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**SLAMMER TIME: A COST-EFFECTIVE ANALYSIS OF THE CALIFORNIA  
STATE PRISON SYSTEM AND ITS IMPACT ON CRIME**

*By*

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**SUBMITTED TO SCRIPPS COLLEGE IN PARTIAL FULFILLMENT OF THE  
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## **Slammer Time: A Cost-Effective Analysis of the California State Prison System and its Impact on Crime**

*By* Rebecca P. Manliguis

### **Introduction**

At a time where cutbacks on spending are a huge focal point across all government levels, the prison system, and effectively combating crime, has been intensely focused upon. With the United States having the highest rate of incarceration of any country in the world, the significance of this focus is understandable. Its prison system is much larger compared to that of other nations, and therefore is a high priority for the United States. As stated in *The Economist*, “No other rich country is nearly as punitive as the Land of the Free.”<sup>1</sup> With such high costs associated with the prison system, understanding the most effective ways to operate the facilities and programs is necessary. When looking at the impact of the system on reducing crime, there are various programs that have different effects on crime reduction. Analyzing what has the most potential for reducing crime while taking costs into account is useful for the government in an attempt to most effectively utilize resources and the allotted budget.

Over the past few decades, prison population growth has increased significantly. There are many factors that this can be attributed to, but regardless of these things, the controversy surrounding the population growth has only increased in recent years. “Aggregating the state and federal

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<sup>1</sup> Joan Petersilia, “Beyond the Prison Bubble,” *Federal Probation* 75 (June 2011): 2.

prison populations as well as inmates in local jails, there were 737 inmates per 100,000 U.S. residents in 2005. This number compares with a world average of 166 per 100,00 and with an average among European Union member states of 135.”<sup>2</sup> It was also found that the average time served for a crime increased significantly between 1984 and 2002 across all crimes. This partially explains why more people are currently locked up than ever before.

The focus of the analysis will be specifically on the California state prison system, which gets a large amount of government funding due to the large prison population and the high costs of operations. While the budget has many different divisions to allocate money towards, there are a few that are more likely than others to have a direct impact on crime and recidivism rates. The ones that will be analyzed include juvenile offender programs, adult education, vocation and offender programs, parole operations, as well as the impact of general prison populations on crime rates. These all have varying impacts on crime, and understanding which ones provide especially good benefits and outcomes is helpful to adjusting prison operations, and can also be used when looking into prison reform.

When looking at the California prison system, it would be interesting not only to see just how much of an effect the size of the prison population has on crime rates, but also to understand what aspects of the state prison system are most effective in lowering crime rates. With such a large budget, knowing exactly what aspects of the budget are most effective in combating

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<sup>2</sup> Steven Raphael, “Explaining the Rise in U.S. Incarceration Rates,” *Criminology & Public Policy* 8:1 (February 2009): 87.

crime is a necessity. Increasing funding in inmate services or parole operations, for example, might be a more effective way to spend the budget in an attempt to decrease crime rates. Understanding the data presented on the effectiveness within these different sectors of the prison budget is necessary to understand how funds need to be moved around in order to improve the overall system.

While crime rates are only one form of measurement for the success of the system, this will be the focus of this paper. It should be an attainable goal to make the system more effective without simply pumping more money into it. Recidivism rates are another measure linked to the successfulness and effectiveness of the prison system. In a California Department of Corrections and Rehabilitation, CDCR, report, the overall recidivism rate in the state was 67.5% in 2010.<sup>3</sup> This means that within three years of being released, 67.5% of criminals returned to prison. This is a high enough percentage for people to argue that the prison system isn't having nearly as big of an impact on prisoners and on our society as we would like. Especially when looking at non-violent offenders, it is understandable that some would argue the prison system is unnecessarily large. The recidivism rate for drug offenders was 65.5%, while the rate for property crime offenders was 71.9%.<sup>4</sup> With such high recidivism rates, we are spending huge amounts of money on non-violent offenders who will find themselves back in prisons

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<sup>3</sup> "2010 Adult Institutions Outcome Evaluation Report," *California Department of Corrections and Rehabilitation* (October 2010): 3.

<sup>4</sup> "2010 Adult Institutions Outcome Evaluation Report," 21.

soon enough. This is additional data that speaks to how dysfunctional the system is within the state. If we focus our time and money on more effective measures to reduce these numbers, there's a lot of potential room for improvement.

The California state prison system has been criticized for the amount of spending that has been dedicated to it. For example, there has been a lot of controversy on the dollar amounts funneled into the system comparative to the amount of money that is pumped into the state's education system. All of this leads us to question, does the prison system having a positive effect on the society and our communities, and is it necessary for all this money to be spent on an arguably dysfunctional system? Exactly how much of a benefit is this to society? Are the costs worth the payoffs we get from the prison system? Is it effective enough of a system for the amount that is dedicated to it? A cost-effective analysis of the overall prison system within the state will allow us to understand just how much the system is benefiting us, based on the costs. If the benefits are not significant enough, it would be in the best interest of the state and the CDCR to seek better, more beneficial ways to deal with crime and our prison system.

Findings show extremely varying degrees of impacts on crime and recidivism rates depending on the different programs implemented. It was found that the current parole system is rather ineffective, especially when compared to the potential it would have if certain aspects of the program were tweaked when parole reform was implemented. Adult education,

vocation, and offender programs have a higher success rate, generally, with lower recidivism rates than the average paroled population has. A merger between adult education programs and the parole system would be more effective due to the fact that prisoners, as well as new parolees, would have access to these programs. Prisoners who have completed these programs have significantly higher success rates than those who have not. The juvenile programs implemented had varying impacts on crime reduction dependent on the specific programs that were used. A few programs, including several extremely hands-on ones were very cost-effective, while others within the juvenile system were completely useless with little impact on crime rates. The type of program implemented led to drastic differences in overall results of crime and recidivism rates among juveniles. Lastly, looking at the effect of an increased prison population on crime rates, data shows that this offers a cost-effective reduction to crime rates. The social benefit saved by incarcerating an additional person is significantly more than the cost of imprisonment. Therefore, this is seen as a definitive cost-effective control for crime, regardless of the increase to the overall system.

## Literature Review

The California state budget has been a controversial subject, especially in recent years, due to the economic position the state, and more largely, our country is in. Since the prison system is such a huge facet of this, there is a lot of useful literature on the subject. Various causes of this recent prison population growth are the first thing that is important to fully understand, in order to comprehend the current issues at hand.

There are more than a few theories on the best way to go about cutting costs in the prison system's budget. Diane Williams, the CEO of Safer Foundation, argued in an editorial that increasing funding in reentry programs was the key to cutting costs in the long run. "The Urban Institute found that under a variety of conditions, reentry programs would only have to reduce recidivism by less than two percent to offset the additional costs of jail-based programs. The Urban Institute also reported that beyond offsetting costs, a noncontracted reentry program with even a moderate level of success could be expected to return anywhere from \$4.40 to \$9 in social benefits for every \$1 that is invested. Over time both monetary benefits and lowered recidivism numbers would result. Investing in in-prison and community reentry programs equals fewer people incarcerated; fewer people committing new crimes; more people becoming working tax-paying citizens; a more cost-effective criminal justice system; and more available



funding that the government can redirect to other areas.”<sup>5</sup> With recidivism rates so high, she is confident that these programs aimed at ending the cycle are the way to go in order to benefit all areas of the system, as well as our overall society. Cheryl Cadue writes about the benefits of reentry and reinvestment programs as well, in “Budget Cuts Challenge Progress Made by States and Elicit Even Smarter Reforms”. These programs were initially implemented to cut costs within the system. “However, states are...having to cut funding for the very programs that have been documented as lowering prison populations and making communities safer.”<sup>6</sup> It is also hard to convince those in positions of power of the positive effects that certain programs have in the long run. Without more immediate, obvious effects, they are often more hesitant to invest in long-term investments that they aren’t sure will payoff as they are supposed to. For those who have the job of making budget cuts, their main focus is going to be on the task at hand, regardless of the negative effects that may potentially occur. At that point in time, all sectors of government will be fighting for an increase in their allotment of money and claiming why it is necessary that they keep their budget.

The Center for Economic and Policy Research (CEPR) put out a very informative report out in 2010, “The High Budgetary Cost of Incarceration”.

Besides some shocking facts - “non-violent offenders make up over 60

<sup>5</sup> B. Diane Williams. “Budget Cuts Must Lead to Innovation in Corrections,” *Corrections Today* (December 2009): 6-10.

<sup>6</sup> Cheryl Cadue. “Budget Cuts Challenge Progress Made by States and Elicit Even Smarter Reforms,” *Corrections Today* 72 (February 2010): 69.

percent of the prison and jail population,”<sup>7</sup> the report includes data on the numbers of those incarcerated as well as the costs of incarcerating these large numbers. At all levels of government, (Federal, State, and Local), the total expenditures on corrections were above \$70 billion in 2008. They also found that the average cost of housing one non-violent offender for a year was between \$25,500 and \$26,000. On the other hand, if more of these non-violent offenders were paroled, this would save the state a significant amount of money. The average amount spent on a parolee for a year is an average of \$1,300 to \$2,800. The article claims that “a 50 percent reduction in non-violent-offender inmates would save the...state governments about \$7.6 billion per year.... Across all three levels of government, these savings total \$16.9 billion or about 22.8 of the total national spending on corrections in 2008.”<sup>8</sup> This would be quite a significant response to the overcrowding issues currently faced, and would address some issues of the budget issues faced by many states at this time.

It is hard for some to justify the magnitude of the system during such difficult economic times, when the outcomes do not always produce significant or obvious payoffs. There have been varying statistics on the relationship between prison population rates and crime rates. For example in the article, “The Effect of County-Level Prison Population Growth on Crime Rates”, they report some findings from previous studies. In one study, it was

<sup>7</sup> John Schmitt, Kris Warner, Sarika Gupta, “The High Budgetary Cost of Incarceration,” *Center for Economic and Policy Research*, (June 2010): 1.

<sup>8</sup> Schmitt, Warner, and Gupta, 11.

found that “for each 1% increase in prison population, homicide rates declined by roughly 1.47% to 1.88%.”<sup>9</sup> However, others argue that these rates are so high that they couldn’t possibly be accurate. In the same article, their own study was looking for the effects of prison population at the county-level in Florida on crime rates there. They found that there was no significant correlation between the two.

In “Specifying the Relationship Between Crime and Prisons”, an analysis of prison populations on violent and property crime rates is done across all states. It is found that “the most reasonable conclusion is that there is no long-run equilibrium relationship between crime and prison population rates. It is possible that crime or prison population rates are cointegrated with other variables; they may be cointegrated at a different level of aggregation.”<sup>10</sup> However, this is the conclusion when looking at prison population rates as a whole. This could produce greatly different outcomes from a full analysis on the effect of different prison programs on crime rates. After additional tests were run, it is also stated that there is a relationship between crime rates and prison populations in both directions; as prison populations increase, crime rates decrease, but as crime rates increase, prison populations also increase. Therefore, instrumental variables must be used in order to try to determine directly what impacts each have on the other.

<sup>9</sup> Tomislav V. Kovandzic, Lynne M. Vieraitis, “The Effect of County-Level Prison Population Growth on Crime Rates,” *Criminology & Public Policy* 5:2 (May 2006): 215.

<sup>10</sup> William Spelman, “Specifying the Relationship Between Crime and Prisons,” *Journal of Quantitative Criminology* 24:2, (June 2008): 167.

The government's use and allocations of funds to combat crime within and outside of the prison system is highly debated for several reasons. The possibilities of potential programs across all different levels are endless, and much analysis has been conducted to figure out which are most effective and should be focused on. Apart from prisons, different educational and social programs within society are looked at, to see if these have more of a positive effect on impacting crime. It is completely necessary to fully understand the costs of these programs, aside from the effectiveness of them, because if costs of implementation are through the roof, it is simply not feasible to put them in place. "Unless the government spends in such a way that the marginal benefit (the crime reduction achieved from the last dollar spent) is the same for each activity, society will not be fighting crime in a cost-effective manner. In such cases, reallocating resources toward higher-payoff approaches will lower crime for any given level of expenditure."<sup>11</sup> Donohue writes about previous analyses that have been done to prove that incarceration is an effective measure of crime control. He also shows that while incredibly successful, the educational programs implemented for young children ages 4 and up were too costly. Family therapy programs were also found to be successful in his analysis. With limited resources, there are tradeoffs that must be made, and he discusses the more effective tradeoff when it comes to crime reduction; "We can try to control crime through social spending over the next 15 years or by spending money on them later for commitment to

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<sup>11</sup> John J. Donohue III, Peter Siegelman, "Allocating Resources among Prisons and Social Programs in the Battle against Crime," *The Journal of Legal Studies* 27:1 (January 1998): 2.

juvenile detention centers or incarceration in federal and state prisons.”<sup>12</sup> While no definite conclusions were made as to which situation was better for society, “[the] point is simply that there may be scope for welfare-increasing large-scale interventions and that society should begin the process of trying to see whether such interventions can actually be carried out on a meaningful scale, rather than unthinkingly committing itself to a policy of massive prison construction without a full awareness of all of its attendant financial and human costs.”<sup>13</sup> Similar to this, the focus of this paper will be finding alternative ways to improve effectiveness of the prison system aside from expanding the entire program to accommodate an increasing number of inmates.

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<sup>12</sup> Donohue and Siegelman, 32.

<sup>13</sup> Donohue and Siegelman, 43.

## Analysis

### The Impact of Prison Populations on Crime

Increasing the number of people incarcerated within the prison system has been touted as a potential answer to high crime rates in our country. In the appendix, Table 2 shows the data from an article on the correlation of prison population size and crime rates. Levitt ran a regression measuring this, and the outcome showed that there was, as expected, a correlation between the two. The estimated effect of prison population size on violent crime was -.099 and for property crime was -.071. When trying to interpret what this means in terms of concrete crime reduction, we learn that for every one additional prisoner, this reduces crime statistics by an estimated 5.54 reported crimes, and 14.86 total crimes, as shown in Table 3. The analysis also goes into the breakdown of the estimated effects of an additional prisoner on different types of crimes, including murder. These numbers are significant enough to know that incarceration has an obvious effect on the impact of crime, but in order to better understand how cost-effective it is, we need to consider the cost of crime and the cost of incarceration.

The costs per crime are estimates from two other studies, Cohen (1988)<sup>14</sup> and Miller, Cohen, and Rossman (1993).<sup>15</sup> They estimate that the social benefit of incarcerating one additional prisoner is \$53,900. According

<sup>14</sup> Mark Cohen, "Pain, Suffering, and Jury Awards: A Study of the Cost of Crime to Victims," *Law and Society Review*, 22 (1988): 537-55.

<sup>15</sup> Mark A. Cohen, Ted R. Miller, Shelli B. Rossman, "Victim Costs of Violent Crime and Resulting Injuries," *Health Affairs*, 12:4 (1993): 186-97.

to the Levitt article, the estimates used for the average cost of incarcerating one prisoner is anywhere from \$23,000 to \$35,000. According to these calculations, the imprisonment of one additional prisoner would have a positive impact of between \$18,900 and \$30,900. Even if we use the highest estimate of incarcerating a prisoner for a year, the benefits still heavily outweigh the costs.

While this clearly shows that incarcerating additional prisoners is beneficial and cost-effective for crime, the remainder of the paper will focus on implementation of programs within the system. It is obvious that our communities will be safer the more criminals we lock up; this is possible to a certain extent. With a limited budget, knowing what programs are most effective within the system may be more useful than knowing the impact of increasing the prison population.

### **Parole Operations**

The parole system in the state of California currently has 92,756 people listed as of March 31, 2012.<sup>16</sup> With a combined budget of \$525,004,000 for parole operations, a good portion of the overall prison budget is allocated to the parole system. With a recidivism rate (within three years) of all parolees in California at 65.5%<sup>17</sup>, parole reform has been a hot

<sup>16</sup> "Monthly Report of Population" *Department of Corrections and Rehabilitation*. 31 March 2012,

<[http://www.cdcr.ca.gov/reports\\_research/Offender\\_Information\\_Services\\_Branch/Monthly/Tpop1a/TPOP1Ad1203.PDF](http://www.cdcr.ca.gov/reports_research/Offender_Information_Services_Branch/Monthly/Tpop1a/TPOP1Ad1203.PDF)>, accessed 5 April 2012.

<sup>17</sup> "2011 Adult Institutions Outcome Evaluation Report" California Department of Corrections and Rehabilitation.

topic in an attempt to make the program more effective, and hopefully lower recidivism rates and crime rates. One of the proposed changes to the parole program is funneling more money into the Preventing Parolee Crime Program, which “provide[s] substance abuse education and treatment, employment readiness training and job placement assistance, literacy training, and multiple-services in a residential setting.<sup>18</sup>” While parolees enrolled in PPCP on average stayed out of prison for approximately 447 days, the group that was not in PPCP stayed out of prison for about 393 days. Of those enrolled, those who met PPCP program goals averaged 522.6 days out of jail, while those who failed to meet the goals averaged 393.3 days.<sup>19</sup> The research also proved that the PPCP program had a higher cost-benefit ratio than parole without PPCP had. Therefore a shift to more programs in the parole system was a viable option looked at for prison reform.

With the success rate of parolees three years out of prison lower than 35%, there are a lot of options that would be more cost-effective than the current parole system in place in the state of California. Comparatively, the adult education and vocational programs have a success rate of about 40%. While parole programs are important because they help keep the parolees in check and have someone to look after them, the effectiveness is understandably questioned. If the parole system were restructured to fit in

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<sup>18</sup> Sheldon X. Zhang, Robert E.L. Roberts, Valerie J. Callanan, “The Cost Benefits of Providing Community-Based Correctional Services: An Evaluation of a Statewide Parole Program in California,” *Journal of Criminal Justice* 34:4 (July 2006): 341-50.

<sup>19</sup> Sheldon X. Zhang, Robert E.L. Roberts, and Valerie J. Callanan, 346.



more educational programs, it would be more effective. After accounting for the costs saved in incarceration of PPCP parolees, and subtracting the costs of parole operations and costs of the PPCP program itself, the total savings was over \$21 million. The cost-benefit ratio was \$1.47 in returns for every \$1 invested. The PPCP is quite a costly expenditure at nearly \$37.4 million, but once the savings in re-incarceration is taken into account, it is clear that the savings is more than the total expenditures. While this research doesn't give a change in recidivism rates between PPCP and non-PPCP parolees, it makes sense that PPCP programs fundamentally would lower these rates as well as lengthen the time that parolees stay out of prison. PPCP provides parolees a type of adult education, which are proven to be beneficial programs. The only difference is that these services are provided once the parolees are released from prison.

Parole reform in California has the potential to save the state millions of dollars in the long-run based on future savings. If additional programs are implemented, the budget will be much more effectively used and will reduce recidivism rates, which will therefore have an impact on crime rates. Due to the fact that the results cannot be immediately seen, people often argue about the true effectiveness of such programs on a large scale and this tends to make implementation difficult. However, unless reforms are put in place, the parole system will remain a rather ineffective tool to combat crime. Parole operations in California presently are not the most cost-effective program for reducing crime.

## Juvenile Offender Programs

In a study done by the Washington State Institute for Public Policy<sup>20</sup>, cost-benefit analyses were performed on different juvenile offender programs. The most effective programs included Multidimensional Treatment Foster Care (vs. regular group care), adolescent diversion projects, family integrated transitions, and functional family therapy on probation. After Cost-Benefit analysis is done, MTFC's benefit to society is valued at \$77,798 per participant. In the California State prison budget, Juvenile Operations and Juvenile Offender Programs are allocated \$137,285,000, Juvenile Academic and Vocational Education is allocated \$29,935,000, and Juvenile Parole Operations are allocated \$10,448,000 out of a total budget of just under \$8.9 billion. If more money was funneled into the juvenile system and was put into implementing or expanding projects, such as the Adolescent Diversion Project, which has seen great success in other communities, success rates would surely increase. In an article on diversion projects, an experimental project done in the state of Michigan was found to be successful, with lower recidivism rates for juveniles than the average statistics.

Based on previous research and analyses, successful juvenile programs appear to be more effective than basic parole and probation control. A study on recidivism of parolees in California found that "of those at risk in each period, 3.6 percent returned to prison within the first 30 days,

<sup>20</sup> Evidence-Based Juvenile Offender Programs: Program Description, Quality Assurance, and Cost, *Washington State Institute for Public Policy*, June 2007.

12.6 percent were returned to prison during the first 90 days, 24.3 percent were returned to prison within 180 days of release, and 38.7 percent were returned to prison within 1 year of release.<sup>21</sup> Therefore, more emphasis should be put on alternative programs in an attempt to more effectively reduce juvenile crime rates and recidivism. In the same cost-benefit analysis of the different juvenile offender programs by the Washington State Institute for Public Policy, parole supervision and probation supervision programs were seen as completely ineffective, in that the costs outweighed the benefits. Table 4 shows this analysis; various parole programs lost the state between \$1,201 and \$6,460. Implementing and expanding programs other than parole and probation programs would be much more effective than the current setup, which allocates a fair share of the budget to the ineffective parole system.

### **Adult Education, Vocation and Offender Programs**

In a test of the effects of adult education, postsecondary education, and vocational training, it was found that these were all successful in reducing recidivism rates. Wilson does an effective study on the impacts of these programs on prisoners as well as its overall impact on society.<sup>22</sup> While using a recidivism rate of 50% for the comparison group, Adult Education

<sup>21</sup> John R. Hipp, Joan Petersilia, Susan Turner, "Parolee Recidivism in California: The Effect of Neighborhood Context and Social Service Agency Characteristics," *Criminology* 48:4 (November 2010): 957.

<sup>22</sup> David B. Wilson, Catherine A. Gallagher, Doris L. MacKenzie, "Work Programs for Adult Offenders Meta-Analysis of Corrections-Based Education, Vocation, and Work Programs for Adult Offenders," *Journal of Research in Crime and Delinquency* 37 (2000): 347-68.

and GED programs led to a recidivism rate of 41%. Postsecondary education and vocational training programs were slightly more successful with recidivism rates of 37 and 39% respectively. An odds-ratio was also tested, which proves how much more or less likely a person in a program group is to recidivate than in the comparison group. The adult basic education and GED program had an odds ratio of 1.44, which means that people in this group are that much less likely to recidivate.<sup>23</sup> With the decrease in recidivism rates, crime rates will also be decreasing. While a 9%-13% improvement isn't a massive improvement, it still is significant enough to have an effect on the recidivism and crime rate statistics.

Academic education enrollment in 2010 ranged from 11,345- 23,153 people month to month in the state of California.<sup>24</sup> The total number of program completions between January and October 2010 was 4,013 people. Vocational program enrollment varied between 3,486 and 4,278 people per month. The total number of program completions between January and October 2010 was 915 people. Statewide, the capacity of prisoners that can be provided with academic and vocational programs is 32,000. With a total budget of \$121,608,000 for academic education and vocational programs for the 2010-year, and all programs running at full capacity, the cost per person would be \$3,800. Using the data found in the Wilson paper, Adult Education and Vocational Programs combined for about a 10% decrease in recidivism

<sup>23</sup> David B. Wilson, Catherine A. Gallagher, and Doris L. MacKenzie.

<sup>24</sup> "Academic Education Enrollment %," *Department of Corrections and Rehabilitation*, (October 2010) <<http://www.cdcr.ca.gov/OCE/index.html>> accessed 17 March 2012.

rates. Therefore, the cost per person of reducing recidivism by one percent would be \$380. Using this analysis, this seems to be a relatively cost-effective program within the prison system for reducing recidivism rates and therefore reducing crime rates in the long run.

### **Conclusion**

With such a large prison system and budget, there are seemingly endless options when it comes to the overall operations put in place. Since

there has been so much debate over what changes should be made to the system itself, I wanted to present a broad overview of the impact and outcomes of different programs within the California state prison system. While it is difficult to make blanket statements as to which programs are most cost-effective, it has been helpful to understand what can be ruled out, and what changes should be made in order to cost-effectively reduce crime.

According to various data analyses, the current parole system is quite ineffective. Most work on parole reform concludes that it would be much more effective if the programs were reworked to implement more educational programs. Educational and vocational programs that are in place for currently incarcerated prisoners have proven to be quite an effective tool to reduce recidivism rates. This is additional proof that if the parole system were altered to include these types of educational resources to new parolees, it would cost-effectively improve outcomes. Juvenile offender programs have mixed results depending on the type of program implemented. There are many different programs funded under the general "Juvenile Offender Program" category. While more hands-on care, therapy, and educational resources proved to be very cost-effective, other programs were either minimally beneficially or completely inefficient. If the programs with the highest cost-benefit ratios were primarily focused on, the juvenile offender program would be a rather effective sector of the prison system.

This paper is meant to provide a general overview of the successfulness of specific programs, taking costs into account. It's good for

getting an overall understanding of how well the system works and what options are available to improve different aspects of it. With additional time and resources, a more in-depth analysis would offer more solid proof as to how much of an impact certain programs have on crime rates. The general knowledge that has been presented here is helpful, but in order for reforms and changes to be implemented, statistical data needs to be presented. An in-depth analysis would need to be conducted to provide facts showing the impacts of the said programs. Since a lot of data I was looking for simply wasn't available, conducting research to collect the data would be the first step before attempting to do a full cost-benefit analysis of the different programs. If that were done, the outcome would prove to be much more conclusive and statistically based than the conclusions I have come to thus far. This paper is meant to have presented a general but thorough analysis of the cost-effectiveness of specific programs within the prison system of the state of California.

## **Appendix**

Table 1

California State Prison Budget

	Personnel Years			Expenditures		
	<b>2010-2011</b>	<b>2011-12</b>	2012-13	2010-11*	2011-12*	2012-13*
Corrections and Rehabilitation Administration	2,055.90	2,362.10	2,370.90	\$361,810	457,348.00	<b>\$388,753</b>
Department of Justice Legal Services	-	-	-	-	-	39,299
Corrections Standards Authority	55.1	69.5	-	60,022	87,771	-
Juvenile Operations and Juvenile Offender Programs	1505.6	1164.7	1146.1	290,931	148,460	137,285.00
Juvenile Academic and Vocational Education	271.4	237.5	235	30,053	35,702	29,935
Juvenile Parole Operations	112.5	100.5	100.5	21,226	15,709	10,448
Juvenile Health Care Services	228.3	120.1	114.5	45,619	49,413	21,490
Adult Corrections and Rehabilitation Operations - General Security	26,969.40	26,373.40	24,171.50	3,284,573	3,059,857	2,900,510
Adult Corrections and Rehabilitation Operations- Security Overtime	-	-	-	302,880	115,879	220,050
Adult Corrections and Rehabilitation Operations- Inmate Support	6,861.10	7,210.60	7,499.70	1,166,896	1,330,231	1,329,469
Adult Corrections and Rehabilitation Operations- Contracted Facilities	315.7	497.1	459.1	426,357	305,991	285,176
Adult Corrections and Rehabilitation Operations- Institution Administration	3,461.00	4,008.50	4,042.20	373,204	450,884	496,644



Parole Operations-Adult Supervision	2,788.90	2,830.90	2,363.60	512,586	350,454	275,043
Parole Operations-Adult Community Based Programs	347.7	409.8	409.8	151,137	221,276	149,354
Parole Operations-Adult Administration	447.9	545.3	541.5	65,312	109,718	100,607
Board of Parole Hearings-Adult Hearings	371	398.9	353	81,965	90,583	77,467
Board of Parole Hearings-Administration	79.5	81.2	66.9	8,182	6,582	3,550
Adult Education, Vocation and Offender Programs-Adult Education	1033.9	1277.9	1229.6	121,608	133,302	137,547
Adult Education, Vocation and Offender Programs-Adult Substance Abuse Program	65.5	65.5	27.4	166,523	160,434	172,018
Adult Education, Vocation and Offender Programs-Adult Inmate Activities	236.3	259	260	50,373	66,310	66,587
Adult Education, Vocation and Offender Programs-Adult Administration	154	177	176.6	26,751	19,157	23,181
Adult Health Care Services	10,259.90	12,960.60	12,960.30	2,173,285	2,036,990	2,023,419
TOTALS, POSITIONS AND EXPENDITURES	57,620.60	61,150.10	58,528.20	\$9,721,293	\$9,252,051	\$8,887,832

(ALL PROGRAMS)						
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\*Dollars in thousands

Corrections and Rehabilitation Budget, *Corrections and Rehabilitation*,  
 <<http://www.ebudget.ca.gov/pdf/GovernorsBudget/5210.pdf>> accessed  
 8 February 2012.

Table 2

The Short-Run Impact of Changes in Prison Overcrowding Litigation Status

	Change(ln) Violent crime			Change(ln) in Property crime		
Variable	OLS (1)	IV (2)	IV (3)	OLS (4)	IV (5)	IV (6)
Change (ln)	-0.099	-0.424	-0.379	-0.071	-0.321	-0.261

Prison population (t-1)						
	0.033	0.201	0.18	0.019	0.138	0.117
Change (ln) Income per capita	0.485	0.384	0.41	0.014	0.076	0.055
	0.117	0.127	0.127	0.066	0.072	0.07
Change Unemployment Rate	0.564	0.411	0.451	1.032	1.138	1.063
	0.333	0.301	0.302	0.186	0.188	0.181
Change (ln) Police	0.026	0.054	0.063	-0.004	0.012	0.002
	0.059	0.048	0.048	0.033	0.03	0.029
Change % Black	-0.015	-0.018	0.007	-0.043	-0.038	0
	0.029	0.025	0.058	0.016	0.016	0.035
Change % Metro	0.013	0.006	0.027	0.006	0	0.005
	0.011	0.012	0.021	0.006	0.006	0.011
Change % Age 0-14	-0.287	-0.075	-0.127	0.22	0.121	0.399
	0.412	0.393	0.447	0.23	0.234	0.257
Change % Age 15-17	-0.041	0.169	0.18	0.351	0.32	0.39
	0.213	0.205	0.226	0.119	0.121	0.127
Change % Age 18-24	0.32	0.282	0.286	0.277	0.079	0.126
	0.253	0.235	0.253	0.141	0.139	0.144
Change % Age 25-34	0.648	0.748	0.828	0.384	0.354	0.436
	0.335	0.329	0.35	0.187	0.195	0.202
Year Controls?	Yes	Yes	Yes	Yes	Yes	Yes
State controls?	No	No	Yes	No	No	Yes
Instrument?	No	Yes	Yes	No	Yes	Yes
R <sup>2</sup>	0.247	-	-	0.606	-	-
P-value overidentifying restrictions	-	0.369	0.424	-	0.416	0.164

Steven D. Levitt "The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation," *The Quarterly Journal of Economics* 111:2 (May 1996): 319-51.

Table 3

Estimated Impact on Crime from Adding One Additional Prisoner

		Cost per crime	Cost per crime		
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	Change in reported crimes	Change in total crime (assumes same elasticity for unreported crimes)	Monetary	Quality of Life	Social benefit of reduced crime
Murder	-0.004	-0.004	\$17,000	\$2.7 Million	\$10,800
Rape	-0.031	-0.053	9,800	40,800	2,700
Assault	-0.55	-1.2	1,800	10,200	14,000
Robbery	-0.55	-1.1	2,900	14,900	17,800
Burglary	-1.3	-2.6	1,200	400	4,300
Larceny	-2.6	-9.2	200	0	1,800
Auto Theft	-0.5	-0.7	4,000	0	2,500
Total	-5.54	-14.86	-	-	53,900

Steven D. Levitt "The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation," *The Quarterly Journal of Economics* 111:2 (May 1996): 319-51.

Table 4

Reducing Crime with Evidence-Based Options: What Works, and Benefits and Costs

	Effect of Studies	Number of Studies	Benefits to Crime Victims	Benefits to Taxpayers	Marginal Costs	Benefits Minus Costs
Multidimensional Treatment Foster Care	-22.00%	3	\$51,828	\$32,915	\$6,945	<b>\$77,798</b>
Adolescent Diversion Project (for low risk/diversion)	-19.90%	6	\$24,328	\$18,208	\$1,913	<b>\$40,623</b>
Family Integrated Transitions	-11.30%	1	\$26,539	\$16,854	\$9,665	<b>\$33,728</b>
Functional Family Therapy on Probation	-15.90%	7	\$19,529	\$14,617	\$2,325	<b>\$31,821</b>
Multisystemic Therapy	-10.50%	10	\$12,855	\$9,622	\$4,264	<b>\$18,213</b>
Aggression Replacement Training	-7.30%	4	\$8,897	\$6,659	\$897	<b>\$14,660</b>
Teen courts	-11.10%	5	\$5,907	\$4,238	\$936	<b>\$9,208</b>
Juvenile bootcamp to offset institution time	0%	14	\$0	\$0	<b>(\$8,077)</b>	<b>\$8,077</b>
Juvenile sex offender treatment	-10.20%	5	\$32,515	\$8,377	\$33,064	<b>\$7,829</b>
Restorative justice for low-risk offenders	-8.70%	21	\$4,628	\$3,320	\$880	<b>\$7,067</b>
Interagency coordination programs	-2.50%	15	\$3,084	\$2,308	\$205	<b>\$5,186</b>
Juvenile drug courts*	-3.50%	15	\$4,232	\$3,167	\$2,777	<b>\$4,622</b>
Regular surveillance-oriented parole	0%	2	\$0	\$0	\$1,201	<b>(\$1,201)</b>
Juvenile intensive probation supervision programs	0%	3	\$0	\$0	\$1,598	<b>(\$1,598)</b>
Juvenile wilderness challenge	0%	9	\$0	\$0	\$3,085	<b>(\$3,085)</b>
Juvenile intensive parole supervision	0%	10	\$0	\$0	\$6,460	<b>(\$6,460)</b>

Scared straight	6.80%	10	(\$8,355)	(\$6,253)	\$58	(\$14,667)
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\*Benefits and costs per participant 2006 dollars

Evidence-Based Juvenile Offender Programs: Program Description, Quality Assurance, and Cost, *Washington State Institute for Public Policy*, June 2007.

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