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## CORRECTIONAL INDUSTRIES PROGRAMS FOR ADULT OFFENDERS IN PRISON: ESTIMATES OF BENEFITS AND COSTS

In recent years, the Washington legislature has directed the Washington State Institute for Public Policy to identify evidence-based programs that can lower crime and give Washington taxpayers a good return on their money.<sup>1</sup> The purpose of this short report is to update previously published findings pertaining to correctional industries programs for adult prisoners.<sup>2</sup>

One goal of correctional industries programs is to give inmates an opportunity to acquire job skills while in prison. It is thought that increased employability will enable offenders to obtain and maintain a job upon leaving prison, and that successful job market performance in the community will lower the chance that an offender will engage in future criminal activity.

Since our review was issued in 2001, one new evaluation of Washington's correctional industries programs has been published. We have also made some refinements in our benefit-cost model. This update incorporates these changes.

**Research Methods.** Our research methods can be briefly summarized.<sup>3</sup> We gathered all existing program evaluation studies that we could locate on correctional industries programs throughout in the United States. We only considered studies with rigorous research designs that include a control group and a treatment group. We then "meta-analyzed" these studies to estimate the average effect that correctional industries programs have on recidivism rates. Even for those studies that met

our minimum research design requirements, we discounted the effects of studies that had a less-than-randomized research methodology, since there is evidence that weaker research designs are likely to overestimate the true effectiveness of criminal justice programs.<sup>4</sup>

**Research Results.** Unfortunately, we only found three rigorous evaluations of correctional industries programs, one of which was of Washington's program. Thus, there is a clear need for additional studies of the effectiveness of these programs.

Nevertheless, we show in Table 1 that, based on these three studies, **correctional industries programs can be expected to produce a statistically significant reduction in the future criminality of participating offenders.** That is, there is credible evidence that the programs reduce future crime, although this conclusion needs to be tested further with new evaluations of correctional industries programs.

Table 1 shows that the unadjusted effect size from the meta-analysis is a statistically significant  $-.115$ . To account for the less-than-randomized research designs, we lower this effect size to  $-.084$ . This is an effectiveness rate that is comparable to other successful programs for adult offenders such as drug courts.<sup>5</sup> To put this number in more familiar terms, we estimate that without a correctional industries program, about 40 percent of eligible offenders would be reconvicted for a new felony within eight years of leaving prison. With participation in a correctional industries program, we estimate that the recidivism rate would be reduced to 36 percent.

<sup>1</sup> The Institute's latest review for juvenile offender and prevention programs is contained in: S. Aos, R. Lieb, J. Mayfield, M. Miller, & A. Pennucci. *Benefits and Costs of Prevention and Early Intervention Programs for Youth*. Olympia: Washington State Institute for Public Policy, 2004.

<sup>2</sup> Our previous findings on correctional industries and other adult offender programs can be found in: S. Aos, P. Phipps, R. Barnoski, & R. Lieb. *The Comparative Costs and Benefits of Programs to Reduce Crime, v. 4.0*. Olympia: Washington State Institute for Public Policy, 2001.

<sup>3</sup> Our methods are fully described in: Aos et al., 2004, Technical Appendix.

<sup>4</sup> M. W. Lipsey. "Those Confounded Moderators in Meta-Analysis: Good, Bad, and Ugly." *The Annals of the American Academy of Political and Social Science* 587(1) (2003): 69-81.

<sup>5</sup> R. Barnoski & S. Aos. *Washington State's Drug Courts for Adult Defendants: Outcome Evaluation and Cost-Benefit Analysis*, Olympia: Washington State Institute for Public Policy, 2003.

**Table 1**  
**Meta-Analytic Estimates of Standardized Mean Difference Effect Sizes**

Correctional Industries Programs, and the effect on:	Number of Effect Sizes Included in the Analysis	Results Before Adjusting Effect Sizes					Adjusted Effect Size Used in the Benefit-Cost Analysis, see footnote
		Fixed Effects Model			Random Effects Model		
		Weighted Mean Effect Size & p-value		Homogeneity Test	Weighted Mean Effect Size & p-value		
		ES	p-value	p-value	ES	p-value	
Crime	3	-.115	0.000	0.102	na	na	<b>-.084</b>

Footnote: Meta-analytic methods used by the Institute are described in full in: S. Aos, R. Lieb, J. Mayfield, M. Miller, & A. Pennucci. *Benefits and Costs of Prevention and Early Intervention Programs for Youth, Technical Appendix*. Olympia: Washington State Institute for Public Policy, 2004. Adjusted effect sizes reflect the assumptions we make concerning research design quality and whether the program operated in the "real world" (the adjustments are described in the document listed above).

The studies with sufficient research rigor to be included in the analysis of correctional industries programs:

(1) W. G. Saylor & G. G. Gaes. *PREP: A Study of 'Rehabilitating' Inmates Through Industrial Work Participation, and Vocational and Apprenticeship Training*. Federal Bureau of Prisons: Washington, DC, 1996.

(2) K. E. Maguire, T. J. Flanagan, & T. P. Thornberry. "Prison Labor and Recidivism." *Journal of Quantitative Criminology* 4(1) (1988): 3-18.

(3) E. Drake. *Class I Impacts: Work During Incarceration and Its Effects on Post-Prison Employment Patterns and Recidivism*. Olympia: Washington State Department of Corrections, 2003.

**Benefits and Costs.** Based on these results, and to provide legislators with a "bottom-line" number, we estimated the benefits and costs of correctional industries programs in Washington State. We did this by employing the benefit-cost model we have developed in recent years.<sup>6</sup> When there is less crime, taxpayers spend less money on the criminal justice system. Fewer crimes also mean there are fewer crime victims. Since our meta-analysis indicates that correctional industries programs reduce subsequent crime, our benefit-cost analysis monetizes the benefits by estimating the present value of life-cycle avoided costs to both taxpayers and crime victims. Table 2 presents the results.

We found that a correctional industries program can be expected to result in \$5,171 in benefits per participant tied to the reduced crime. Of these total benefits, \$2,646 accrue to taxpayers in the form of reduced criminal justice system expenditures that will be avoided because recidivism is lower. There will also be fewer crime victim costs; we estimate these benefits to be \$2,525 per program participant. We estimate that the incremental costs to taxpayers of a correctional industries program is \$777 per offender. This amount pays for the administrative costs and the opportunity costs of working capital, while other program costs are self-supporting. Thus, the overall net gain for correctional industries programs is estimated to be \$4,394 per participant, or \$6.65 in benefits per dollar of cost.

**Conclusion.** We find that correctional industries programs for adult offenders in prison can achieve a statistically significant reduction in recidivism rates, and that a reasonably priced program generates about **\$6.70 in benefits per dollar of cost**. To enhance this conclusion, we recommend that additional rigorous outcome evaluations be undertaken of correctional industries programs.

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**Table 2**

Summary of Estimated Benefits and Costs of Correctional Industries Programs (in 2003 Dollars Per Program Participant)	
Benefits to taxpayers in criminal justice system savings	\$2,646
Benefits of avoided criminal victimizations	\$2,525
<b>Total Life-Cycle Benefits</b>	<b>\$5,171</b>
<b>Total Program Costs</b>	<b>\$777</b>
<b>Net Present Value</b>	<b>\$4,394</b>
<b>Benefit-to-Cost Ratio</b>	<b>\$6.65</b>

Note: The dollar figures reported here are the present value of life-cycle benefits to taxpayers and crime victims from the estimated reduction in crime that correctional industries programs produce, discounted with a 3 percent real discount rate. The program cost estimate is based on the taxpayer cost to administer Washington's program and the opportunity costs of the program's working capital; the rest of the program's costs are covered by income from the goods sold. Benefits are estimated with the Institute's benefit-cost model; see S. Aos, R. Lieb, J. Mayfield, M. Miller, & A. Pennucci. *Benefits and Costs of Prevention and Early Intervention Programs for Youth, Technical Appendix*. Olympia: Washington State Institute for Public Policy, 2004.

<sup>6</sup> The model is fully described in: Aos et al., 2004, Technical Appendix.