previous studies that compared the benefits of incarceration (or reduced costs of crime) with the costs of incarceration concluded about sentencing policies?**
- **Do previous studies provide any insight about the types of offenders for which incarceration makes more sense from a benefit-cost standpoint?**

For the most part, this chapter summarizes the work done by others to measure the costs of crime and compare the benefits and costs of incarceration. It was not feasible, given time and resource constraints, to attempt to measure the costs of crime exclusively for Minnesota. In addition, even with more time, it may not be

possible to provide better estimates than those provided by national studies, given the lack of adequate data at the state and local levels.

INCARCERATION AND CRIME RATES

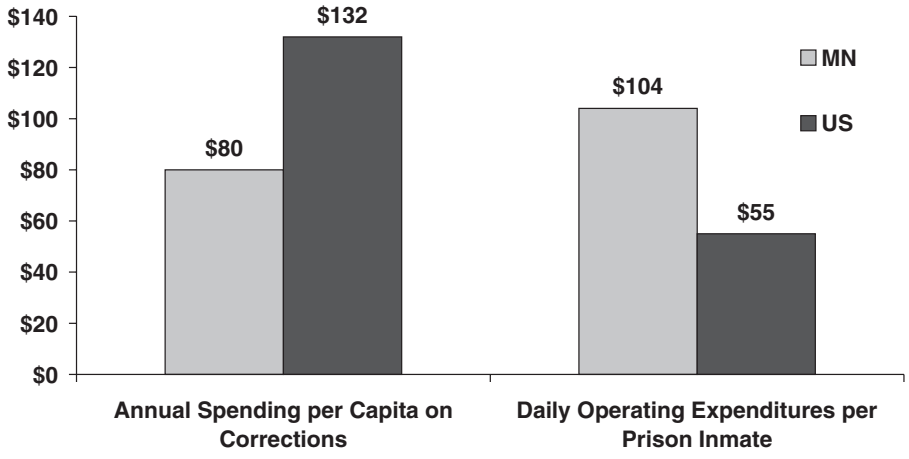
Minnesota has clearly chosen a different correctional policy than other states. Minnesota has a lower incarceration rate than nearly all other states but has a relatively high probation caseload. Minnesota spends less than many other states on corrections even though the percentage of Minnesota's population under correctional supervision is slightly higher than the national average and Minnesota's costs per prison inmate are significantly higher than those in nearly all other states.

Spending

State and local governments in Minnesota have consistently spent less on corrections than most other states. Figure 3.1 shows that Minnesota spent about $80 per state resident on prisons, jails, probation, and other correctional programs in fiscal year 1995. Minnesota's spending was about 39 percent below the national average of $132 per capita.[1] However, Minnesota's average daily

Minnesota consistently spends less on corrections than do most other states.

Figure 3.1: Correctional Spending, Minnesota and the United States, 1995-96



SOURCE: Bureau of Justice Statistics.

1 State and local governments in Minnesota also spent 18 percent less than the national average for police protection and 7 percent less than the average for judicial and legal expenditures. Unlike the correctional spending category, these two categories include spending that is not related to criminal activity. For example, judicial and legal expenditures include spending on civil litigation activity.

operating expenditures per prison inmate have consistently been much higher than the national average. In 1996, Minnesota spent $104 per diem, which was 88 percent higher than the national average of $55.[2]

Incarceration

Minnesota's incarceration rate is well below the national average.

Despite Minnesota's high costs per prison inmate, Minnesota's correctional spending has remained well below the national average due to its very low use of incarceration as a criminal sanction. Table 3.1 shows that Minnesota incarcerates a much lower share of its population in both prisons and jails than the national average. Minnesota has the lowest prison incarceration rate in the nation, with its rate being only a little more than one-fourth the national rate. In addition, Minnesota's jail incarceration rate is less than half the national average. Considering both prison and jail inmates, Minnesota's overall incarceration rate is only one-third the national rate. Only two states, Vermont and Maine, incarcerate fewer offenders per capita in prisons and jails combined than Minnesota.

It is generally believed that Minnesota imprisons violent criminals for a longer period of time than most other states. Some evidence suggests that this may be the case for the most violent offenders but not for all offenders committing person crimes. Considering Minnesota's very low overall imprisonment rate, it is then likely that Minnesota's imprisonment rates for property and perhaps other crimes are much lower than those in other states.

Table 3.1: Incarceration Rates for Prisons and Jails Under State and Local Control, June 30, 1999

	Minnesota	United States Average	Percentage Difference from U.S. Average	Minnesota's Rank Among the 50 States
Prison inmates per 100,000 residents	121	428	-72%	50th of 50
Jail inmates per 100,000 residents[a]	105	222	-53	43rd of 46
Prison and jail inmates per 100,000 residents[b]	226	639	-65	48th of 50

[a]Four states have integrated prison and jail systems. All of their inmates are counted as prison inmates, and none are counted as jail inmates.

[b]Unlike the prison inmate row, this row does not include prisoners under the legal authority of a prison system who are being held outside of a state's prison facilities.

SOURCE: *Prison and Jail Inmates at Midyear 1999*, Bureau of Justice Statistics Bulletin, U.S. Department of Justice (Washington, D.C., April 2000).

2 Minnesota's per diem prison expenditures have been significantly higher than those in other states due to our relatively high prison staffing levels, including both security and program staff. Compared with other states, Minnesota has a relatively high percentage of its prison inmates in high or medium security prisons and a very low percentage in minimum security facilities. The per diem figures cited above are higher than those usually presented since they include central office expenditures by the state departments with authority over prison operations.

It should be pointed out that imprisonment rates for whites and African Americans are significantly different from one another both in Minnesota and in other states. In 1997, the imprisonment rate in Minnesota for African Americans was 30 times that for whites, compared with a national average of 9. Minnesota's imprisonment rates for African American males and females were 9 percent and 2 percent below their respective national averages, but Minnesota's imprisonment rates for white males and females were 70 percent and 79 percent below the comparable national averages.

Probation

Minnesota's share of adults on probation is among the nation's highest.

Although Minnesota has a very low incarceration rate, it has a slightly larger share of its population under overall correctional supervision than most other states. As Table 3.2 shows, the number of offenders on probation or parole per capita in Minnesota is 35 percent higher than the national average. Minnesota has the sixth highest share of population on probation or parole in the nation.[3] The table also shows that, when those on probation or parole are added to those incarcerated, Minnesota has about 5 percent more offenders under correctional supervision than the national average. In fact, Minnesota has the 14th highest share of population under supervision despite ranking 48th in the share of population that is incarcerated.

Table 3.2: Probation and Parole Rates and Overall Correctional Supervision Rates for Minnesota and the United States, 1998-99

	Minnesota	United States Average	Percentage Difference from U.S. Average	Minnesota's Rank Among the 50 States
Number of offenders on probation or parole per 100,000 adult residents (12/31/98)	2,711	2,007	35%	6th of 50
Number of offenders under correctional supervision or authority per 100,000 adult residents[a]	3,022	2,876	5	14th of 50
Number of offenders on probation or parole per number incarcerated in prison or jail	8.7	2.3	278	1st of 50

[a]Includes prison and jail inmates on June 30, 1999 and offenders on probation or parole on December 31, 1998.

SOURCE: Office of the Legislative Auditor's analysis of data from *Probation and Parole in the United States, 1998*, Bureau of Justice Statistics Bulletin, U.S. Department of Justice (Washington, D.C., August 1999) and *Prison and Jail Inmates at Midyear 1999*, Bureau of Justice Statistics Bulletin, U.S. Department of Justice (Washington, D.C., April 2000).

3 Minnesota's probation rate is 56 percent higher than the national average, while its parole rate is 73 percent lower than average. Even though Minnesota has a much lower than average parole rate, its combined probation and parole rate is still well above the national average because there are five times more offenders on probation than on parole nationally.

Table 3.2 also illustrates why Minnesota's overall correctional spending is below the national average. Minnesota has close to nine offenders on probation or parole per offender incarcerated in either prison or jail. This is the highest ratio in the nation and is nearly four times higher than the national average. Because annual spending per incarcerated offender can be 10 to 30 times higher than average expenditures per offender on probation or parole, Minnesota has kept its overall expenditures on corrections low relative to other states.

Crime Rates

We should expect Minnesota to spend less on corrections and to have a lower incarceration rate than most other states due to its lower than average crime rate. However, as Table 3.3 shows, while Minnesota's serious (Part I) crime rate is 12 percent below the national average, its overall incarceration rate is 65 percent below the average. In addition, Minnesota's prison incarceration rate is 72 percent below the national average, but its violent crime rate is only 45 percent less than the average and its property crime rate is only 8 percent below average.

Table 3.3: Part I Crimes per 100,000 Inhabitants, Minnesota and the United States, 1998

Crime	Minnesota	United States Average	Percentage Difference from National Average	Minnesota's Rank
Murder and Manslaughter	3	6	-59%	41st of 50
Robbery	93	165	-44	31st of 50
Aggravated Assault	165	360	-54	42nd of 50
Rape	50	34	45	6th of 50
Violent crime	**310**	**566**	**-45%**	**38th of 50**
Burglary	688	862	-20	30th of 50
Larceny/Theft	2,724	2,728	0	28th of 50
Motor Vehicle Theft	325	459	-29	36th of 50
Property crime	**3,736**	**4,049**	**-8**	**31st of 50**
All crimes	**4,046**	**4,616**	**-12%**	**32nd of 50**

SOURCE: *Sourcebook of Criminal Justice Statistics 1999*, Tables 3.122 and 3.124. The online version is available at http://www.albany.edu/sourcebook.

It should be pointed out that correctional populations in Minnesota and throughout much of the nation grew dramatically during the 1980s and 1990s. Minnesota's per capita prison, jail, and probation populations have all more than doubled since 1985. Increased violent crime rates, tougher sentencing policies (particularly those implemented in 1989), and increased arrest rates have contributed to the growth in Minnesota's correctional populations.[4] The overall violent crime rates in Minnesota increased significantly during the 1980s and the first half of the 1990s but has declined since 1994. The overall property crime rate showed no consistent trend during the 1980s and much of the 1990s. However, the property crime rate declined in the last two years and, in 1999, was at its lowest point during the 1980s and 1990s.

4 Office of the Legislative Auditor, *Trends in State and Local Government Spending* (St. Paul, MN, 1996), 135-137.

It is not entirely clear why crime rates have fallen in recent years. The aging of the baby boom generation, the continued strong economy and availability of jobs, a decline in the cocaine market and accompanying violence, and the effect of increasing incarceration rates could all be possible explanations for the declining crime rates in Minnesota and elsewhere in the nation.

ESTIMATES OF THE COSTS OF CRIME

In this section, we highlight the most comprehensive effort to measure the costs of crime. We do not attempt to measure the costs of crime directly or to discuss every study that has looked at this issue. Readers interested in a more comprehensive review of previous cost of crime studies should examine the Minnesota House Research Department's 1999 publication on the costs of crime.[5]

Generally, property crimes have lower victim and societal costs than do violent crimes.

The most comprehensive estimates of the costs of crime were presented in a 1996 report to the National Institute of Justice.[6] These estimates are presented in Table 3.4 along with an inflation adjusted total. The estimates include productivity losses to crime victims and society; other tangible losses such as the costs of medical or mental health care, police and fire services, victim services, property loss or damage, and time spent by victims in the criminal justice system; and intangible losses such as reduced quality of life, pain and suffering, and loss of affection and enjoyment.[7] These estimates suggest that:

- **Crimes resulting in death or in physical or psychological injury result in relatively high costs to victims and society.**

Clearly, a crime resulting in a fatality has the highest average cost, which is estimated to be in excess of $3,000,000 for the year 2000. These costs are high primarily due to the estimated quality of life costs and productivity losses due to lost wages. Other crimes with average costs exceeding $100,000 include arson with injury and sex crimes such as rape, sexual assault, and sexual abuse of a child. These crimes tend to have high estimated losses due to a reduced quality of life. Arson with injury also involves substantial property losses and medical care costs. Two other crimes have estimated costs exceeding $50,000: driving while intoxicated (DWI), if it results in injury, and physical abuse of a child. Both also have significant estimated quality of life costs.

Property offenses, however, have fairly low average costs provided no violent crime is committed during the offense. The average cost of larceny or theft is under $500, while the average cost of a burglary is $1,700. Robbery without injury ($2,400) and motor vehicle theft ($4,400) have somewhat higher average

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5 Emily Shapiro, Minnesota House Research Department, *Cost of Crime: A Review of the Research Studies* (St. Paul, MN, August 1999).

6 Ted R. Miller, Mark A. Cohen, and Brian Wiersema, *Victim Costs and Consequences: A New Look*, a final summary report presented to the National Institute of Justice (Washington, D.C., February 1996).

7 Medical and mental health care and property losses are the most significant subcategories in the "other tangible losses" category. The cost of police services is relatively small and is particularly small for these estimates because it is averaged over all crimes committed including crimes not reported to police.

Crimes resulting in death or injury have higher costs than do other crimes.

Table 3.4: Costs per Crime, 1993 and Estimated 2000

Type of Crime	In 1993 Dollars: Productivity	Other Tangible	Quality of Life	Total Costs	In 2000 Dollars[a]: Total Costs
Fatal Crime					
Rape, assault and other	$1,000,000	$30,000	$1,910,000	$2,940,000	$3,504,000
Arson	724,000	46,000	1,970,000	2,740,000	3,265,000
DWI	1,150,000	30,000	1,995,000	3,180,000	3,790,000
Child Abuse	**2,200**	**5,700**	**52,371**	**60,000**	**72,000**
Sexual	2,100	7,400	89,800	99,000	118,000
Physical	3,400	5,600	57,500	67,000	80,000
Emotional	900	4,800	21,100	27,000	32,000
Rape and sexual assault	**2,200**	**2,900**	**81,400**	**87,000**	**104,000**
Other assault or attempt	**950**	**650**	**7,800**	**9,400**	**11,000**
With injury	3,100	1,700	19,300	24,000	29,000
No injury	70	130	1,700	2,000	2,400
Domestic	760	440	10,000	11,000	13,000
Robbery or attempt	**950**	**1,350**	**5,700**	**8,000**	**9,500**
With injury	2,500	2,700	13,800	19,000	23,000
No injury	75	625	1,300	2,000	2,400
DWI	**2,800**	**3,200**	**11,900**	**18,000**	**21,000**
With injury	12,100	10,200	48,400	71,000	85,000
With property damage but no injury	170	1,130	1,400	2,700	3,200
Arson	**1,750**	**17,750**	**18,000**	**37,500**	**45,000**
With injury	15,400	33,600	153,000	202,000	241,000
No injury	8	15,992	500	16,000	19,000
Larceny or attempt	**8**	**362**	**0**	**370**	**440**
Burglary or attempt	**12**	**1,088**	**300**	**1,400**	**1,700**
Motor vehicle theft or attempt	**45**	**3,455**	**300**	**3,700**	**4,400**
Child neglect	**25**	**1,775**	**7,900**	**9,700**	**12,000**

[a]We used the CPI-U to adjust the total costs for the inflation that occurred between 1993 and 2000. The total cost figures for 2000 were rounded to the nearest $1,000 for amounts of $10,000 or more, to the nearest $100 for amounts between $1,000 and $10,000, and to the nearest $10 for amounts under $1,000.

SOURCE: Ted R. Miller, Mark A. Cohen, and Brian Wiersema, *Victim Costs and Consequences: A New Look*, a final summary report presented to the National Institute of Justice (Washington, D.C., February 1996). Inflation adjustment for 2000 was calculated by the Office of the Legislative Auditor.

costs. Arson without injury ($19,000) is the one exception to the general rule for property crimes due to the high average costs of property damage. Other crimes with relatively low estimated costs include assault without injury ($2,400) and DWI without injury ($3,200).[8]

Drug crimes are not included in Table 3.4 because of the difficulty in estimating their costs. Some analysts suggest that drug users are "willing victims" and are

8 The cost of a DWI without injury was calculated using only DWIs that resulted in property damage. The cost of a DWI without injury or property damage would be lower than that for a DWI without injury.

offenders themselves. As a result, they do not include the costs to these victims as a cost of crime. But, it could be argued that drug use involves significant productivity losses for society, as well as spillover effects on the quality of life in a community. In addition, as we saw in Chapter 2, many offenders convicted of felony drug crimes have significant criminal histories involving other types of crime, particularly property crimes. For some drug users, drug use is part of a pattern of behavior involving other criminal activity. While a number of analysts have examined the productivity losses from drug use, few analysts have attempted to estimate the societal and community costs per drug crime with the same rigor used by the authors whose estimates for other crimes are shown in Table 3.4.

In some respects, the differences in estimated costs for various types of crime are similar to the priorities reflected in the sentencing guidelines, even though the guidelines were not intended to respond to differences in the costs of crime. As we saw in Chapter 2, the guidelines place a significantly greater priority on imprisoning violent offenders than on imprisoning property offenders. The cost estimates discussed above show that the cost to victims and society of a violent crime is much greater than the cost of a property crime. However, while the guidelines place greater emphasis on imprisoning drug offenders than property offenders, the cost of crime estimates do not provide a benchmark to assess this policy because of the difficulty in measuring the costs of drug crimes.

These data on the costs of crime, while appropriately estimated and more comprehensive than any other source, have several limitations. First, some costs of crime are not included, particularly those that are more difficult to estimate due to lack of adequate data or research. Most of the excluded costs are the costs of society's response to crime. For example, the costs of the criminal justice system other than police costs are not included. This category includes the costs of prosecution, courts, public defenders, probation, incarceration, and correctional programs and offender treatment.[9] Also excluded from the cost estimates are the costs of security precautions taken by potential future victims, the costs of their response to the fear of crime, and their potential loss of quality of life due to the fear of crime. These estimates also exclude the costs imposed on innocent individuals when they are accused of an offense or when legitimate activity is restricted in an effort to reduce crime. Finally, the estimates exclude the privately borne legal costs of offenders as well as the value to offenders and their families of lost wages, productivity, freedom, and consortium while offenders are incarcerated.[10]

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9 It would be difficult to estimate certain public costs of crime such as prosecution and police costs for Minnesota because of the lack of adequate cost data, the need to separate the costs of criminal justice activities from other agency functions, and the lack of adequate data on criminal justice activities by jurisdiction. Estimates for the state of Washington, where adequate data were available, indicate that the cost per arrest by police was about $12,600 for violent felonies and $1,900 for property and drug felonies. The cost of prosecution and court resources was, on average, about $97,000 for murder/manslaughter offenses, $18,400 for certain other violent crimes, and $1,700 for property and drug felonies. See Washington State Institute for Public Policy, *The Comparative Costs and Benefits of Programs to Reduce Crime: A Review of National Research Findings with Implications for Washington State* (Olympia, WA, May 1999), 116.

10 Also excluded from the estimates are the legal costs borne by victims or their families in pursuing tort claims and the second generation costs incurred in those cases when victims of crimes such as child abuse later commit crimes themselves.

Second, these estimates are averages for crimes that may have a wide range of costs. Costs for a particular crime such as larceny or theft may vary greatly due to differences in the amount of money or property stolen. Crimes involving injury can also have significantly different costs due to differences in the nature and severity of injuries sustained during the commission of the crime. Because the estimates presented in Table 3.4 are averages, they should not be used to assess the cost of any particular offense.

Finally, it should be recognized that the estimates made for the National Institute of Justice include some categories of costs that are difficult to estimate. Clearly, intangible costs such as losses in the quality of life cannot be priced as easily as other categories of costs. Nevertheless, the study used reasonable techniques to estimate these costs, including using life insurance industry data to estimate the value of the life lost by murder victims and using jury awards to estimate quality of life losses for nonfatal crimes.

BENEFITS AND COSTS OF INCARCERATION

Comparing the financial benefits and costs of incarceration may be helpful to some policy makers.

In this section, we examine how the benefits of incarceration compare with the costs of incarceration. The benefits are essentially the costs of crimes avoided because offenders are "incapacitated" while they are in prison or jail and unable to commit crimes. The costs of incarceration include operating expenditures of prisons or jails and an annualized portion of their construction costs if it is necessary to build additional capacity. Alternatively, the costs of incarceration may consist of the rental costs for a correctional facility if such facilities are available for rental.

Ideally, we would like to be able to compare the benefits of incapacitation—measured by the value of the reduction in crimes committed—with the costs of incarceration. If the benefits exceed the costs for certain offenses or groups of offenders, then it could be argued that more of these offenders should be incarcerated despite the high costs of operating a prison or jail. If, on the other hand, the benefits are less than the costs, it could be argued that current incarceration rates are excessive.

But there are factors besides benefits and costs that influence incarceration policy.

It should be recognized that *incapacitation* is only one of a number of reasons why policy makers may want to incarcerate an individual. The guidelines used in Minnesota for sentencing convicted felons are largely based on a philosophy of *just deserts*. The guidelines recommend sentences based on what the framers of the guidelines felt was a fair and just penalty given the severity of a crime and an offender's criminal history. Another philosophy might be to establish sentences that provide sufficient *deterrence* so that the sentenced offenders and potential offenders are less likely to commit crimes. Imprisonment can also be viewed as means to punish an offender or, in other words, to provide society with *retribution*. Finally, incarceration can provide an opportunity to administer treatment to offenders with the goal of *rehabilitation*. The bottom line is that, even though examining the benefits and costs of incapacitation may be useful, there may be other reasons why policy makers may want to either incarcerate or not incarcerate offenders.

Nevertheless, in the remainder of this chapter, we examine the benefits and costs of incapacitation. First, we provide estimates of the costs of incarceration for Minnesota prisons and jails and make a rough comparison of these costs with the benefits of incapacitation as measured by the costs of crime presented earlier. Next, we discuss the difficulties involved in making such comparisons. Finally, we examine what other studies of this issue have concluded.

Costs of Incarceration

Table 3.5 shows that the operating costs of Minnesota's state prisons were approximately $85 per day, or $31,000 per year, per inmate in fiscal year 2000. This average cost has decreased slightly in recent years as Minnesota's prison population has grown and the state's existing facilities are operated closer to capacity. The average cost does not include the state's newest prison at Rush City, which has not fully opened and, in fiscal year 2001, is operating at less than half its capacity. For 2001, the projected per diem cost of the Rush City facility is about $163, or roughly $60,000 per inmate per year.

Table 3.5: Estimated Prison and Jail Costs per Inmate, 2000

Type of Facility	Per Day	Per Year
Department of Corrections Prison		
Operating costs	$ 85	$ 31,000
Estimated construction costs	21 to 28	7,700 to 10,300
TOTAL COSTS	$106 to 113	$ 39,000 to 41,000
Private Prison	$ 55	$ 20,000
Local Jails and Corrections Facilities[a]		
Operating costs	$ 66	$ 24,000
Estimated Construction Costs	10 to 16	3,600 to 5,800
TOTAL COSTS	$ 76 to 82	$ 28,000 to 30,000

[a]These estimates are based on the average 1996 costs of facilities who responded to a DOC survey. We converted the estimates to 2000 dollars using the CPI-U.

SOURCE: Department of Corrections.

The $31,000 per inmate per year figure includes the ongoing costs of running Minnesota's prisons, including health care costs, but does not include any other portion of central office costs. We have not attempted to include central office costs since it could be argued that central office costs do not necessarily need to grow if another prison is added. It should also be pointed out that the Department of Corrections has developed a plan for reducing its facility operating costs per inmate by up to 20 percent.[11] The figures in Table 3.5 do not reflect DOC's proposed changes.

It costs between $20,000 and $40,000 to incarcerate an offender for one year.

On the other hand, adding another prison would involve financing construction costs. Generally, other studies have estimated the annualized costs of construction to be about one-fourth to one-third of the annual operating costs of a prison. Given an average annual operating cost of $31,000 per inmate, the estimated annual total costs including construction might be roughly $40,000 per inmate. Whether this estimate is reasonable would depend on the type of prison being built. The costs of building and operating a minimum security facility for property and other low-level offenders would be lower while the costs of a high-security facility would likely be much higher.

Another option that needs to be considered is the availability of suitable rental space. According to Department of Corrections staff, up to 200 beds have been available in the past at a private correctional facility in Minnesota. The rental rate at the facility was $55 per day, or about $20,000 per inmate per year. This rate compares favorably with the $40,000 per year estimate for DOC-operated facilities, but limited space would be available at this private facility and may not be suitable for all types of offenders.

Table 3.5 also provides an estimate of the per diem and annual costs of jails and other local correctional facilities in Minnesota. The estimated average operating cost per inmate of Minnesota's jails is about $66 per day or $24,000 per year. If construction of additional jail capacity were necessary, the total annual costs per inmate might be between $28,000 and $30,000. These estimates are much less certain than those for prisons since they are based on 1996 data on about 60 percent of the existing facilities. In addition, estimated construction costs are unknown but were based on 15 to 25 percent of the estimated operating expenditures. Finally, it should be pointed out that jail costs per inmate vary significantly around the state. The variation in costs reflects the different types of facilities operated around the state, the differences in their operations and services, and the degree to which the facility's capacity is utilized. The estimate presented in Table 3.5 is an average for facilities with a wide range in costs per inmate.

Comparing the Benefits and Costs of Incarceration

In this section, we make a rough comparison of the costs of incarceration with the potential benefits of incarceration as measured by the costs of crime avoided by incarcerating an offender. Given a prison cost of about $40,000 per year and a private facility cost of $20,000 per year, Table 3.6 estimates the number of

11 Department of Corrections, *Per Diem Reduction Plan for the Minnesota Department of Corrections Adult Facilities Division* (St. Paul, October 2000).

Table 3.6: Number of Prevented Offenses Needed per Year to Make the Benefits of Incapacitation Equal to Estimated Prison Costs, 2000

Type of Crime	DOC Facility	Private Facility[a]
Murder	0.01	0.01
Child abuse	0.6	0.3
Rape and sexual assault	0.4	0.2
Other assault or attempt	3.6	1.8
Robbery or attempt	4.2	2.1
DWI with injury or property damage	1.9	1.0
Arson	0.9	0.4
Larceny or attempt	90.9	45.5
Burglary or attempt	23.5	11.8
Motor vehicle theft or attempt	9.1	4.5
Child neglect	3.3	1.7

[a]The use of a private facility may not be appropriate for violent offenders.

SOURCE: Office of the Legislative Auditor's analysis.

offenses of a given type that an offender would have to commit each year in order for the benefits measured by the reduced costs of crime to equal the costs of prison.

The table suggests that preventing one murder in 100 years would be sufficient to justify imprisoning an offender. Alternatively, if there is a greater than 1 percent chance that the offender would commit a murder that year, the benefits of incapacitating the offender for a year may equal the costs of prison. For rape and child abuse, the number of offenses prevented per year needed to justify imprisonment for that year is less than one.

For other crimes, however, the benefits of incarceration would only equal or exceed the costs if an offender would have committed one or more crimes during the year. For property crimes, the number of offenses at the breakeven point would be between 5 and 9 motor vehicle thefts, 12 and 24 burglaries, or 46 to 91 larcenies or thefts. The range reflects the difference between incarcerating the offenders at a facility costing $20,000 per year and a facility costing $40,000.

Estimating the benefits of incarceration is particularly difficult.

Problems in Estimating Benefits

While this comparison would seem to make it simple to estimate the monetary benefits of incapacitating more offenders, it is actually quite difficult. At the root of the problem is the difficulty in knowing **the number and types of offenses** an offender would commit each year if not incarcerated. As we have seen, conviction data probably provide a relatively low estimate of the number of crimes an offender commits because convictions account for only a small percentage of the crimes committed. Studies that have examined the issue have used arrest data, inmate interviews, and other sources in an attempt to estimate the number of

It is hard to estimate the number and type of crimes prevented by incarcerating an offender.

crimes committed per year by the typical offender and the type of crimes they committed. However, these studies vary significantly in their estimates of the average number of offenses committed per year by active offenders—from about 5 to over 200 offenses per year. In addition, most offenders do not specialize completely in one type of crime. As a result, it becomes more difficult to calculate whether the benefits of incarcerating offenders exceed the costs. For example, a burglar, while usually specializing in burglaries, might commit a costly violent crime if confronted by a victim during a burglary.

A second problem is that it is difficult to estimate **the remaining length of an offender's criminal career**. If an offender is incarcerated but was likely to have ended criminal activity prior to the end of the prison sentence, then the benefits of incapacitation are less than would otherwise be the case. Offenders generally do not continue their criminal activities throughout their lives, but it is hard to predict when any particular offender or group of offenders will no longer be criminally active.

A third problem is that removing one offender from the streets may result in the **replacement** of that offender by others and little or no reduction in crime rates. For example, some researchers suggest that incarcerating a drug dealer is unlikely to result in a reduction in crime. The imprisoned dealer will simply be replaced by another individual willing to provide the illegal substances in demand.

Finally, it is somewhat difficult to predict the net impact of imprisoning an offender due to the fact that some **crimes are committed by multiple offenders**. If one offender is imprisoned but the offender's partner is not imprisoned, it is not entirely clear how the absence of the incapacitated offender will affect the offense rate of the offender who remains free. The crime rate could go down due to the absence of the partner or it could remain unchanged if the free offender acquires a new, previously inactive partner or learns to commit the same crimes without a partner.

Considering these difficulties, we did not attempt to use data from Minnesota to estimate the benefits of incarceration. While we had information on convictions in Minnesota, we had little basis on which to estimate the overall offense rates of chronic offenders. Offenses that are not reported to police and reported offenses for which no arrest is made are difficult to attribute to any particular offender or group of offenders. Instead, the remainder of this chapter examines national studies that have addressed some or all of the estimation problems outlined above.

Previous Studies

Much of the research into and controversy about the cost effectiveness of incarceration has focused on the number of offenses committed by the average inmate rather than the cost of crime. Even though significant issues can be raised about how to measure the cost of crime, it has been even more difficult to reach consensus about the average number of offenses committed by offenders before they went to prison. At the root of the problem is the fact that offenders typically commit more offenses than the number for which they are convicted.

Early studies found the benefits of incarceration exceeded the costs.

Early studies of this issue estimated the offense rate using data from prison inmate surveys conducted by the RAND Corporation. A 1987 study by Edwin Zedlewski concluded that each additional incarcerated inmate would reduce the annual cost of crime by $430,000 but only cost $20,000 to incarcerate.[12] Zedlewski used an offense rate of 187 offenses per year, not including drug crimes, and estimated that each avoided offense would save an average of $2,300 in crime costs.[13]

David Cavanagh and Mark Kleiman reached similar conclusions in 1990 using the RAND survey data. They estimated the annual cost of crime averted by imprisoning one offender to be between $172,000 and $2,364,000, including indirect and other social costs in addition to the out-of-pocket and quality of life costs. In contrast, they estimated the cost of incarceration to be $23,000 to $70,000, including prison operating and capital costs of $12,000 to $48,000 and $12,000 to $22,000 in lost offender wages and public costs of supporting the offender's family. This study used an offense rate of 199 to 689 crimes per inmate per year including drug crimes.[14]

But these studies overstated the number of crimes prevented by incarceration.

The most important problem with these early studies is the offense rate used to estimate the reduction in crime costs due to incarceration. The average offense rates calculated using the RAND Corporation data were not representative of the majority of inmates surveyed and probably not representative of most offenders not in prison. Half of the surveyed inmates said they committed fewer than 15 crimes per year, while 25 percent committed more than 135 crimes per year and 10 percent committed more than 600 crimes annually.[15] Thus, the conclusion reached by these studies may not have been valid even for most of the current inmate population.[16] Furthermore, the implication that it would be beneficial to incarcerate a greater number of offenders was not based on any analysis of the offense rate for offenders not currently in prison. These offenders could have a much lower average offense rate than the average rate for those incarcerated.

More recent research on offense rates and the relative benefits and costs of incarceration does not provide a clear consensus but is generally less supportive of the conclusions reached by the earlier studies. The most comprehensive examination of offense rates, criminal career lengths, and benefit-cost calculations is contained in a 1994 book written by William Spelman, a professor at the

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12 Zedlewski added $5,000 per year in lost wages for incarcerated offenders and other social costs to the $20,000 figure for a total of $25,000 in prison and other social costs. See Edwin W. Zedlewski, *Making Confinement Decisions*, National Institute of Justice, Research in Brief (Washington, D.C., July 1987).

13 Most of the studies discussed in this section except the Zedlewski study do not explicitly consider most of the public costs of crime such as court, prosecution, and public defender costs. The rationale for not including these costs is that these costs may increase if a jurisdiction attempts to send more offenders to prison and more defendants choose to go to trial rather than plead guilty. The increase could offset any reduction in costs occurring because more offenders are eventually incarcerated and unable to commit crimes.

14 David P. Cavanagh and Mark A. R. Kleiman, *A Cost Benefit Analysis of Prison Cell Construction and Alternative Sanctions*, a BOTEC Analysis Corporation report prepared for the National Institute of Justice (Washington, D.C., June 1990).

15 Zedlewski, *Making Confinement Decisions*, 3.

16 These studies did not provide insight into whether those who committed relatively few crimes had committed more serious and costly crimes. If they had, the benefits of incarcerating those individuals may still have exceeded the costs.

University of Texas.[17] Spelman reexamined the RAND data and examined other studies of arrest rates as well. He concluded that the offense rate varies significantly depending on the group of offenders being considered. According to Spelman, the average active offender commits about 8 crimes per year, while offenders who are incarcerated at some point in their careers commit an average of 30 to 50 crimes per year when active, and incoming prison inmates have committed an average of 60 to 100 crimes per year.

One of the problems facing the criminal justice system is that these averages are not representative of the groups of offenders being examined. As we mentioned above, the distribution of offense rates is highly skewed—that is, the average offense rate is not representative of most of the offenders in the group. The average is higher than the rate for most of those in the group because the rate is very high for a small percentage of offenders in the group. If the criminal justice system could somehow identify those offenders with high offense rates, it could perhaps more selectively incarcerate just those offenders. The problem with that strategy is that there is not good information about offense rates of individuals, and judges might be rightfully reluctant to sentence individuals based on offense information other than prior convictions of an offender. Furthermore, researchers have not been able to predict with much success the future criminal activity of an offender.[18]

More recent work shows the difficulty of reaching definitive conclusions about the net economic benefits of incarceration.

Spelman estimated prison and other social costs of incarceration to be about $40,000 per year and estimated the cost per crime, including the same types of costs used by Cavanagh and Kleiman, to be about $5,100. He found that a 1 percent increase in prison capacity would cost $360 million annually and would reduce crime by 0.12 to 0.20 percent, resulting in reduced crime costs of $306 million to $512 million per year. The net result would be somewhere between a $54 million loss and a $152 million gain. His best estimate was that a 1 percent increase in prison capacity would result in a net gain of $41 million per year for the nation. However, in reaching these estimates, Spelman inflated the measured costs of crime—including monetary losses, pain and suffering, and other quality of life losses—by 300 percent to include indirect costs of crime such as the costs of additional security and crime prevention, reduced social interaction and solidarity, reduced trust, and disintegration of the sense of a community.[19]

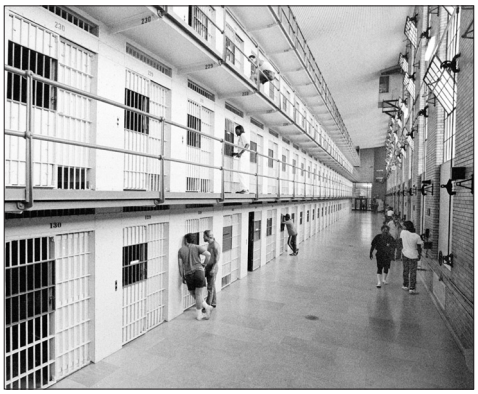
Spelman concluded that "…for most states and the nation as a whole, constructing additional jails and prisons is a risky investment with a very uncertain payoff."[20] He also suggested that states with low incarceration rates and low incarceration costs would be more likely to obtain net benefits from incarcerating more individuals. As discussed earlier in this chapter, Minnesota has a low incarceration rate but high incarceration costs. Minnesota might be able to benefit from incarcerating more offenders if it could be done at a lower cost. Although

17 William Spelman, *Criminal Incapacitation* (New York: Plenum Press, 1994).

18 See Spelman, *Criminal Incapacitation*, 99-100, and Peter W. Greenwood and Susan Turner, *Selective Incapacitation Revisited: Why the High-Rate Offenders Are Hard to Predict*, RAND Corporation report for the National Institute of Justice (Washington, D.C.: March 1987).

19 Spelman based this estimate of indirect crime costs on a 1984 study that examined the effect of crime on housing prices. See W.W. Greer, "What is the Cost of Rising Crime?" *New York Affairs*, vol. 8 (January 1984), 6-16.

20 Spelman, *Criminal Incapacitation*, 227.



Spelman did not directly recommend a general increase in the nation's incarceration rate, he suggested that a better return could be achieved by police and prosecution policies that more selectively focus on high-rate offenders.

Several other studies are worth mentioning. In a 1994 article, researcher Thomas Marvell concluded that "prison populations appear to be near an equilibrium point from a cost-benefit viewpoint."[21] He calculated the annual cost of prison operation and construction to be $29,000 per inmate. Using a higher estimate than Spelman of the reduction in crime resulting from a 1 percent increase in incarceration, Marvell estimated the avoided out-of-pocket costs of crime to be about $19,000 per offender incarcerated. To that figure, he added $18,000 per offender for reduced pain and suffering and psychological injuries to victims. But, given the uncertainties involved with estimating this latter category as well as other benefits, he concluded that the estimates of costs and benefits do not differ by much. Unlike Spelman, he did not include any indirect costs of crime in the benefits of incarceration, nor did he include any offender costs in the costs of incarceration.

In a 1996 article, Harvard researcher Steven Levitt estimated that each additional inmate incarcerated would reduce crime costs by $53,900, which he said was probably higher than the costs of incarceration plus the social costs of incarcerating an offender (such as lost wages and pain and suffering for offender families).[22] Using a statistical analysis of states with judicial orders regarding prison overcrowding, Levitt estimated that each newly incarcerated inmate would have committed 15 Part I offenses per year and found that assault, robbery, and burglary decreased the most in response to increases in imprisonment. His estimates of the reduced costs of crime included the types of costs shown in Table 3.4 but did not include any indirect costs of crime.

Levitt's statistical techniques measured both the effects on the crime rate of incapacitating more offenders and deterring others from committing crimes. His estimates could be criticized for being based largely on southern states with high incarceration rates, although he suggests that the responsiveness of the crime rate to increased incarceration may be higher in states with lower incarceration rates.

Levitt concluded that: "While calculations of the costs of crime are inherently uncertain, it appears that the social benefits associated with crime reduction equal or exceed the social costs of incarceration for the marginal prisoner."[23] Despite

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21 Thomas Marvell, "Is Further Prison Expansion Worth the Costs?" *Federal Probation*, vol. 58, no. 4 (Washington, D.C., December 1994), 61.

22 Steven D. Levitt, "The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation," *Quarterly Journal of Economics* 111 (Cambridge, MA, May 1996), 319-351.

23 *Ibid.*, 319.

this conclusion, Levitt stated that: "The finding that increased prison populations appear to substantially reduce crime does nothing to reduce the importance of identifying and correcting those factors that lie at the source of criminal behavior."[24] He commented that, if feasible, crime prevention or rehabilitation is preferable to prison from "both a cost-benefit and humanitarian perspective."[25] Levitt suggested that early-childhood programs and family-intervention programs are worth considering, along with alternative sanctions such as community-based sentences and boot camps.

Even if the benefits of incarceration exceed its costs, incarceration is not necessarily the most cost effective option.

We conclude that:

- **The research studies we reviewed do not provide a clear consensus regarding the relative benefits and costs of incarceration.**

The difficulties in estimating the number of offenses committed by offenders, as well as the uncertainties involved in estimating the costs of crime, make it difficult to draw any firm conclusions. Another problem is that:

- **The existing studies of the benefits and costs of incapacitation fail to provide much insight into how to maximize the benefits from increasing incarceration.**

The studies either provide no such insights or do not provide convincing evidence to support their recommended approaches. Levitt suggested keeping the current group of prisoners behind bars for longer periods because they are likely to be more criminally active than offenders that have not typically been incarcerated.[26] However, keeping the current offenders behind bars longer is impractical since they have already been sentenced. Minnesota requires them to be released after they have served two-thirds of their sentences unless the Department of Corrections holds them longer due to violations of prison rules. Levitt may have intended to say that prison sentences for future convicted felons should be lengthened. However, he provided no advice regarding the particular types of offenses and offenders that should receive longer sentences. In addition, he provided little insight into why other approaches such as increased targeting of career criminals by police and prosecutors should not be considered instead.

As discussed earlier, Spelman recommended that police and prosecutors focus more on career criminals. His rationale was laid out in great detail, yet his recommendation was clouded by skepticism on his part that police and prosecutors could adequately target high-rate offenders. His skepticism may be appropriate to a certain degree because many crimes are never solved and high-rate offenders may be more adept at evading police detection than other offenders. Police and prosecutors can only target their resources at those offenders whose crimes are detected, and courts can only sentence offenders in accordance with their convictions.

It should be pointed out that none of these studies, except the Levitt article, includes the effect of a higher incarceration rate in deterring others from

24 Ibid., 348.

25 Ibid., 348.

26 Ibid., 347-348.

committing crimes. While literature on deterrence suggests that deterrent effects may be important, it may be more important to increase the chance that offenders are caught and convicted of the crimes they commit than to focus on increasing the length of sentences for those who are convicted.[27] Offenders may respond more to an increase in the certainty that they will be punished than to the lengthening of sentences they have a small chance of receiving.

27 See Andrew von Hirsch, Anthony E. Bottoms, Elizabeth Burney, and P-O. Wikstrom*, Criminal Deterrence and Sentence Severity: An Analysis of Recent Research* (Oxford, UK, 1999) and Daniel S. Nagin, "Deterrence and Incapacitation," in Michael Tonry, ed., *The Handbook of Crime & Punishment* (New York, 1998), 345-368.