



# ECONOMIC IMPACT OF SENTENCING REFORM ACT INITIATIVES ON THE SOUTH CAROLINA ECONOMY

**A report prepared for the  
South Carolina Department of Probation, Parole and Pardon Services**

February 28, 2014

**By David W. Hughes, Ph.D.<sup>1</sup>**

Professor and Regional Development Economist  
School of Agricultural, Forest, and Environmental Sciences  
Community Development Extension Program Leader  
Clemson University  
Clemson Institute for Economic and Community Development

<sup>1</sup>Sandhill Research & Education Center  
PO Box 23205  
Columbia, SC 29224-23205  
803-699-3178/FAX 803-736-4418  
dhughe3@clemson.edu  
<http://www.clemson.edu/public/ciecd/>

---

## **Introduction**

The information presented here is an analysis of the economic and to some degree the social impacts of initiatives implemented by the South Carolina Department of Probation, Parole and Pardon Services (SCDPPPS) under the Omnibus Crime Reduction and Sentencing Reform Act (SRA) of 2010. Specifically, the research presented here evaluates the “shock” or economic impact that occurs in the economy when 1,611 supervised offenders were not admitted to the South Carolina Department of Corrections (SCDC) from FY 2011 through FY 2013. Throughout this paper, these offenders will be referred to as “SRA-diverted offenders.” Approximately 52% of SRA-diverted offenders are now participating in the South Carolina (S.C.) economy as earned-income supported consumers.

## **Economic Impact Model**

The impact analysis relies on an Input-Output (I-O) model of the S.C. economy. Such models replicate purchasing and selling patterns between various parts of an economy in a detailed manner (Hughes, 2003). The model was constructed using the IMPLAN input-output economic model building computer program for 2011 (IMPLAN 2000). IMPLAN is a well-established tool for conducting impact analysis studies. Income injected into an economy has a multiplier effect, as it is generally re-spent locally. The distribution of re-spending is determined by the degree to which local businesses and consumers buy from local businesses. “Impact analysis looks at the effects of a positive or negative change in economic activity. Impact analysis is based on economic multipliers, which account for the total effect across the entire economy of the event under study. For example, impact analysis is often used to estimate the effects of a new local industry on jobs and incomes in all parts of the economy. It is also used to estimate policy or investment impacts and the total contribution of an industry to an economy” (Hughes, 2003:25). In this case, our analysis concerns the total contribution of spending by employed SRA-diverted offenders under Sentencing Reform Act initiatives, that is, its impact on the S.C. economy. Impacts on the S.C. economy are reported in terms of employment or jobs, personal income (i.e., income earned by workers), gross state product (GSP) (analogous to gross domestic product at the national level but for South Carolina, i.e., the impact on returns to labor and capital in the state economy) and output (gross (total) revenues earned by South Carolina businesses or other operations such as government).<sup>1</sup>

## **Research Process and Results**

A database of employment and pay for the current supervised offender population was provided by SCDPPPS. A major effort was required for “cleaning up” the database in order to estimate the distribution of the working population of supervised offenders in terms of earned personal income. That is, an estimate was required for annual pay for each employed SRA-diverted offender. Estimates were evaluated for reasonableness based on comparison to in-sample values across occupations, published pay rates for S.C. (Bureau of Labor Statistics), and our knowledge of the S.C.

---

<sup>1</sup> Personal income is part of gross state product and gross state product is in turn included as part of output.

economy. The estimates were grouped based on earned personal income ranges (such as \$25,000 - \$35,000); that is, earned personal income spending groups were formed from the estimates. Based on our analysis, employed SRA-diverted offenders were estimated to have on average earned \$21,385 in personal income. The distribution of earned income across major income categories is provided in Figure 1. The majority (52%) of earned income was in the \$15,000-\$25,000 income category, followed by 16.9% in the \$10,000-\$15,000 category, and 15.5% in the \$25,000-\$35,000 income category. Earned income in the higher income categories made a small (1.5% for the \$75,000-\$100,000 income category) or negligible contribution to total earned income for employed SRA-diverted offenders.

We also analyzed the distribution of occupations and major employers from the database of supervised offenders. Many such individuals were self-employed or worked in the fast-food industry (such as McDonald's), in basic processing (such as Columbia Farms, a major poultry processor), for various landscaping or lawn care businesses, or for other entities (such as Vocational Rehabilitation). Similarly, major occupations included landscaper, cook, construction worker, mechanic, cashier, food service worker (such as waitress), maintenance worker, and home/hospitality/industry cleaning worker.

**Figure 1. Supervised Offenders Personal Income by Income and Spending Category.**

Thousand \$ Personal Income	Percent of Total
0-10	7.6%
10-15	16.9%
15-25	52.0%
25-35	15.5%
35-50	5.7%
50-75	1.5%
75-100	0.5%
100-150	0.2%
150+	0.1%

The personal income earned by employed SRA-diverted offenders has a multiplier effect in the S.C. economy. The S.C. input-output model was used to separately estimate the total multiplier-based impact on the S.C. economy in FYs 2011, 2012, and 2013. That is, the earned personal income by spending group was used to set-off the multiplier process after accounting for spending leakages.<sup>2</sup>

Model impact results need to be interpreted with care. Model impact results include what economists term *direct effects plus multiplier effects*. Reported results include values for SRA-diverted offenders plus personal income, gross state product, and output generated in other parts of the state economy because of spending. For example, the personal income data reported here includes personal income earned by SRA-diverted offenders (what economist term a *direct effect*) plus the personal income earned by people working in various parts of the state economy because the SRA-diverted offenders spent earned personal income in the state (what economist term *indirect and induced effects*). As a result, dividing personal income estimates by employment estimates yield an average that is based on impact results across the entire economy not merely on what SRA-diverted offenders earn.

### **Economic Impact of Employed SRA-Diverted Offenders**

In terms of the impacts for FY 2011, spending by 299 employed SRA-diverted offenders led to 54 additional jobs for an estimated total of 353 jobs in the S.C. economy due to direct and multiplier effects (Table 1). Total impacts on personal income were estimated at \$4.576 million while the estimated total contribution to the S.C. gross state product was \$6.229 million and the estimated total contribution to economic activity in the state was \$8.685 million.

In terms of the impacts for FY 2012, spending by 576 employed SRA-diverted offenders led to 103 additional jobs for an estimated total of 679 jobs in the S.C. economy due to direct and multiplier effects (Table 1).<sup>3</sup> Total impacts on personal income were estimated at \$9.092 million while the estimated total contribution to the S.C. gross state product was \$12.376 million and the estimated total contribution to economic activity in the state was \$17.256 million.

In terms of the impacts for FY 2013, spending by 833 employed SRA-diverted offenders led to 149 additional jobs for an estimated total of 982 jobs in the S.C. economy due to direct and multiplier effects (Table 1).<sup>4</sup> Total impacts on personal income were estimated at \$13.148 million while the estimated total contribution to the S.C. gross state product was \$17.897 million and the estimated total contribution to economic activity in the state was \$24.955 million.<sup>5</sup>

---

<sup>2</sup> Spending leakages are the dollars that do not remain in the local economy; the lower the spending leakages the higher the multiplier effect.

<sup>3</sup> The reported impacts are cumulative; that is, the impact of employment-based spending in FY 2012 includes SRA-diverted offenders from FY 2011 and SRA-diverted offenders from FY 2012.

<sup>4</sup> Reported impacts are based on employment-based spending by SRA-diverted offenders in FYs 2011, 2012, and 2013.

<sup>5</sup> As indicated in footnote one, personal income is a component of gross state product, and gross state product is a component of output. Hence, personal, gross state product, and output should not be summed when discussing study results.

**Table 1. Impact of SRA-diverted Offender Employment and Their Subsequent Spending of Earned Personal Income on the South Carolina Economy.**

Category	SRA-Diverted Offender Employment	Employment from SRA-Diverted Offender Spending	Personal Income (Million \$)	Gross State Product (Million \$)	Output (Million \$)
FY 2011	299	54	4.576	6.229	8.685
FY 2012	576	103	9.092	12.376	17.256
FY 2013	833	149	13.148	17.897	24.955

## Other Impacts

### Social Services

Based on a 2011 report conducted by the United States (U.S.) Government Accountability Office, and on data taken from a factsheet produced by the Children’s Defense Fund for South Carolina (2011), we estimated that 25 children are not in foster care and three children were not adopted out of foster care because of SRA initiatives.

### Child Support

Incarceration or any type of criminal record has a major impact on an individual’s ability to earn income and their subsequent ability to provide child support (Geller, Irwin & Western, 2011). In addition, incarceration can have a major impact on an individual’s ability to provide child support, as payments can “pile up” on parents (virtually all fathers) while they are in prison. Probation and parole enable opportunities to reduce this “pile up” effect. In as much as recidivism is reduced by probation and parole, this should also increase child support payments. Based on previous research by Geller et al. (2011), our best estimate is that SRA initiatives led to an average increase in child support payments per relevant SRA-diverted offender of \$326 in FY 2011, \$332 in FY 2012, and \$337 in FY 2013. Based on Meyer and Warren (2011), 25% of incarcerated prisoners have open child support payment cases. Accordingly, we estimate that the total impact of SRA initiatives on child support payments is \$47,203 for FY 2011, \$92,408 for FY 2012, and \$135,628 for FY 2013.

### Court Costs

Based on a study conducted in New Jersey, supervised offenders have a recidivism rate (38%) that is only slightly less than prison inmates (39%) who fully serve out their term. Of the supervised offenders returned to prison, roughly a third were returned not for new offenses but for violations of their parole conditions (not passing drug tests or missing mandatory reporting) (Pew Charitable Trust, 2013). Further, according to data provided by the SCDPPPS, probation and parole

compliance revocations under the Sentencing Reform Act have declined by 45% with a 49% decrease in the incarceration rate due to technical violations. Using a combination of this data and the New Jersey Study, we can argue that SRA initiatives have likely led to a 17.6% reduction in court cases for repeat criminal offenders. According to a report generated by The Commonwealth of Massachusetts (2011), the average cost per court case is \$1,188. Based on this data, we estimate that the resulting savings in court costs are \$233,454 due to SRA initiatives.

#### Taxpayer and Other Social Benefits

A summary of our estimates relating to taxpayer expenditures and savings related to SRA initiatives are provided in Table 2.<sup>6</sup> Based on data provided by SCDPPPS, savings from reductions in incarcerations (net of supervision cost) were \$4.229 million in FY 2011, \$2.993 million in FY 2012, and \$5.276 million in FY 2013. Averted court costs are an additional taxpayer benefit. These values are balanced, however, by negative impacts due to the use of food stamps, welfare, and Medicaid expenditures by the SRA-diverted offender population. On the positive side, taxpayer cost savings are enhanced by tax revenues generated by working SRA-diverted offenders.

**Table 2. Taxpayer Benefit and Cost and Other Social Benefits Resulting from South Carolina Sentencing Reform Act Initiatives.**

Category	FY 2011	FY 2012	FY 2013
Benefit:			
Tax Revenues	\$793,928	\$1,527,524	\$2,209,013
Court Costs Averted	\$40,868	\$78,729	\$113,857
Savings from Reduced Incarceration *	\$4,229,456	\$2,993,340	\$5,276,329
<b>Total Taxpayer Benefit</b>	<b>\$5,064,252</b>	<b>\$4,599,593</b>	<b>\$7,599,199</b>
Cost:			
Food Stamps	-\$166,888	-\$319,078	-\$461,431
Welfare	-\$7,201	-\$13,855	-\$20,036
Medicaid	-\$363,719	-\$875,358	-\$1,295,006
Total Cost	-\$537,808	-\$1,208,291	-\$1,776,473
<b>Net Taxpayer Benefit</b>	<b>\$4,526,444</b>	<b>\$3,391,302</b>	<b>\$5,822,726</b>
Child Support	\$47,203	\$92,408	\$135,628
<b>Total Social Net Benefits</b>	<b>\$4,573,647</b>	<b>\$3,483,710</b>	<b>\$5,958,354</b>

\* These figures reflect savings to SCDC previously reported and published in annual reports to the Sentencing Reform Oversight Committee (SROC) in FYs 2011-2013.

<sup>6</sup> Taxpayer benefits include net savings in government funded programs and additional tax revenues generated as a result of Sentencing Reform Act initiatives.

Estimates of the negative impacts due to the use of food stamps and welfare are based on estimates of “enrollment or use” in S.C. as taken from the American Community Survey Integrated Public Use Micro Sample database (King et al., 2010), and were used as a basis of comparison for individuals in the program as well as the average per enrolled person for S.C. as published by the United States Department of Agriculture (2014) (for food stamps) and the Child Welfare League of America (2014) (for welfare). The cost of food stamp payments for SRA-diverted offenders was estimated at \$0.167 million in FY 2011, \$0.319 million in FY 2012, and \$0.461 million in FY 2013. The cost of “welfare” payments for SRA-diverted offenders was estimated at \$7,201 in FY 2011, \$13,855 in FY 2012, and \$20,036 in FY 2013.

The impact on Medicaid is based on estimates of the number of supervised offenders listed as disabled (6.7%), on the average Medicaid cost per disabled person for S.C. as taken from data provided by the Henry K. Kaiser Family Foundation (2013, 2014), and on assumptions concerning when supervised offenders enrolled. The total cost for Medicaid payments for SRA-diverted offenders was \$0.364 million in FY 2011, \$0.875 million in FY 2012, and \$1.295 million in FY 2013.

SRA-diverted offenders who work also generate tax revenues. Based on estimates taken from a macro Social Accounting Matrix as generated from our IMPLAN model for S.C., we estimated the level of tax revenue per dollar of income for the various household income groups in the IMPLAN model. These were then matched to our estimate of where the SRA-diverted offender population belonged by household income class. Total earned income by supervised offender in each appropriate household income class were then used to generate estimates of the total contribution of SRA-diverted offenders to state and local tax revenues in S.C. Using this process, we estimate that working SRA-diverted offenders generated \$0.794 million in tax revenues in FY 2011, \$1.527 million in FY 2012, and \$2.209 million in FY 2013. Adding tax revenue generated by employed SRA-diverted offenders to total taxpayer savings (from reduced incarceration and averted court costs) yields a total taxpayer benefit \$5.064 million in FY 2011, \$4.600 million in FY 2012, and \$7.599 million in FY 2013. Subtracting all of our costs from total taxpayer benefits yields a net positive benefit to taxpayers of \$4.526 million in FY 2011, \$3.391 million in FY 2012, and \$5.823 million in FY 2013 (Table 2).

Increases in child support due to SRA initiatives are not a form of savings for government programs or an increase in tax revenues. However, increases in child support payments are a very important social benefit. Hence, we add our estimates of increases in child support due to SRA-diverted offenders to arrive at a measure of total net social benefits due to SRA initiatives of \$4.574 million in FY 2011, \$3,484 million in FY 2012 and \$5.958 million in FY 2012.

## **Summary and Conclusions**

The research presented here has determined that the economic impacts of initiatives under the Sentencing Reform Act are significant. By FY 2014, SRA initiatives influenced an additional 982

jobs into the South Carolina economy. It is important to note that SRA-diverted offenders typically work in occupations that do not replace existing positions; instead, their positions supplement the current work force. Other social benefits exist but are difficult to quantify; hence, a benefit-cost ratio is beyond the scope of this study. Still, resulting from this analysis, Sentencing Reform Act initiatives implemented from FY 2011 through FY 2013 reflect an annual net social benefit to South Carolina ranging from \$4,573,647 million in FY 2011 to \$5,958,354 million in FY 2013. Most of this social benefit is in the form of revenue savings for government programs or the generation of tax revenues (and hence are a benefit to South Carolina taxpayers). In addition, employment-based spending by SRA-diverted offenders had an estimated economic impact on the South Carolina economy ranging from \$8.685 million in FY 2011 to \$24.955 million in FY 2013. When we examine impacts of SRA initiatives implemented by the South Carolina Department of Probation, Parole and Pardon Services for the three year period, the cumulative impact on the South Carolina economy is \$50.896 million.



## References

- Children's Defense Fund. 2011. "Children in South Carolina." Washington, DC. January.
- Child Welfare League of America. 2014. "South Carolina's Children 2012." Washington, DC. January. Accessed at [www.cwla.org/advocacy/statefactsheets/2012/southcarolina.pdf](http://www.cwla.org/advocacy/statefactsheets/2012/southcarolina.pdf).
- Geller, A., Irwin G., and Western, B. 2011. "Paternal Incarceration and Support for Children in Fragile Families." *Demographics*, 48, 25-27.
- Hughes, D. W. 2003. "Policy Uses of Economic Multiplier and Impact Analysis." *Choices*, 2<sup>nd</sup> Quarter, 25-30. Accessed at [www.choicesmagazine.org](http://www.choicesmagazine.org).
- IMPLAN Group Inc., Minnesota. 2000. *IMPLAN Professional Version 2.0 User's Guide, Analysis Guide and Data Guide*. Stillwater, MN.
- King, M., Ruggles, S., Alexander, J. T., Flood, S., Genadek, K., Schroeder, M.B., Trampe, B., and Vick, R. 2010. Integrated Public Use Microdata Series, Current Population Survey: Version 3.0. [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor].
- Meyer, D. R. and Warren, E. 2011. "Child Support Orders and the Incarceration of Noncustodial Parents." Institute for Research on Poverty and School of Social Work, University of Wisconsin–Madison. Accessed at <http://irp.wisc.edu/research/childsup/cspolicy/pdfs/2011-12/Task7b-2011-12-Report.pdf>.
- Pew Center on the States. 2009. "One in 31: The Long Reach of American Corrections." The Pew Charitable Trusts. Washington, DC. Accessed at [www.pewstates.org/uploadedFiles/PCS\\_Assets/2009/PSPP\\_1in31\\_report\\_FINAL\\_WEB\\_3-26-09.pdf](http://www.pewstates.org/uploadedFiles/PCS_Assets/2009/PSPP_1in31_report_FINAL_WEB_3-26-09.pdf).
- The Pew Charitable Trust. 2013. "The Impact of Parole in New Jersey." Washington, DC. Accessed at [www.pewstates.org/uploadedFiles/PCS\\_Assets/2013/PSPP\\_NJParole-Brief.pdf](http://www.pewstates.org/uploadedFiles/PCS_Assets/2013/PSPP_NJParole-Brief.pdf).
- The Commonwealth of Massachusetts. Committee for Public Counsel Services. 2011. "Committee for Public Counsel Services: FY 2012 Budget." Accessed at [www.publiccounsel.net/Administration/pdf/FY%2012%20Budget%20Update%20-%20Ways%20and%20Means%20Budget%20Hearing.pdf](http://www.publiccounsel.net/Administration/pdf/FY%2012%20Budget%20Update%20-%20Ways%20and%20Means%20Budget%20Hearing.pdf).
- The Henry K. Kaiser Family Foundation. 2013. "Enrollment-Driven Expenditure Growth: Medicaid Spending during the Economic Downturn, FY 2007-2011." Kaiser Commission on Medicaid and the Uninsured. Accessed at [kaiserfamilyfoundation.files.wordpress.com/2013/05/8309-02.pdf](http://kaiserfamilyfoundation.files.wordpress.com/2013/05/8309-02.pdf).

The Henry K. Kaiser Family Foundation. 2014. "Medicaid Payments per Enrollee, FY 2010." Accessed at <http://kff.org/medicaid/state-indicator/medicaid-payments-per-enrollee/>

United States Government Accountability Office (GAO). 2011. "More Information and Collaboration Could Promote Ties Between Foster Care Children and Their Incarcerated Parents." Report to Congressional Requesters. GAO-11-863. Washington, DC.

United States Department of Agriculture. 2014. "Supplemental Nutrition Assistance Program: Average Monthly Benefit per Person." Food and Nutrition Service. Accessed at [http://www.fns.usda.gov/pd/18SNAPavg\\$PP.htm](http://www.fns.usda.gov/pd/18SNAPavg$PP.htm).