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Does it Pay to Invest in Reentry Programming for Jail Inmates?

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In this paper, we consider the costs and benefits of providing reentry services to a jail-based population, including those arrested but not convicted. We first estimate average spending on jail-based reentry in the few communities actively implementing these programs. We then estimate how much crime would have to be prevented for the reentry investment to break even. Overall, we find that very modest reductions in offending are necessary to offset the costs of jail-based reentry. We also find that most of the benefit accrues to the public and not to government agencies. We conclude with some suggestions for local government agencies to recoup their investment in jail inmates.

On a typical day, more than 700,000 Americans will be incarcerated in jail. Decisions about the appropriate level of investment in this population to prepare inmates for a successful return to the community are limited by scarce jail resources and complicated by the transient nature of the population. Average jail stays are brief, often less than two weeks, as many inmates are quickly released or transferred to prisons to serve longer sentences. Given the volume of jail entries and releases, it is prudent to consider the implications of providing services to those serving time in jail. Often, jails and jail funders ask the question: will we see a return on our investment in reentry by reducing demand for jail space and permitting jail resources to be made available for other uses? The relative paucity of jail reentry programs nationally suggests that many jails do not expect a return adequate to justify the investment.

In this paper, we conduct an economic analysis to determine whether or not such an investment in reentry services is cost-effective. The preferred approach would be to compare the costs of providing reentry programming to any benefits from improved outcomes. However, since there are few jail-based reentry programs, and even less data, there is no empirical basis to make such a comparison. While we cannot directly test the hypothesis that jail-based reentry programming is a cost-effective strategy, in this paper we ask a similar question - how much of a reduction in crime would have to occur to offset the costs of jail-based reentry? We believe it is reasonable to suggest that if large reductions in crime are required to offset the costs of programming, jail-based

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reentry may be infeasible. However, if only relatively small reductions in offending are required to offset the costs of new programs, then these types of programs deserve consideration.

We find that under a variety of conditions, jail-based reentry programs would have to reduce recidivism by less than two percent to offset the cost of jail-based programming. Put another way, we find that reentry programs for jail-based inmates produce benefits large enough to offset the cost of the investment with only a modest reduction in crime. However, policymakers should not necessarily expect to see the benefits of reduced recidivism in their local jail budgets. In general, small reductions in crime yield large benefits to the public. Public agencies also see benefits from reduced crime, but the benefits are smaller than the benefits to the public. As demonstrated in this paper, we estimate that approximately 70% of the benefits of abated crime accrue to community members while the remaining 30% accrues to the criminal justice system.

Our findings indicate that the case for jail-based reentry programming is strong. However, the strength of that claim is based on the perspective from which it is evaluated. If the goal of jail-based reentry is to reduce crime in the community and benefit the public, then the evidence for jail-based reentry is compelling. Many cost-benefit studies have found that there are large costs of crime to victims and reductions in crime yield large savings to those who are not victimized (see Cohen 2000). If the goal of jail-based reentry is to control local costs associated with jailing offenders, we conclude that jail reentry may have a small positive impact on spending though the evidence in favor of this hypothesis is not as strong.

When jails ask whether they will we see a return on their investment in reentry the answer appears to be “no” in the short-run and “maybe” in the long-run. Governmental spending on corrections appears to be relatively impervious to changes in the amount of crime committed. In the last two decades, index crime rates have fallen by more than 20%. In the same period, spending on local jails has increased more than 600% and capacity has increased every year with a net gain of more than a half million prison beds, tripling local jail capacity. We believe that among the reason why jails and prisons have not benefited from the reduction in crime – and why they are reluctant to invest in reentry programs - is a misperception about how benefits occur. Corrections agencies appear to believe that successful programs will leave budgeted dollars unspent at the end of the budget cycle. The empirical evidence strongly contests this notion. In contrast, corrections agencies may be able to recoup their investments by directly reducing budget items in anticipation of reduced demand for beds.

In this paper, we first describe the size of the jail population and the costs associated with serving those inmates. Next, we briefly summarize the design of this research. Then, we describe our empirical approach and results. We conclude with a discussion of the implications and limitations of our approach.

CRIME AND INCARCERATED POPULATIONS

Prisoner reentry programs began in state prisons. In order to understand whether jail-based reentry is a reasonable extension of these programs, it is instructive to consider whether the overall trends in jail and prison are similar. Since many of the same social and governmental mechanisms that affect state prison populations also affect jail populations, a natural place to begin our discussion is with an examination of trends in state prison populations. In addition to trends in correctional populations, we consider the relationship between prison and jail sizes and changes in the crime rate. The implications are important for economic analysis – if correctional systems are relatively unresponsive to changes in crime rates, questions are raised about how researchers should treat reductions in recidivism. This subject is addressed in more depth later in the paper.

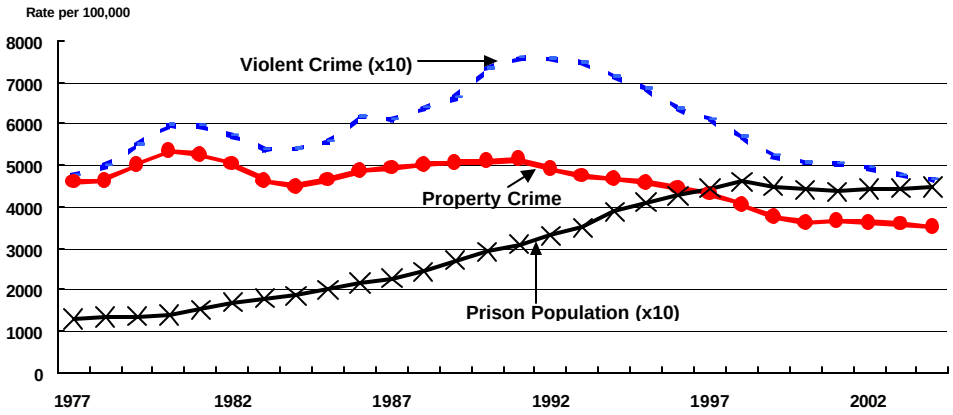
A significant scholarly literature exists that attempts to untangle the relationship between crime and the size of the incarcerated population. Most research has concluded that crime and prison have a straightforward, simultaneous relationship. Increases in the crime rate will yield increases in the number of offenders incarcerated. As incarceration both incapacitates likely offenders and deters potential offenders, increases in the prison population should reduce crime. Eventually some equilibrium should be established, but there is no consensus about the size of the prison population and the amount of crime that would yield a stable equilibrium. Crime control research has generally focused on quantifying the amount of crime prevented by larger prison populations. While the subject remains highly controversial, there is a general consensus in the academic community that each additional person incarcerated leads to a reduction in the number of crimes committed in the community (Levitt 1996; Spelman 2000).

Over the last three decades, prison populations have grown rapidly. On December 31, 1977, about 268,000 people were incarcerated in a state prison. By December 31, 2004 there were almost four times as many state prisoners, more than 1.3 million. Concurrently, the number of prison releasees had grown as well, totaling more than 600,000 annually in 2003. This rapid increase in the number incarcerated offenders, and subsequently released, has in, large part, driven interest in reentry programs.

The increase in incarceration rates has begun to steady in recent years. Between 2000 and 2004 the number incarcerated in state prisons as a percentage of the population has remained relatively steady. While the number incarcerated has continued to increase, that increase is now equivalent to the growth in the overall population. The increase in state prison populations is graphically described in Figure 1.

Figure 1

As index crimes have fallen, the incarceration rate in state prisons has risen.



Source: Bureau of Justice Statistics.

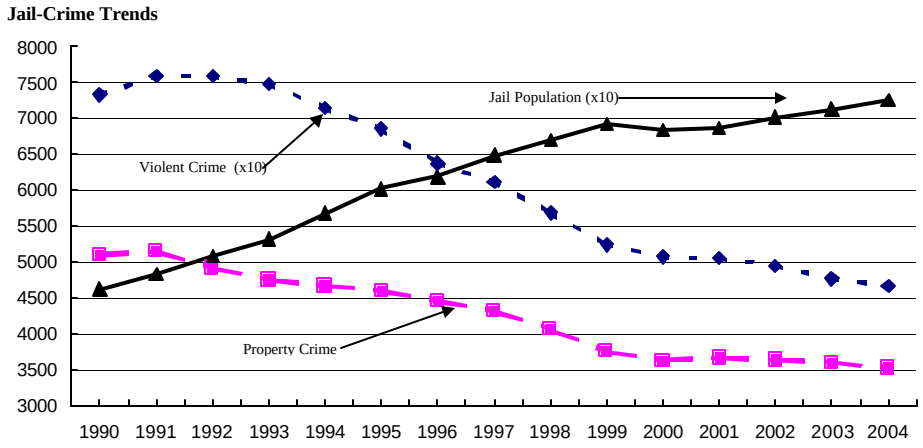
The data on the relationship of crime rates to jail populations is strikingly similar to the prison-crime data. Figure 2 describes the change in the size of the jail population (per 100,000) from 1990-2004 compared to the number of index crimes reported. During this period, the number of reported crimes peaked, and then fell for more than a decade. By contrast, the number of jail inmates increased steadily throughout the period. Expanding the time series slightly, from 1985 through 2005, jail populations have about tripled, from a daily average of about 250,000 to almost 750,000.

In both Figure 1 and Figure 2, the crime rate is represented by data from the Bureau of Justice Statistics on the number of index crimes per 100,000 US residents, including separate trends for violent crimes and property crimes. Although violent offenders facing felony sentences are unlikely to receive jail time, both property and violent offenders are likely to spend at least some time in jail, and many convicted of property offenses will ultimately serve their sentences in jail. While prison and jail populations grow steadily throughout the thirty years in this series, crime fluctuates. Since

1993, the crime trend has been down, and overall there is about a 20% reduction in the number of crimes committed in this period.

Figure 2

In the past two decades, the size of the jail population has increased while the jail crime rate has declined.



Source: Bureau of Justice Statistics.

The increase in incarceration juxtaposed with the decrease in crime is striking, and suggests that incarceration rates have exceeded the demand as measured by crime. However, a number of plausible explanations support the notion that increasing incarceration rates are appropriate. For example, the likelihood that any single offender could be identified, arrested, convicted and incarcerated could increase. Average length of sentences imposed and average length of time served could increase as well. The rates at which individuals whose offenses do not appear in crime statistics are incarcerated – those who commit drug crimes and those who are incarcerated on technical violations of community supervisions – could rise as well.

Another factor that would seem to affect the number of jail inmates, is the capacity of jails to house inmates. Beginning in 1984, the jail system as a whole experienced a steady increase in the number of jail cells. During that period, the average increase in jail capacity was 25,000 beds, with an average annual increase of more than a 5% (Table 1). Throughout the period, jail populations were close to capacity.

Table 1

Jail capacity has increased every year between 1984 and 2004.

Year	Rated capacity	Amount of capacity added	Percent of capacity occupied
2005	789,001	33,398	95
2004	755,603	19,132	94
2003	736,471	22,572	94
2002	713,899	14,590	93
2001	699,309	21,522	90
2000	677,787	25,466	92
1999	652,321	39,541	93
1998	612,780	26,216	97
1997	586,564	23,593	97
1996	562,971	17,208	92
1995	545,763	41,439	93
1994	504,324	29,100	96
1993	475,224	26,027	97
1992	449,197	27,960	99
1991	421,237	32,066	101
1990	389,171	21,402	104
1989	367,769	28,136	108
1988	339,633	38,435	101
1987	301,198	15,472	98
1986	285,726	12,896	96
1985	272,830	11,398	94
1984	261,432	-124	90
1983	261,556	261,556	85

Source: Bureau of Justice Statistics.

Despite the large increases in the number of jail inmates, reentry programming has been limited for jail populations. A significant barrier to reentry programming in jails is the combination of relatively short periods of incarceration and the relatively rapid movement of prisoners within systems. An Urban Institute study of the Philadelphia Prison System (PPS), which includes all of the jails in Philadelphia, found that the median period of incarceration was 15 days (Roman, Kane, Turner and Frasier 2005). While sentenced inmates in jail serve longer jail terms – the Bureau of Justice Statistics estimates an average sentence of between 9 and 10 months (BJS 2005) – this

population encompasses a relatively small percentage of the inmates in jail on any given day, about 10% in Philadelphia (Roman et al 2005).

While inmates may cycle through a jail relatively rapidly, they are also likely to experience multiple periods of incarceration in a jail. The Urban Institute study of PPS examined data on all inmates admitted and released from PPS between 1995 and 2002. During that eight year period, 250,000 inmates entered and exited the PPS jails. Of these, about 53,000 entered and were released a single time. Another 53,000 entered and were released multiple times – for a total of more than 200,000 admissions and releases in those eight years. By the end of the eight year period, 82% of inmates in PPS had a previous admission to PPS. Since inmates may have been arrested again before or after the study period, the actual percentage of PPS inmates with multiple periods of exposure to PPS is certainly greater. Despite the short period of any single period of incarceration, jail inmates may therefore experience enough cumulative exposure to warrant jail-based reentry programming.

FINANCING JAILS

A general estimate of the cost of a day of local corrections can be derived from data describing the total amount spent on jails around the country, and the average daily population. Table 1 describes annual spending on local jails between 1982 and 2003. During this period, the annual cost of jails increased about 600%, increasing at about twice the rate of growth of the jail capacity, and more quickly than the rate of growth of the inmate population. Per capita, per day spending on jail inmates also increased slightly during this period. However, these data only provide a rough approximation of jail costs, since local corrections expenditures include special populations – such as juveniles and the criminally insane - that are more expensive to house.

Table 2

Annual Expenditures on Local Corrections

Year	Local Corrections	State Transfers to Local Corrections	Total Local Corrections	Cost Per Capita/ Per Day
1982	$3,011,000,000	$3,104,170,566	$6,115,170,566	
1987	5,947,000,000	6,131,020,377	12,078,020,377	
1992	10,404,000,000	10,725,935,094	21,129,935,094	$112
1997	13,007,000,000	13,409,480,755	26,416,480,755	$110
2000	15,934,000,000	16,427,052,075	32,361,052,075	$123
2001	16,721,000,000	17,238,404,528	33,959,404,528	$127
2002	18,358,000,000	18,926,058,868	37,284,058,868	$132
2003	18,656,000,000	19,233,280,000	37,889,280,000	$129

Source: Bureau of Justice Statistics

No national data exist detailing the costs of housing prisoners in local jails on a per day per capita basis. As such, we rely on data describing the cost of prison from three jurisdictions to develop estimates of the costs of jail. Since jail costs are highly dependent on county and state-specific characteristics, the daily cost of housing inmates varies considerably from jurisdiction to jurisdiction:

- Allen County, IN reports a daily operating cost per prisoner of $40 per day;
- Hampden County, MA reports a $78 per day inmate cost;
- Montgomery County, MD's daily operating costs are approximately $137/day.

These data describe three alternative jail incarceration cost environments. Ultimately, the cost effectiveness of reentry services is dependent on the cost environment faced by a particular jurisdiction.

STUDY DESIGN

We use a standard cost-benefit analysis to estimate (a) the likely effects of providing reentry programming to inmates returning from local jails and (b) the conditions under which reentry programming is most likely to be cost-effective. The study first estimates the average cost of a jail-based reentry program.[2] Since there is a limited best practices literature describing the services associated with jail-based reentry, it is not possible to cost each of the elements that would comprise jail-based reentry. Instead, we identify two communities with active jail reentry programs. In these two communities, jail-based reentry generally entails the addition of jail-based staff with training to provide services to inmates while incarcerated in jail. In these communities, the additional cost of jail reentry are generally defined as additional staff. Because services may also be provided in the community, we develop estimates of a third reentry program designed to serve inmates post-release. The cost of providing reentry services to inmates (CRS) include:

- The costs of providing reentry services including the provision of life skills and substance abuse counseling, employment and education services, healthcare and a variety of other services designed to seamlessly reintegrate a returning inmate into the community.

Next we estimate the benefits of providing these services. In a cost-benefit analysis, the benefits of a crime control program take the form of averted or prevented costs – e.g. costs that would have

[2] For this study, we assume that most jails provide no reentry preparation services. We believe that this is a conservative assumption, since many jails do attempt to prepare inmates for release in some form.

occurred absent an intervention. These benefits have two components: the costs to victims of crime that are prevented and the costs to the criminal justice system that are prevented.

- The costs to victims include the costs of lost wages, medical care, and pain and suffering. The economic literature provides estimates of the cost of victimization for a variety of offenses. These estimates are based on economic damages resulting from victimization and from jury awards for various injuries in civil lawsuits.
- The costs to the criminal justice system include the costs of investigation, arrest, prosecution, and incarceration.

A jail-based reentry program would be expected to add costs to corrections budgets, since the programming requires additional staff or additional outside contracting. In order to offset those costs, the programs would need to reduce the number of new crimes committed to a level below the number that would have been expected to occur if no program had been implemented. Alternatively, the program could reduce the severity of the new crimes committed, where inmates treated by a reentry program commit new crimes that are less severe than would have been anticipated.

This study consists of the following steps:

- estimate the costs of providing reentry services (CRS).
- develop estimates of the cost of processing offenders in the criminal justice system.
- develop estimates of the costs of new crime to victims.
- develop estimates of the amount of new crime that would have to be prevented (the benefits) in order to make the investment in jail-based reentry cost neutral. Hereafter, this is referred to as the breakeven recidivism rate – the reduction in recidivism we would have to observe in order for new investment in reentry programming to be cost-effective.

Mathematically, the "breakeven" recidivism rate (r) is defined as the difference between the expected recidivism rate and the post-jail reentry recidivism rate. We isolate the cost of providing reentry services (CRS) and se it equal to the sum of the cost of recidivism to crime victims (CR) and the cost of recidivism to the criminal justice system (CCJ). The breakeven recidivism rate r is the amount of recidivism that would have to be reduced to make the costs and the benefits of jail-based reentry equivalent:

$$CRS = r*(CR + CCJ) \qquad (1)$$

More simply, the breakeven recidivism rate is the ratio of the cost of providing reentry services to the average inmate to the benefits of abated crime accruing to society if the average inmate does not recidivate:

$$r = CRS / (CR + CCJ) \quad (2)$$

As an illustration, suppose a county spends $1 million annually on the county jail. Suppose that the inmates released from that facility commit new crimes annually that total $1 million in damages to residents. Now suppose that the county decides to spend $200,000 annually on new jail-based reentry services. In the equation above (2), r= $200,000/ (1,000,000+1,000,000), or r=0.10. Therefore, it would be necessary for recidivism to be cut by 10% in order for the new investment in reentry to be cost-effective.

For this study, we develop estimates of CRS, the cost of providing reentry services, CR, the cost of new crime to victims and CCJ, the costs of processing new offenders. However, the expected reduction in recidivism from providing is not known, and cannot be estimated from the existing research literature. Therefore, in this paper we solve for r. While the interpretation of whether the r we derive in this paper demonstrates that jail-based reentry is cost-effective is left to the reader, we believe that if r is relatively small, jail-based reentry is a feasible approach and if r is relatively large, the case for jail-based reentry is more difficult.

THE COST OF REENTRY SERVICES

In recent years, significant attention has been focused on the impact of persistent increases in the number of people incarcerated in the United States, increases in the number of people returning to communities after completing a period of incarceration, and increases in the number of people within communities who have ever been incarcerated. While the empirical literature on the relationship between returning inmates/prisoners and crime is limited, research suggests that changes in the numbers of inmates returning to particular communities is related to the level of crime within a community (Sabol and Lynch 1997). Researchers examining the effects of increases in the number of ex-prisoners have found that a small number of communities receive disproportionate numbers of returning prisoners (Clear, Rose, and Ryder, 2001; Hagan and Coleman, 2001; Travis, Solomon, and Waul, 2001; Mauer, 2000; Bonczar, 2003). The arrest and incarceration of new offenders may then lead to the removal of large numbers of young men from a community, which may add to the disruption to the community fabric (Rose, Clear, Waring and Scully, 2000).

Reentry programs attempt to break the cycle of crime and imprisonment by investing in human capital, to address the deficits in education and employability of inmates (Hagan and Dinovitzer,

1999; Sabol and Lynch, 1997). Typically, the inmate is removed from society and placed in an institution where treatment programs, or other formal preparation for return to the community have limited availability or accessibility. Too often, the ex-prisoner is ill-equipped to deal with the stressors to be faced upon return to the community (Moore and Mears 2002). These stresses (financial, personal, and medical) may be compounded by other problems (such as substance dependence and mental health problems) that are related both to prior offending and to an ex-prisoners likelihood of future offending.

Some programming is available in jail and prison. Typically, these programs are designed to address ongoing problems such as substance abuse, anti-social behavior, and mental health disorders. Many prisons (91%) – but fewer jails (60%) – also have some programs designed to assist inmates through human capital building programs such as educational and technical courses (Pastore and Maguire, 2005). The challenges in delivering services to this population are compounded by issues unique to the prison system, such as a lack of information about and inmates needs and the lack of coordinated treatment plans (Moore and Mears 2002).

Overall, prisons have not been successful in meeting these challenges, and appear to have become even less successful over time (Travis, et al., 2001). Nationwide, the percentage of state prisoners participating in various programming has dropped substantially from 1991-1997, mainly due to fewer available resources (Sabol and Lynch 1997):

- Prisoners participating in residential substance abuse treatment in prison dropped from 25 percent in 1991 to 10 percent in 1997;
- Prisoners participating in vocations program dropped from 31 percent to 27 percent;
- Prisoners participating in education programs dropped 43 percent to 35 percent.

No national data documents the costs of offering reentry services to inmates. Here, we rely on administrative cost data obtained from Hampden County, Massachusetts and Montgomery County, Maryland to provide estimates of the cost of adding staff to develop within-jail reentry programs, as well as cost estimates from the Safer Foundation, a nonprofit organization that specializes in providing jail reentry services in Chicago, Illinois. The two jail system estimates represent relatively modest investments in jail-based reentry, since they do not include post-release community service provision. The Safer model represents the costs of a comprehensive suite of reentry services. Each of these three organizations faces differing costs of providing treatment to returning inmates. Since costs of providing services differ substantially between jurisdictions, examining the costs faced by several jurisdictions is prudent.

Personnel Costs

Hampden County, Massachusetts

Hampden County, Massachusetts is currently operating a jail reentry program for approximately 1,850 locally incarcerated inmates. To provide these services to returning inmates, Hampden County employs three full-time personnel and four additional personnel, each of whom devote approximately 25% of their time to providing education and employment services to incarcerated and returning inmates. In addition, Hampden County employs the equivalent of three healthcare workers who provide both physical and mental health services to inmates, helping returning inmates to make arrangements to receive services once they are released from jail. Three full-time reentry case workers, a part-time reentry case worker and six paid mentors (who work eight hours per week) help returning inmates deal with life issues on a day-to-day basis. Hampden County has also built a database of the needs of inmates to assist in meeting the specific needs of returning inmates. The total operating costs of providing reentry services, summarized in detail below, are $727,500 or about $392 per inmate.

Table 3

Annual Reentry Staff Expenses, Hampden County, Massachusetts

Cost of Services[3]	Total Cost	Cost per Inmate
Education and Employment (4 FTEs)	$203,200	$109.48
Healthcare (3 FTEs)	$228,600	$123.17
Database of Released Inmates	$50,000	$26.94
Reentry Managers (3 FTEs)	$205,740	$110.85
Part-time reentry manager	$15,000	$8.08
6 paid case managers (part-time)	$24,960	$13.45
Total	**$727,500**	**$391.97**

Source: Hampden County, Massachusetts Department of Corrections

Montgomery County, Maryland

Montgomery County, MD provides extensive reentry services to the over 9,000 inmates who are released from jails on an annual basis. Resident supervisors oversee inmates during their release into a community corrections facility and once they are released into the community. Correctional specialists provide daily, direct counseling to inmates, helping them to receive life skills, substance abuse, employment training as well as other services as needed. The total personnel costs of providing reentry services to Montgomery County's inmate population are $5,265,468 or approximately $575 per returning inmate.

[3] Assumes 1856 individuals served, the average total inmate count for FY05

The following table summarizes operating (non-personnel) expenses faced by Montgomery County in providing reentry services. Montgomery County's non-personnel costs total $97 per inmate or approximately 14% of total service costs.

Table 4

Annual Reentry Non-Staff Expenses, Montgomery County, Maryland

Category	Total Cost	Cost per Inmate
Services and Contracts	$552,270	$60
Food service	193,970	21
Laboratory services	39,400	4
Medical services	106,200	12
Psychological services	112,400	12
Electronic monitoring services	100,300	11
Communications Services	48,440	5
Mail Services	3,030	0
Outside Printing and Photocopying	2,000	0
Assigned motor pool vehicles	54,890	6
Travel	2,600	0
Education, Tuition and Training	6,720	1
Office Supplies and Equipment	18,580	2
Medical/Health Supplies	79,770	9
Books, Videos and Subscriptions	19,000	2
Other Supplies and Materials	23,000	3
Repairs and Maintenance	31,000	3
Miscellaneous Operating Expenses	49,150	5
Inmate/resident labor payments	8,500	1
Other	40,650	4
TOTAL	**$890,450**	**$97**

Source: Montgomery County, Maryland Department of Corrections

Safer Foundation (Chicago, IL)

The Safer Foundation, a nonprofit organization located in Chicago, IL, has provided reentry services to inmates returning to Chicago, IL for over thirty years. Safer provides intensive counseling, life skills training, educational services and employment and transitional work services. It's service offerings are generally more intensive than those offered by Departments of Correction and Parole. Safer estimates that they can provide job readiness, placement and retention services for a cost of $1800 per client and customized care and mentoring for an additional $1200 per client, for a total of $3000 per client in "high-end" intensive reentry services. Estimated per-inmate costs of varying types of reentry services are summarized below:

Table 5

Summary of Annual Reentry Expenses

	Low Cost (Hampden County)	High Cost (Montgomery County)	Contracted Services (Safer Foundation)
Per inmate staff total	$392	$575	
Per inmate non-staff total [4]	$97	$97	
Per inmate total	$489	$672	$3,000

Sources: Hampden County, Massachusetts Department of Corrections, Montgomery County, Maryland Department of Corrections, Safer Foundation.

BUSINESS AS USUAL: THE COST OF PROCESSING OFFENDERS IN THE CRIMINAL JUSTICE SYSTEM

Though no national data exists on processing costs by offense for local governments, Cohen, Miller and Rossman (1994) provide estimates for the cost of a single arrest associated with a limited number of crimes including assault ($14), murder ($105), rape ($43) and robbery ($22). Costs, reported in 1987 dollars, were derived by multiplying average time spent on a case in each category by police salaries including fringe benefits, estimated to be $22 per hour. Cohen, Miller and Rossman (1994) also calculate the costs of investigation, prosecution and court-related costs. Their results, expressed in 2005 dollars are summarized below.

Table 6

Cost of Processing Offenders in the Criminal Justice System

Charge	Arrest cost	Processing cost, Miami-Dade County [5]	Legal (Indigent) Defense Cost	Criminal Justice Administration Cost	Total Cost
Assault	$24.07	$2,893.40	$364.47	$1,805.15	$5,087.09
Murder	180.51	2,893.40	1289.39	6,361.00	10,724.30
Rape	73.93	2,893.40	713.46	3,567.32	7,248.11
Robbery	37.92	2,893.40	498.57	2,492.83	5,922.72

Source: Cohen, Miller and Rossman (1994).

Excluding murder cases, the total cost of arresting, processing and prosecuting an average violent offender is estimated to be $6085.97.

Allen County, Indiana recently completed a two-year pilot study of the Allen County Reentry Court. Among the data they reported were criminal justice administration costs for various offense types. The costs, expressed in 2005 dollars for major offense types, are reported in the table below.

[4] The per offender non-staff total cost per offender is derived from Montgomery County, MD.
[5] includes investigation, pre-booking and pre-trial jail costs

Table 7

Cost of Processing Offenders in the Criminal Justice System

Re-arrest Charge	Average Criminal Justice Administration Cost
Violent offense Rape Sexual assault Robbery Assault/Battery Other violent	$2,049.25
Property offense Burglary Larceny/Theft Vehicle theft Arson Fraud Possession of stolen property Other property	$1,475.23
Drug offense Drug possession Drug trafficking	$1,299.61
Public order offense Weapons offense DUI Other public order	$1,270.34

Source: Allen County Reentry 2 Year Pilot Study (2004).

Here we treat Allen County's estimate of the cost of criminal justice administration for a violent crime ($2049.25) as a minimum estimate and Cohen, Miller and Rossman's estimate ($6085.97), which relied heavily on data from Miami-Dade County, as a maximum estimate. Since Cohen, Miller and Rossman calculated arrest and processing costs for only violent crimes, no maximum estimate for other crime types was available. However, by calculating an inflation factor between Cohen, Miller and Rossman and Allen County, we generated a maximum estimate for property, drug and public order offenses. The results are summarized in Table 8. We use the average of the two processing cost estimates - the third column of Table 8 - in the cost-benefit models that follow.

Table 8

Cost of Processing Offenders in the Criminal Justice System

Re-arrest Charge	Average CJ Admin Cost Allen County, IN	Average CJ Admin Cost CMR (with inflation factor)	Average Processing Cost
Violent offense	$2,049.25	$6,085.97	$4,067.61
Property offense	1,475.23	4,381.22	2,928.23
Drug offense	1,299.61	3,859.65	2,579.63
Public order offense (including DUI)	1,270.34	3,772.72	2,521.53

Sources: Cohen, Miller and Rossman (1994), Allen County Reentry 2 Year Pilot Study (2004).

THE COST OF NEW CRIME TO VICTIMS

Released inmates who commit new offenses generate large costs for both the criminal justice system and corrections, the most substantial portion of the costs of crime are borne by the public, in the form of increased victimization. Though the true costs of victimization cannot be directly observed, there are estimates in the economics literature of the cost of victimization to victims. These costs include medical expenses resulting from injury, productivity losses and intangible costs associated with pain and suffering. McCollister (2004) reports estimates for total victimization costs broken down by offense type.

Table 9

Cost of Victimization by Offense Type

Type of Offense	Tangible Cost	Intangible Cost	Total Cost
Rape/Sexual assault	$36,884	$174,162	$210,901
Aggravated assault	$19,179	$100,216	$111,431
Robbery	$23,227	$26,947	$48,095
Household burglary	$3,812	$255	$4,044
Larceny/Theft	$1573	$11	$1,583
Possession of stolen property	$668	$0	$668
Vandalism	$616	$0	$616

Source: McCollister, 2006.

Since the McCollister paper does not develop estimates for the victimization of drug or public order offenses, we relied on estimates for these offenses provided in the Allen County report, shown below in 2005 dollars.

Table 10

Cost of Victimization by Offense Type

Type of Offense	Tangible Cost
Drug possession	$6,322
Drug trafficking	12,645
Weapons offense	2,529
DUI	22,760
Other public order	6,322

Source: Allen County Reentry 2 Year Pilot Study (2004).

The resulting average victimization costs for each category are: violent offenses - $145,332, property offenses - $3,144, drug offenses - $8,595 and public order offenses - $13,179.

The Cost of a Recidivism Offense

Using the cost of arresting, processing, prosecuting and incarcerating offenders as well as the cost of victimization to society, the next step was to calculate the expected cost of a recidivism offense. Table 11 summarizes these costs for each of the four offenses types we considered.

Table 11

The Cost of a Recidivism Offense to Society

Type of Offense	Victimization Cost	Processing cost	Corrections cost [6]	TOTAL COST
Violent	$145,332	$4,068	$20,514	$169,914
Property	3,144	2,928	20,514	26,514
Drug	8,595	2,580	20,514	31,689
Public Order	13,179	2,522	20,514	36,215

Sources: Cohen, Miller and Rossman (1994), Allen County Reentry 2 Year Pilot Study (2004).

The cost of a given recidivism offense to society ranges from $26,514 for a property offense to $169,914 for a violent offense. Victimization costs range from a low of 12% of the total societal cost of crime for property offenses to a high of 86% for violent offenses.

The Distribution of Instant Offenses

The characteristics of the jail population vary widely from jurisdiction to jurisdiction. As such, the cost-effectiveness of the provision of reentry services depends, in part, on the types of inmates served. Roman, Kane, Turner and Frazier (2005) report the distribution of instant offenses for inmates housed in Philadelphia jails to be 29% violent offenses, 16% property offenses, 39% drug

[6] Assumes mean sentence of 263 days across offenses. This calculation uses a corrections cost of $78/day as reported by Hampden County, MA.

offenses and 16% other offenses. Though such a distribution of instant offenses may not be typical of all local jail populations, we believe it is an acceptable place to begin our analysis.

Given this distribution of instant offenses, one might expect the recidivism offenses of these inmates to follow a similar distribution. However this is not necessarily the case. Often an inmate who has been arrested for one type of offense is rearrested for an offense of a different type. Aos, Phipps, Barnoski and Lieb (2001) report the distribution of follow-up offenses for inmates in Washington State for each type of instant offense. The findings, which we use to construct a portfolio of expected offenses given the instant offense, are reported below:

Table 12

Portfolio of Recidivism Offense Types by Instant Offense Type

		Instant Offense		
	Type of Offense	Violent	Property	Drug
Recidivism Offense	Violent	32%	15%	12%
	Property	40%	63%	24%
	Drug	29%	22%	64%

Source: Aos, Phipps, Barnoski and Lieb (2001).

The Expected Cost per Recidivating Inmate

Given the distribution of instant offenses in Philadelphia reported by Roman, Kane, Turner and Frazier (2005) and the expected portfolio of recidivism offenses reported by Aos, Phipps, Barnoski and Lieb (2001), we can calculate an expected cost per recidivating inmate (EC). This cost is generated by calculating an expected cost of recidivism weighted by the expected types of recidivism offenses for each instant offense category. The following chart displays the expected recidivism cost for each offense type. Since expected recidivism data are not available for public order and DUI offenses we simply assume that if a public order inmate recidivates, the recidivism offense will be a public order offense.

Table 13

Cost of Crime to Society by Instant Offense Type

		Instant Offense		
	Type of Offense	Violent	Property	Drug
Recidivism Offense	Violent	$53,030	$25,024	$19,389
	Property	$8,844	$14,084	$5,351
	Drug	$7,836	$6,076	$17,706
	TOTAL	**$69,710**	**$45,184**	**$42,447**

Using the distribution of offenses reported by Roman, Kane, Turner and Frazier (2005), we calculate the expected cost per recidivating inmate to be $49,123.

ESTIMATES OF THE ECONOMIC IMPACT OF JAIL-BASED REENTRY

In this section, we develop estimates of the breakeven rate of recidivism that would make jail-based reentry cost-effective. The cost of providing reentry services to inmates is compared to the cost of processing and incarcerating recidivists and the cost of new crime to victims. Our analysis begins with a discussing of the costs and benefits from a social welfare perspective, which considers costs and benefits to everyone, and conclude with an examination of how benefits are distributed between communities and government agencies.

Social Costs and Benefits

Table 14 uses the distribution of instant offenses reported by Roman, Kane, Turner and Frazier to calculate the breakeven recidivism rate under three different assumptions about the costs of providing reentry services:

Table 14

Breakeven Recidivism Rate, by Cost of Reentry for a Mid-level Corrections Cost Jurisdiction

	Low Cost Reentry Program (Hampden County)	High Cost Reentry Program (Montgomery County)	Contracted Services (Safer Foundation)
Breakeven recidivism rate (*r*)	0.67%	0.93%	4.14%

Source: Urban Institute analysis of the costs and benefits of jail reentry

Given the distribution of instant offenses found in Philadelphia and a relatively low cost reentry program such as the one operated in Hampden County, a decrease in recidivism of just 0.67% renders reentry services cost-beneficial to society. A high-cost reentry program such as the one operated in Montgomery County requires just a 0.93% reduction in recidivism to meet the requirements of cost-effectiveness.

However, not all counties have a population of returning inmates whose distribution of expected recidivism offenses mirrors those of Philadelphia. As such, we display breakeven recidivism rates for both Philadelphia, as well as three ficticious jurisdictions which we will call A, B and C. Jurisdiction A has a returning population comprised primarily of drug inmates. Jurisdiction B has a returning population with a high incidence of violent offenses. Jurisdiction C contains primarily property inmates with a substantial number of drug inmates. The distribution of offenses for these four jurisdictions are displayed in the table below:

Table 15				
Distribution of Crime by Jurisdiction Type				
Distribution of crimes	**Philadelphia**	**A**	**B**	**C**
Violent (non-murder)	29%	15%	50%	10%
Property	16%	15%	15%	50%
Drug	39%	60%	20%	30%
Other (incl. DUI)	16%	10%	15%	10%
Source: Urban Institute analysis of the costs and benefits of jail reentry				

Table 16 (below) allows for the relaxation of three different assumptions we have made in our analysis. First, the distribution of instant offenses is allowed to vary by jurisdiction. Second, the daily corrections costs are allowed to vary. Finally, the cost of providing reentry services is variable. Practitioners can use this table to assess the recidivism differential that their particular jurisdiction would require to make reentry services economically viable. For example, a jurisdiction with a population of inmates similar to Jurisdiction B operating in a high cost of corrections and high cost of reentry services environment would require a 0.71% reduction in recidivism to make the provision of reentry services worthwhile. Switching to intensive contracted services in this same jurisdiction would require a 3.19% drop in recidivism.

Table 16

Breakeven Recidivism Rates by Jurisdiction Type, Corrections Cost Environment and Reentry Services Cost Environment

	High corrections costs ($137/day)			**Medium corrections costs ($78/day)**			**Low corrections costs ($40/day)**		
Jurisdiction	**Low cost reentry services**	**High cost reentry services**	**Contract reentry services**	**Low cost reentry services**	**High cost reentry services**	**Contract reentry services**	**Low cost reentry services**	**High cost reentry services**	**Contract reentry services**
Philadelphia	0.56%	0.76%	3.41%	0.67%	0.93%	4.14%	0.78%	1.07%	4.80%
A	0.58%	0.79%	3.54%	0.71%	0.97%	4.33%	0.83%	1.13%	5.06%
B	0.52%	0.71%	3.19%	0.62%	0.86%	3.82%	0.71%	0.98%	4.37%
C	0.58%	0.80%	3.57%	0.71%	0.98%	4.37%	0.83%	1.15%	5.12%

Source: Urban Institute analysis of the costs and benefits of jail reentry

Table 17 details benefit-cost ratios (BCRs) that would accrue from a 5% reduction in recidivism under a variety of assumptions. In the jurisdiction mentioned above that is similar to jurisdiction B and operates in a high-cost corrections and reentry environment, the provision of reentry services would return $7.00 for every dollar invested in reentry. It is apparent that regardless of the inmate

population, the cost environment of corrections or the cost-environment of publicly provided reentry services, benefit-cost ratios generally exceed 1, the breakeven level. This indicates that depending on the characteristics of the jurisdiction, the provision of non-contracted reentry services might be expected to return between $4.40 and $9.00 in social benefits for each dollar invested in the program.

Table 17

Benefit-Cost Ratios by Jurisdiction Type, Corrections Cost Environment and Reentry Services Cost Environment (5% Recidivism Differential)

	High corrections costs ($137/day)			Medium corrections costs ($78/day)			Low corrections costs ($40/day)		
Jurisdiction	Low cost reentry services	High cost reentry services	Contract reentry services	Low cost reentry services	High cost reentry services	Contract reentry services	Low cost reentry services	High cost reentry services	Contract reentry services
Philadelphia	9.0	6.6	1.5	7.4	5.4	1.2	6.4	4.7	1.0
A	8.7	6.3	1.4	7.1	5.2	1.2	6.1	4.4	1.0
B	9.6	7.0	1.6	8.0	5.9	1.3	7.0	5.1	1.1
C	8.6	6.3	1.4	7.0	5.1	1.1	6.0	4.4	1.0

Source: Urban Institute analysis of the costs and benefits of jail reentry

Community vs. Government Agency Benefits

Often, policymakers wish to understand the impact of a policy on the bottom line of public agencies. In the case of jail reentry, the question would be whether there are savings to government agencies from reentry programs. Table 18 summarizes breakeven recidivism rates for government agencies – police departments, courts and the department of corrections. For each cell in the chart, breakeven recidivism rates are higher than in Table 16 since the benefits to victims from prevented crimes are not included. Recidivism differentials between 1% and 5% are generally required to render publicly provided reentry services cost-effective. Substantially higher recidivism differentials are needed for contracted services to be cost-effective.

Table 18

Breakeven Recidivism Rates by Jurisdiction Type, Corrections Cost Environment and Reentry Services Cost Environment (Government Agencies Only)

	High corrections costs ($137/day)			Medium corrections costs ($78/day)			Low corrections costs ($40/day)		
Jurisdiction	Low cost reentry services	High cost reentry services	Contract reentry services	Low cost reentry services	High cost reentry services	Contract reentry services	Low cost reentry services	High cost reentry services	Contract reentry services
Philadelphia	1.26%	1.73%	7.71%	2.09%	2.87%	12.82%	3.65%	5.01%	22.39%
A	1.26%	1.73%	7.72%	2.10%	2.88%	12.85%	3.66%	5.03%	22.47%
B	1.25%	1.72%	7.66%	2.07%	2.84%	12.68%	3.58%	4.92%	21.96%
C	1.27%	1.74%	7.77%	2.12%	2.97%	12.99%	3.74%	5.13%	22.91%

Source: Urban Institute analysis of the costs and benefits of jail reentry

Table 19 summarizes the benefits at a 5% recidivism differential that public agencies can be expected to accrue for every dollar invested in the provision of reentry services. Both the low and high-cost reentry services estimates yield benefit-cost ratios in excess of one for all four jurisdictional types. The BCRs are substantial lower than in the previous tables which included all relevant social benefits because about 70% of the social costs of crime are borne by crime victims and about 30% accrue to public agencies. Given that reentry services are publicly provided, a recidivism differential of 3% should be sufficient to result in cost savings to the criminal justice system. Contracted services require a recidivism differential in excess of 5% to be cost-effective.

Table 19

Benefit-Cost Ratios Resulting from a 5% Recidivism Differential (Government Agencies Only)

	High corrections costs ($137/day)			Medium corrections costs ($78/day)			Low corrections costs ($40/day)		
Jurisdiction	Low cost reentry services	High cost reentry services	Contract reentry services	Low cost reentry services	High cost reentry services	Contract reentry services	Low cost reentry services	High cost reentry services	Contract reentry services
Philadelphia	4.0	2.9	0.7	2.4	1.7	0.4	1.4	1.0	0.2
A	4.0	2.9	0.7	2.4	1.7	0.4	1.4	1.0	0.2
B	4.0	2.9	0.7	2.4	1.8	0.4	1.4	1.0	0.2
C	4.0	2.9	0.6	2.4	1.7	0.4	1.3	1.0	0.2

Source: Urban Institute analysis of the costs and benefits of jail reentry

Discussion

Our findings indicate that regardless of cost environment or offender population, a modest publicly funded reentry program yields considerable net benefits to society. Put another way, only

small reductions in recidivism would be necessary in order for public agencies to recoup their investment in jail-based reentry. More expensive programs, such as Safer Return, may also yield a positive return, since the higher costs reflect more intensive, higher dosage programming.

If the effects of reentry services persist over time, the benefits to society will be even greater than our findings indicate. To the extent that reentry services help some habitual offenders to become productive members of society, cost savings in the form of decreased reliance on public supports and benefits in the form of increased tax revenue may accrue on top of the immediate benefits quantified in this paper. Some policymakers may view the finding that jail-based reentry programs yield greater returns to the public than to the government agencies administering the program as a reason not to pursue these programs. From an economic perspective, taxpayers dollars are used to fund these programs with a goal of improving public safety. Government spending on programs represents a transfer of resources from the public to the government as a means of achieving the goal of improved public safety. If the program achieves that goal, as it appears to do, administrators should support these programs. Pursuing a goal of simply saving the government money, regardless of the outcome to public safety, seems self-defeating.

In addition, it should be noted that the savings to government agencies described here may itself be ephemeral. The first two figures in this study show that despite declines in the crime rate, jail populations have increased rapidly. This may be evidence that jail spending is mostly unrelated to crime rates. That means that any reduction in crime from jail reentry programs are unlikely to translate into real savings. That is, the dollars saved above are likely to be automatically allocated to the next potential inmate in the criminal justice queue and not returned to the public coffers. Other research suggests that the only means by which a state can recoup this gain is by anticipating the savings and re-allocating those resources before they are dedicated to incarcerating new offenders.

Conclusion

The findings here support the idea that it is appropriate to consider implementing reentry programs in jails, and in communities that receive returning inmates. The study suggests that those findings are robust to the cost of the program, the cost of incarcerating inmates, and the type of inmates held in jail. The issue would benefit from further research, including a standard cost-benefit analysis comparing the costs of a jail-based reentry demonstration to the benefits.

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