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Federal Bureau of Prisons



Post Release Employment Project Summary of Preliminary Findings

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Federal Bureau of Prisons
Office of Research and Evaluation
June 27, 1991

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**Post Release Employment Project
Summary of Preliminary Findings**

**Office of Research and Evaluation
Federal Bureau of Prisons
U. S. Department of Justice
Washington, D. C. 20534**

June 27, 1991

**An analysis of the impact of training and
industrial work programs operated by the
Federal Bureau of Prisons on Federal
offenders during their incarceration and after
release from confinement**

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Overview

This report is a summary of some of the major findings of the Post Release Employment Project (PREP) conducted by the Office of Research, Federal Bureau of Prisons. PREP was designed to answer fundamental questions about the effect of prison vocational training and work experience on the offender's behavior when he is released to the community. PREP is primarily an analysis of the potential differences between Federal offenders who received training and work experience (the Study Group) and those who did not participate in these activities (the Comparison Group).

Preliminary Findings:

- Study group participants (those who received training and work experience) demonstrated better institutional adjustment than did the participants in a comparison group. Study group members were less likely to have a misconduct reports within the last year of their confinement, and when they did, it was less likely to have been serious misconduct. Study group participants were also rated by their unit teams to have a higher level of responsibility than their comparison counterparts. An inmate's level of responsibility refers to his level of dependability, financial responsibility, and the nature of his interaction with staff and other inmates.
- At the point of halfway house release, both study and comparison offenders were equally likely to successfully complete their halfway house stay, although study inmates were employed on average a greater proportion of each workweek.
- Inmates who participated in work and vocational programming during their imprisonment showed better adjustment, were less likely to recidivate by the end of their first year back in the community, were more likely to be employed in the halfway house and community, and earned slightly more money in the community than inmates who had similar background characteristics, but who did not participate in work and vocational training programs.

Background and Methodology

Throughout this report, we refer to the work/training group as the ***study group***, and the untrained group as the ***matched-comparison*** or simply ***comparison group***. Previous papers describe the statistical and analytical procedures for selecting comparison subjects. Conceptually, the comparison offenders were chosen to be as similar to the study group as could reliably be measured based on criminal, education, and employment history and characteristics of the current offense. This was the only feasible, and in this office's opinion, the only ethical way to compare trained and untrained offenders and still control for the self-selection process that determines who participates in these programs.

Selection bias is a term used by methodologists and statisticians to describe the potential inaccuracies that can arise when subjects or other units are not randomly assigned to the treatments being studied. Selection bias can be due to differences in some preexisting characteristics of the individuals being observed (resulting in what is referred to as self selection bias) or to the situations that determine why some individuals participate in a program or treatment and others do not. The problem of bias arises when the selection process is related to the treatment effects, and the research design doesn't allow the researcher to disentangle the two effects. Ideally, an evaluator wants to draw inferences about a treatment, training, or some other intervention uncontaminated by selection biases. Self-selection bias has been implicated in such diverse areas of study as manpower training, Scholastic Aptitude Testing (SAT), delinquency research, and almost any evaluation study that is used to draw conclusions about an intervention.

In many applied settings it is not only impractical, but also unethical to randomly assign subjects to interventions. Experimental designs cannot eliminate selection biases since randomly assigned subjects can withdraw, resign, or be removed from a particular program. Furthermore, because vocational training and industrial work is voluntary in the Bureau of Prisons, it made more sense to conduct an evaluation in its "natural" setting, rather than force some participants into work or vocational training programs against their will. Observational studies such as PREP also have their costs. To tease out potential differences, larger sample sizes than those used in experiments are usually required.

Preparation for this study began in 1983. Data collection on post-release outcomes continued into early 1987, with some data coming in as late as October, 1987. Data were collected on more than 7,000 inmates. Understanding and modelling self-selection is not only important for drawing valid conclusions about outcome. It is also important in describing the process by which inmates are given the opportunity and seize the occasion to participate in vocational training and meaningful work. The opportunity to participate in industrial work is obviously limited by the number of jobs the Bureau of Prisons can offer through the expansion or contraction of its industries.

Throughout the duration of this project, in which study and comparison inmates were released from the Bureau (1984 through 1986), about 35 percent of inmates were employed by UNICOR, in institutions where there were Federal Prison Industries operations. Currently, the proportion of inmates employed by UNICOR is 32 percent. The conclusions of this study are probably dependent on the proportion of inmates employed by UNICOR. The impact of industrial work experience offered to a larger segment of the corrections population may or may not increase the salutary effects of employment; however, we do not know what the optimal level of UNICOR employment might be.

Unlike most studies of prison vocational training or work experience, PREP is a prospective, longitudinal study. Study inmates were identified by case management staff at the institution over a period of several years. Inmates were selected for the study group prior to their release, if they had participated in industrial work for at least 6 months or had received vocational instruction. The study group is composed primarily of inmates with UNICOR work experience -- 57 percent had exclusively UNICOR work experience, while 19 percent had a combination of UNICOR work experience, vocational training, or apprenticeship training. The remaining 24 percent were involved in some combination of vocational or apprenticeship training. Based on a set of matching variables, comparison inmates were selected who were released in the same time frame, but who had not participated in either work or training. The results of the matching analysis are demonstrated in Table 1 on the following page. The table depicts information for the comparison group, study group, and a baseline group that represents all other inmates released in the same time frame as the study and comparison offenders.

Table 1

COMPARISONS AMONG STUDY, COMPARISON, AND BASELINE OFFENDERS

Severity of Current Offense

	Comparison Group		Study Group		Baseline Group	
	%	(Base)	%	(Base)	%	(Base)
Lowest	7.67	(219)	7.55	(152)	11.77	(1619)
Low/Moderate	34.22	(977)	30.10	(606)	38.74	(5331)
Moderate	33.91	(968)	34.77	(700)	31.98	(4400)
High	16.60	(474)	16.44	(331)	13.14	(1808)
Greatest	7.60	(217)	11.13	(224)	4.38	(602)
Total		(2855)		(2013)		(13760)

	Comparison Group		Study Group		Baseline Group	
	%	(Base)	%	(Base)	%	(Base)
None	44.10	(1259)	49.48	(966)	50.52	(6952)
Minor	17.76	(507)	17.69	(356)	17.22	(2370)
Serious	38.14	(1089)	32.84	(661)	32.25	(4438)
Total		(2855)		(2013)		(13760)

Projected Length of Incarceration

	Comparison Group		Study Group		Baseline Group	
	%	(Base)	%	(Base)	%	(Base)
0-12 Months	25.25	(721)	27.02	(544)	43.44	(5977)
13-59 Months	71.63	(2045)	67.71	(1361)	53.93	(7421)
60-83 Months	2.38	(68)	4.37	(88)	2.05	(282)
84+ Months	0.74	(21)	0.99	(20)	0.58	(80)
Total		(2855)		(2013)		(13760)

This table represents three items selected from the Bureau's security designation scoring sheet. The first item reflects the relative seriousness of the commitment offense. The seriousness measure shows that study and comparison group offenders generally have a more serious commitment offense than the baseline offenders. The variable also shows that study group participants are more likely to have a "greatest" severity offense than either the comparison or baseline offenders. "Greatest" severity offenses include homicide, rape, and manslaughter. The second variable depicted is whether the offender had a serious prior commitment. Comparison group offenders were more likely to have had a prior serious commitment. The most dramatic difference

in Table 1 is represented in the last variable, projected length of stay. The study and comparison groups were similar to each other in their distribution of expected length of stay. However, there was a dramatic difference between both study and comparison group offenders relative to the baseline group. Baseline group offenders were much more likely to have shorter expected lengths of stay than either the study or comparison group inmates.¹

These three variables were selected to indicate the substantive differences between the study and comparison groups relative to other offenders released during the same time frame of the PREP project. Study and comparison subjects had longer lengths of stay and more serious commitment offenses. In a previous paper, we demonstrated how the matching procedure was used to choose comparison subjects who were selected from the larger "reservoir" of released offenders, and how this procedure eliminated other statistically significant differences between study and baseline group offenders.

The primary focus of PREP was a determination of the differences exhibited by study and comparison group inmates once they were released to community supervision. Post-release follow-up information was obtained on all inmates. The follow-up included information on employment, wages, and revocation. Most study and some comparison inmates were released through a halfway house prior to their eventual release to the community. In the following sections, we will summarize findings related to institutional adjustment and halfway house and community outcome information.²

¹ Actual time served was computed for the study and comparison groups and, as one would expect, based on the projected length of incarceration, the study group served more time than did the comparison group. On average, study group inmates served about 6 months longer than comparison group inmates.

² All of the results in Tables 1,2,3, and 4 are statistically significant. In Table 5, significant contrasts are indicated with an "**", otherwise, "n.s." is noted for "not significant." Statistical tests in Tables 1 through 4 and the employment data for Table 5 are chi-square tests for differences in proportions. The statistical test for employment wages in Table 5 were based on t-tests of differences in group means. We have also noted in each table the different number of observations. Not all information was collected or available on all observations in this study. Furthermore, as the study progressed through the post-release outcome stages, inmates would be revoked, or otherwise "drop out" of the study (e.g. successfully complete their period of supervision).

Study Results

Institutional Adjustment

One of the arguments for the continuation or even expansion of industrial work in prisons is that it is necessary to effectively cope with inmate idleness and therefore directly and indirectly helps to ensure the orderly running of correctional institutions. This is not a question directly addressed by the PREP study. To answer such a question, a research design would have to evaluate changes in institutional misconduct patterns related to the expansion or contraction of prison industries. Comparisons between prison systems that have varying degrees of industrial work programs is very difficult, since prison systems are often different on many other dimensions as well.

In this section, we address a more limited question. Do inmates working in prison industries or participating in vocational training evidence better institutional adjustment than their matched comparison counterparts? Table 2 shows the results of three measures that suggest study group participants did show better institutional adjustment. Study group members were less likely to have a misconduct report within the last year, and when they did, it was less likely to have been serious misconduct. Study group participants were also rated by their unit teams to have a higher level of responsibility than their comparison counterparts. An inmate's level of responsibility refers to his level of dependability, financial responsibility, and the nature of his interaction with staff and other inmates.

Table 2
INSTITUTIONAL ADJUSTMENT
Frequency of Disciplinary Reports Within the Last Year

	Comparison Group		Study Group	
	%	(Base)	%	(Base)
None	73.8	(766)	77.7	(587)
One or More	26.2	(272)	22.2	(168)
Total		(1038)		(755)

Table 2 (Cont.)

INSTITUTIONAL ADJUSTMENT

Type and Frequency of Most Serious Disciplinary Reports³

	Comparison Group		Study Group	
	%	(Base)	%	(Base)
Any Greatest	2.6	(27)	1.6	(12)
More than One High within the Last 2 Years	3.5	(36)	2.4	(18)
Only one High within the Last 2 Years	10.5	(109)	9.3	(70)
More than One Moderate within the Last Year	2.9	(30)	2.4	(18)
Only One Moderate within the Last Year	8.4	(87)	9.1	(69)
More than One Low Moderate within the Last Year	.3	(3)	0.0	(0)
Only One Low Moderate within the Last Year	.6	(6)	1.3	(10)
None	71.3	(740)	73.9	(558)
Total		(1038)		(755)

Level of Responsibility

	Comparison Group		Study Group	
	%	(Base)	%	(Base)
Poor	7.4	(77)	2.9	(22)
Average	40.7	(423)	37.5	(283)
Good	51.8	(538)	59.6	(450)
Total		(1038)		(755)

³ Offenses are classified into 4 categories: Low Moderate, Moderate, High, and Greatest severity.

Halfway House Outcomes

The Bureau of Prisons contracts with halfway houses in order to provide qualifying inmates an opportunity prior to the end of their imprisonment to work in the community. This is also the first opportunity to recidivate. Table 3 depicts some of the important halfway house outcome information collected in the PREP study. The variable disposition shows that almost the same proportion of study (83.9 percent) and comparison (83.3 percent) inmates successfully completed their halfway house stay. On average, study inmates spent 98.01 days in the halfway house environment prior to their release to community supervision, while comparison inmates spent 93.5 days. Table 3 also shows that study inmates held a job for a greater proportion of days (.498 days of the week) versus comparison offenders (.452 days of the week). This proportion was computed by taking the ratio of the number of days an offender was employed in a week relative to a 7-day week. Thus, if the offender was employed 5 days a week, his proportion would have been .71. The study proportion indicates that on average, these offenders were working 3.49 days a week, while the comparison group was working 3.16 days a week. Table 3 also shows that study inmates were working more at day labor jobs as well.

One of the responsibilities of staff at halfway houses is to provide employment counselling. As can be seen from table 3, most offenders get jobs through their own resources. Study inmates, however were more likely to get employment help from their friends or from an employment agency than comparison inmates. This was true for the longest and most recently held job. Finally, for inmates who left their longest held job at the halfway house, most study offenders quit in order to get a better job, although 7.81 percent were fired and 23.83 percent were laid off. Comparison subjects were more likely to quit their jobs for reasons other than to get a better job.

Table 3		
HALFWAY HOUSE OUTCOME DATA		
Disposition		
	Comparison Group %	Study Group %
Escapes	6.81	5.18
New Arrests	.10	.52
Return to Custody	9.12	8.37
Successful Completion	83.30	83.94
Other	.67	1.99
Number of Observations	(1042)	(3070)
Proportion of Days Employed - Full-Time		
	.452	.498
Number of Observations	(732)	(2808)

Table 3 (Cont.)

Proportion of Days Employed - Day Labor

	Comparison Group %	Study Group %
	.004	.018
Number of Observations	(766)	(2808)

Person or Agency Responsible for Finding the Job Held the Longest

Halfway House	18.92	16.10
Offender	51.35	49.81
Friends	2.70	14.98
Relatives	8.11	6.74
Employment Agency	6.41	8.81
Other	13.51	3.75
Number of Observations	(37)	(257)

Person or Agency Responsible for Finding Most Recently Held Job

Halfway House	13.62	15.74
Offender	57.28	51.64
Friends	4.80	13.59
Relatives	6.81	8.15
Employment Agency	2.48	6.15
Other	15.02	4.72
Number of Observations	(646)	(2649)

Reason Why Offender Left Longest Held Job

Fired	3.03	7.81
Laid Off	9.09	23.83
Quit for a Better Job	33.33	44.14
Quit - Other Reason	54.55	24.22
Number of Observations	(33)	(256)

In summary, at the point of halfway house release, both study and comparison offenders were equally likely to successfully complete their halfway house stay, although study inmates were, on average, employed a greater proportion of each workweek. Although most study offenders were released through a halfway house, many of the comparison inmates were released directly to community supervision.

Post-Release Outcome

Once released to community supervision, offenders in the PREP study were followed by making phone calls to their supervising probation officers. Follow-up occurred at 6- and 12-month intervals. However, monthly information was collected over the entire interval. Table 4 shows the 6- and 12-month dispositions for study and comparison subjects.⁴ At both the 6- and 12-month follow-up points, study group offenders were less likely to be revoked from supervision. Although not depicted in Table 4, the study and comparison groups were indistinguishable in their reason (parole violation vs. new offense) for being revoked. Nevertheless, the predominant reason for revocation (60 - 70 percent) for both groups was a parole violation rather than a new offense. Furthermore, inmates who participated exclusively in UNICOR were also less likely to have their supervision revoked than comparison group offenders -- these results were also statistically significant. Although the magnitude of difference seems small, the differences are not only statistically significant, they are substantively meaningful. At the 12-month time period, 10.12 percent of comparison offenders had been revoked, while only 6.59 percent of study offenders had been revoked. In other recidivism studies conducted by the Bureau, about 20 percent of released inmates were revoked or rearrested within a year of their release. In 1980, the percentage was 19.4 percent, in 1982, 23.9 percent, and in 1987, 19.2 percent. What is most striking is the fact that both study and comparison offenders were more likely to be successful than other inmates released to the community.

Disposition - 6 Months		
	Comparison Group %	Study Group %
Completed	12.67	10.02
Under Supervision	81.16	85.06
Revoked	6.17	4.92
Number of Observations	(2495)	(2236)
Disposition - 12 Months		
Completed	8.47	7.86
Under Supervision	81.42	85.55
Revoked	10.12	6.59
Number of Observations	(1829)	(1502)

⁴ The data in Table 4 show that about 600 - 700 fewer inmates were represented in the 12-month follow-up than in the 6-month follow-up. The reason for this is that when the PREP study was terminated, there were about that number of offenders still in the "pipeline" for whom no 12-month outcome data was collected.

The differences among study, comparison, and these baseline groups indicate several important conclusions: (1) Due to the research design and the matching methodology, there are characteristics of both study and comparison offenders that decrease their likelihood of recidivating; (2) UNICOR work experience and vocational training further increases the likelihood of post-release success; (3) had we compared the study group to a normal baseline group, even with statistical controls, it is likely we would have exaggerated the differences between offenders who participated in work and vocational training, and those that did not.

Table 5 shows the proportion of study and comparison group offenders who were employed during the follow-up period in any given month. The second half of the table shows the average wages earned in each month, as well as the 6- and 12-month totals. Although not indicated in Table 5, there is a tremendous amount of variability in post-release wages, which is probably why most comparisons did not reach statistical significance. The table shows that study group offenders were more likely to be employed in any of the 12 months following their release to the community. This difference varies between about 8 and 9 percent from month to month. At the end of 12 months, study group inmates had averaged about \$200 more in wages than comparison group offenders, although this result was not statistically significant.

Table 5			
POST-RELEASE OUTCOME DATA - EMPLOYMENT			
If Still Under Supervision at the End of 6 Months, Percentage of Offenders Employed in:			
	Comparison Group %	Study Group %	Statistical Significance
Month 1	65.56	74.70	*
Month 2	65.48	75.06	*
Month 3	65.84	74.19	*
Month 4	64.68	72.84	*
Month 5	63.69	71.11	*
Month 6	61.05	68.58	*
Number of Observations	(2506)	(2253)	
If Still Under Supervision at the End of 12 Months, Percentage of Offenders Employed in:			
	Comparison Group %	Study Group %	Statistical Significance
Month 7	71.76	79.24	*
Month 8	70.73	77.11	*
Month 9	68.81	76.05	*
Month 10	66.74	74.32	*
Month 11	64.88	72.85	*
Month 12	63.08	71.72	*
Number of Observation	(1831)	(1503)	

Table 5 (Cont.)

POST-RELEASE OUTCOME DATA - EMPLOYMENT WAGES

If Still Under Supervision at the End of 6 Months, Total Wages Earned in:

	Comparison Group	Study Group	Statistical Significance
Month 1	\$ 668.25	\$ 723.57	*
Month 2	\$ 693.45	\$ 737.17	*
Month 3	\$ 703.32	\$ 727.80	n.s.
Month 4	\$ 701.09	\$ 733.82	n.s.
Month 5	\$ 693.12	\$ 720.77	n.s.
Month 6	\$ 676.35	\$ 701.29	
Total 1 - 6 Months	\$4,135.59	\$4,344.42	n.s.
Number of Observations	(2506)	(2253)	

If Still Under Supervision at the End of 12 Months, Total Wages Earned in:

	Comparison Group	Study Group	Statistical Significance
Month 7	\$ 851.02	\$ 846.10	n.s.
Month 8	\$ 835.92	\$ 845.98	n.s.
Month 9	\$ 828.03	\$ 833.50	n.s.
Month 10	\$ 815.57	\$ 822.21	n.s.
Month 11	\$ 793.06	\$ 822.97	n.s.
Month 12	\$ 769.45	\$ 820.97	n.s.
Total 7 - 12 Months	\$4,893.06	\$4,991.72	n.s.
Number of Observations	(1831)	(1503)	
Total 1 - 12 Months	\$9,665.88	\$9,862.82	n.s.

In summary, inmates who participated in UNICOR work and other vocational programming during their imprisonment showed better adjustment, were less likely to be revoked at the end of their first year back in the community, were more likely to be employed in the halfway house and community, and earned slightly more money in the community than inmates who had similar background characteristics, but who did not participate in work and vocational training programs.

Future Analyses and Reports

The analyses depicted in this report represent only the most fundamental differences between study and comparison offenders. Future analyses will address mobility issues -- the impact of prison work and vocational training on changes in occupations before, during, and after release from prison. We will also analyze specific occupational work and training effects to the extent the data allow. Every inmate's job or vocational training was classified according to the Department of Labor's Dictionary of Occupational Titles. These DOT codes will allow us to look at broad, as well as more refined classes of occupations and their impact on post-release outcome. We have also collected economic climate data. Data such as unemployment statistics, industrial sector information, and information on the demographic characteristics of the areas to which inmates were released will allow us to examine the relative impact of these areal economic climate data in relation to work and vocational training. As part of the data collected on study inmates while they were in prison, work evaluations conducted by the inmates' supervisors were gathered, as well as ratings of the inmate's performance in the vocational training courses. This performance information will allow us to examine whether the intensity of the inmate's work performance affects post-release success.

Although the marginal impact of work and vocational training in prison has produced small but statistically significant effects, it is possible that further analysis will show us how to optimize our training through specific skills acquisition. It is also likely that the economic climate of an area is an important determinant of an offender's community employment. We are well aware that many of our ex-offenders not only must overcome low skill levels, they must also overcome the stigma associated with imprisonment.