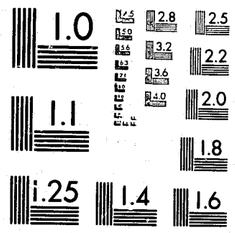


98588

RESTITUTION OR REBATE: THE ISSUE OF JOB SUBSIDIES IN JUVENILE RESTITUTION PROJECTS

By

William R. Griffith

January 1983

Funding for this report and research was provided by grants no. 77-NI-99-0005, 79-NJ-AX-0009, and 82-JS-AX-0025 from the Office of Justice Assistance, Research, and Statistics, OJJDP/NIJJDP, U.S. Department of Justice, Washington, DC to the Institute of Policy Analysis, Eugene, Oregon. Points of view or opinions stated in this document are those of the author, and do not necessarily represent the official position or policies of the Department of Justice.

RESTITUTION OR REBATE: THE ISSUE OF JOB SUBSIDIES IN JUVENILE RESTITUTION PROJECTS

INTRODUCTION

The issue of utilizing employment subsidies in juvenile restitution projects has been one of the most controversial topics in the national juvenile restitution initiative. In February, 1978, the Office of Juvenile Justice and Delinquency Prevention announced a major initiative designed to promote and experiment with the use of restitution in juvenile courts (OJJDP, 1978). The objectives of these restitution projects, according to the program announcement, would be to (1) reduce incarceration of juveniles, (2) reduce recidivism, (3) bring about a greater sense of responsibility on the part of young offenders, (4) help satisfy victims, (5) promote community confidence in the juvenile justice process, and (6) generate increased knowledge about the feasibility of restitution for juvenile offenders.

Following a two-stage application process, grants were awarded to forty-one separate projects in twenty-six states, Puerto Rico, and the District of Columbia. Six of these grants were awarded to statewide agencies or organizations which in turn spawned a total of fifty projects at the local level. Altogether, eighty-five projects were funded by the initiative with a total commitment of approximately $23 million over three years. The Institute of Policy Analysis was selected as national evaluator and the National Office for Social Responsibility was awarded a contract to provide technical assistance.

Arguments over whether job subsidies were appropriate components in juvenile restitution projects emerged early in the initiative. Proponents argued that employment subsidies were necessary in order for more youths to participate in these programs. Specifically, since a youth's ability to pay was typically a screening criterion for monetary restitution eligibility (Schneider, et al., 1977), job subsidies would increase the number of youths eligible for this type of restitution. Moreover, proponents contended that job subsidies made more hard-core, disadvantaged youth eligible for restitution--exactly the type of offenders at which the initiative was targeted.

Opponents of subsidies argued that job subsidies were not restitution--that the payment of public money to juvenile delinquents in subsidized jobs in order to pay back the victims of these delinquents shifted the focus away from restitution and toward victim compensation. Moreover, since youths frequently would be allowed to keep a portion of the money they earned from their subsidized employment, job subsidies would actually reward offenders referred to restitution programs. Similar to a manufacturer trying to improve business through rebates, a subsidy might act as an incentive, encouraging juveniles to commit offenses in order to get a subsidized restitution job and earn some pocket money.

In 1980, officials at OJJDP in charge of the juvenile restitution initiative decided that job subsidies were allowable for two main reasons:

1. Subsidies "offer a means of initially distributing the financial responsibility of employing youths between the project and local public and private sector employers. As a result, projects can develop cooperative relationships with local and private business and industry, and in turn can secure employment for restitution purposes;" and,

2. "These funds help guarantee equal treatment of all juvenile offenders, regardless of their ability to pay restitution" (OJJDP, 1980).

OJJDP also attached specific limitations on how subsidy monies could be spent. Specifically, subsidies could not be used to make payments to victims before the restitution had been earned by the juvenile; they could not be used to pay third party expenses (e.g., insurance companies); they could not continue after a youth had completed his or her restitution (in most situations); and a youth could not keep more than 50 percent of the subsidized earnings, up to a maximum of $500.

The OJJDP criteria for offering subsidies resulted in two major types of employment subsidization, representing ideal types along a public sector-private sector continuum. At the public sector end, employment subsidies involved youth being paid--subsidized--by the court for work done in public service jobs, such as parks maintenance. At the other end of the continuum, subsidies were used for providing incentives to the private sector to hire delinquent youth. Restitution projects would make arrangements with businesses such as fast-food franchises to subsidize a portion of the youths' wages if the businesses would hire youth on a temporary basis.

The issue of employment subsidies is embodied by four major questions: First, how did referrals to projects that offered subsidies differ from referrals to projects that did not? Second, in projects offering subsidies, which factors influenced whether or not individual

youths would receive subsidization? Third, what were the effects of subsidies on the performance of these youths in restitution projects? And fourth, if subsidies had a positive effect on the performance of youths in restitution projects, which types of offenders benefited most from the receipt of an employment subsidy? This paper, drawing upon individual-level data collected from each of the 85 federally-funded restitution projects, will attempt to address these questions.

SUBSIDY PROJECTS AND NONSUBSIDY PROJECTS

Of the 85 sites in the juvenile restitution initiative, 51 or exactly 60 percent provided employment subsidization to ten percent or more of their program referrals.[1] A project meeting this criterion has been classified as a subsidy project in this analysis. Projects offering no subsidies or providing subsidization to less than ten percent of their program referrals have been classified as nonsubsidy projects.

In the 51 subsidy projects, three provided subsidies to 90 percent or more of their referrals, while the average subsidy project subsidized about 44 percent of its referrals. The total amount of subsidy dollars distributed in the first two years of the juvenile restitution initiative

[1] In the Management Information System (MIS) data, a referral is counted as having received a subsidy if the project indicated on the youth's MIS closure form that some of the youth's earnings were paid from project funds (MIS Form C, item 4c). Cases where a subsidy was promised at intake but no subsidy was ever actually paid (according to the closure data) are not counted as subsidy cases.

was $1.09 million. On average, subsidized youth received $285 each in employment subsidization; the median subsidy amount was $175.

Many youth were able to earn some pocket money through their subsidized restitution jobs. Sixty-five percent of the subsidized youth kept some of their earnings; 35 percent kept none. On the average, youth kept about 21 percent of their monetary restitution orders and about 21 percent of their total subsidies. For an average referral, this would amount to between $37 and $60 being kept by the youth, depending on whether one used the median or mean amount of subsidization.

In terms of monetary restitution orders, for a youth receiving a subsidy, the proportion of his or her order that was subsidized averaged about 107 percent. Looking at the amount of monetary restitution paid, rather than ordered, the proportion subsidized averaged 113 percent. Only 11 percent of all youth in subsidized restitution jobs had less than 100 percent subsidization of their monetary restitution payment to victims.

Characteristics of Referrals to Subsidy Projects and Nonsubsidy Projects

The characteristics of referrals to subsidy projects differed slightly from the characteristics of referrals to nonsubsidy projects (Table 1). The largest difference in referral characteristics between these two types of projects concerned the size of the youths' monetary restitution orders. Over 47 percent of all youth in subsidy projects who received monetary restitution were given orders exceeding $165, while only 33 percent of nonsubsidy project referrals receiving monetary restitution were given orders this large. Moreover, subsidy projects tended to

TABLE 1. COMPARISONS OF REFERRALS FROM PROJECTS OFFERING SUBSIDIES WITH THOSE FROM PROJECTS NOT OFFERING SUBSIDIES

	Nonsubsidy Projects	Subsidy Projects	Total	Number of Cases
Age				
13 & younger	11.4%	11.1%	11.2%	1,923
14	13.3	16.5	15.1	2,591
15	20.9	24.5	23.0	3,943
16	25.6	26.3	26.1	4,440
17	22.3	18.0	19.8	3,386
18 & older	6.5	3.6	4.8	825
Total	100.0%	100.0%	100.0%	17,108
τ_c = -.08 α < .001				
$\bar{x}$ =	15.5	15.3	15.4	17,108
s.d. =	1.6	1.5	1.6	
Annual Household Income				
$ 6,000 & Lower	19.5%	20.3%	20.0%	1,988
$ 6,000 - $10,000	18.3	19.3	19.0	1,880
$10,000 - $14,000	19.9	19.6	19.7	1,954
$14,000 - $20,000	17.4	17.9	17.8	1,762
$20,000 & Higher	24.9	22.9	23.5	2,334
Total	100.0%	100.0%	100.0%	9,918
τ_c = -.02 α < .05				
$\bar{x}$ =	$14,228	$13,332	$13,606	9,918
s.d. =	10,411	9,280	9,582	
Race				
White	70.0%	72.9%	71.7%	12,184
Nonwhite	30.0	27.1	28.3	4,815
Total	100.0%	100.0%	100.0%	16,999
phi = .03 α < .001				

TABLE 1. (Continued)

	Nonsubsidy Projects	Subsidy Projects	Total	Number of Cases
School Attendance				
Full Time	72.1%	78.8%	76.1%	12,559
Not in School	24.0	17.2	20.0	3,309
Other	3.9	4.0	3.9	650
Total	100.0%	100.0%	100.0%	16,518
τ_c = .06 α < .001				
Sex				
Male	89.3%	89.8%	89.6%	15,463
Female	10.7	10.2	10.4	1,797
Total	100.0%	100.0%	100.0%	17,260
phi = .01 n.s.				
Total Number of Priors/Charges				
0	47.4%	42.0%	44.4%	7,308
1	19.0	23.5	21.6	3,565
2	12.1	12.7	12.4	2,049
3	7.4	7.8	7.6	1,255
4	4.4	4.7	4.6	757
5	2.9	2.8	2.8	469
6 & More	6.8	6.5	6.6	1,089
Total	100.0%	100.0%	100.0%	16,492
τ_c = .04 α < .001				
$\bar{x}$ =	1.56	1.66	1.62	16,492
s.d. =	2.52	2.72	2.64	

TABLE 1. (Continued)

	Nonsubsidy Projects	Subsidy Projects	Total	Number of Cases
Seriousness				
Victimless	2.2%	2.4%	2.3%	390
Minor General	1.7	1.7	1.7	284
Minor Property	17.4	10.5	13.4	2,267
Minor Personal	2.6	1.7	2.1	350
Moderate Property	32.1	24.8	27.9	4,733
Serious Property	23.4	31.6	28.2	4,792
Serious Personal	4.2	3.6	3.9	655
Very Serious Property	12.2	20.4	16.9	2,874
Very Serious Personal	4.2	3.3	3.6	619
Total	100.0%	100.0%	100.0%	16,964
τ_c = .15 α < .001				
$\bar{x}$ =	5.34	5.76	5.58	16,964
s.d. =	1.81	1.79	1.81	
Completion Status				
Successful	86.9%	85.5%	86.1%	11,753
Unsuccessful	13.1	14.5	13.9	1,901
Total	100.0%	100.0%	100.0%	13,654
phi = .02 α < .001				
Size of Monetary Restitution Order				
$1 - $41	25.9%	14.5%	18.5%	1,965
$42 - $90	22.2	17.8	19.3	2,050
$91 - $165	18.7	20.4	19.8	2,100
$166 - $335	18.2	22.0	20.7	2,191
$336 & Higher	15.0	25.3	21.7	2,298
Total	100.0%	100.0%	100.0%	10,604
τ_c = .19 α < .001				

receive more serious offenders. In subsidy projects, 32 percent of all referrals had committed serious property offenses and 20 percent had committed very serious property offenses; for nonsubsidy projects, these figures were 23 percent and 12 percent, respectively.

On the other hand, nonsubsidy projects tended to have older referrals; 29 percent of their referrals were 17 and older, while only 22 percent of the subsidy projects' referrals were at least 17 years of age. Nonsubsidy projects also tended to have fewer youth who were reported to be in school; 72 percent of the nonsubsidy projects' referrals were in school on a full-time basis, while 79 percent of the subsidy projects' cases were. However, nonsubsidy projects had more youth with no prior offenses; 47 percent of their referrals had no priors, while only 42 percent of the subsidy projects had none.

Other differences in referrals' background characteristics between subsidy and nonsubsidy projects tended to be extremely small. Income differences were very weak; slightly more affluent youth were referred to nonsubsidy projects. Racial differences amounted to three percent, with nonsubsidy projects receiving more nonwhite referrals. There were no sex differences. The rates of successful completion of restitution requirements for youth from subsidy and nonsubsidy restitution projects differed by only 1.4 percent, with projects offering subsidies being slightly lower.

To summarize the differences in background characteristics of subsidy and nonsubsidy project referrals, subsidy projects tended to have referrals with larger monetary restitution orders, slightly more serious

offenses, more priors, and lower household incomes, while nonsubsidy projects tended to have referrals who were slightly older, with a larger proportion of nonwhites and nonschool youth. Thus, on two of the major criteria frequently used to identify serious offenders--referral offense seriousness and number of prior offenses--subsidy projects had larger proportions of referrals. This suggests that subsidy projects received a larger number of serious offenders than nonsubsidy projects, although the differences were small and were not consistent across all offender background variables.

With an understanding of the characteristics of referrals to these two types of projects, the balance of this paper will focus mainly on referrals to the 51 subsidy projects. Any generalizations to referrals from nonsubsidy projects are reasonable to make as long as one keeps in mind the slightly different characteristics of the nonsubsidy project referral population.

THE PROVISION OF SUBSIDIES TO RESTITUTION YOUTH

Since not all referrals to subsidy projects received subsidization, the issue of who would receive a subsidy was an important one. In a survey done by IPA of 19 directly-funded and 21 statewide-funded restitution projects in the OJJDP initiative, 70 percent of the projects responded that all youth referred to their projects were eligible for job subsidization. In the other 30 percent of the projects where not all youth were eligible for a subsidy, all of them would not subsidize a youth

who currently had a job, and some would only subsidize younger offenders who were not competitively employable in the private sector.

Still, in projects where all referrals were eligible for a subsidy, not all received one; for example, youth receiving unpaid community service orders were not subsidized since no monetary repayment to the victim was required.[2] Moreover, it appears that other factors were taken into account in decisions to subsidize juvenile offenders' restitution employment. Table 2 displays the relationships between the offenders' background characteristics and whether or not they received employment subsidization while in a restitution project that offered subsidies. The strongest zero-order relationship exists between offense seriousness and the receipt of an employment subsidy. Over 96 percent of all youth receiving a subsidy had committed an offense of at least moderate property or greater, while only 73 percent of youth not receiving a subsidy in projects that offered subsidies met this criterion.

In addition to offense seriousness, other factors appear to have been taken into account in the decision to offer employment subsidization. As mentioned above, some projects responded that they would offer more subsidies to younger offenders who were not competitively employable in the private sector. Table 2 reveals that a larger proportion of offenders receiving subsidies were under 16 (56.8 percent) than the proportion not

---

[2]Some projects provided stipends to these youth to pay transportation costs to their unpaid community service jobs, but these were not counted as subsidies.

TABLE 2. COMPARISONS OF YOUTHS RECEIVING SUBSIDIES WITH YOUTHS NOT RECEIVING SUBSIDIES, IN PROJECTS OFFERING SUBSIDIES

	Youth Received No Subsidy	Youth Received Subsidy	Total	Number of Cases
Age				
13 & younger	9.6%	12.7%	11.0%	905
14	14.1	18.7	16.2	1,328
15	23.0	25.4	24.1	1,977
16	28.2	24.2	26.3	2,165
17	20.6	16.7	18.9	1,549
18 & older	4.5	2.3	3.5	286
Total	100.0%	100.0%	100.0%	8,210
$\tau_c = -.12$ $\alpha < .001$				
$\bar{x}$ =	15.43	15.12	15.29	8,210
s.d. =	1.51	1.55	1.53	
Annual Household Income				
$ 6,000 & Lower	18.5%	22.0%	20.2%	1,145
$ 6,000 - $10,000	18.5	20.1	19.2	1,090
$10,000 - $14,000	20.2	18.4	19.3	1,095
$14,000 - $20,000	18.1	18.1	18.1	1,024
$20,000 & Higher	24.7	21.4	23.2	1,312
Total	100.0%	100.0%	100.0%	5,666
$\tau_c = -.06$ $\alpha < .001$				
$\bar{x}$ =	$13,898	$12,916	$13,434	5,666
s.d. =	9,426	9,040	9,258	
Race				
White	75.8%	71.8%	74.0%	6,056
Nonwhite	24.2	28.2	26.0	2,125
Total	100.0%	100.0%	100.0%	8,181
phi = .05 $\alpha < .001$				

TABLE 2. (Continued)

	Youth Received No Subsidy	Youth Received Subsidy	Total	Number of Cases
School Attendance				
Full Time	77.0%	82.2%	79.4%	6,392
Not in School	18.9	14.6	16.9	1,364
Other	4.1	3.2	3.7	301
Total	100.0%	100.0%	100.0%	8,057
$\tau_c = .05$ $\alpha < .001$				
Sex				
Male	88.4%	90.9%	89.5%	7,415
Female	11.6	9.1	10.5	868
Total	100.0%	100.0%	100.0%	8,283
phi = .05 $\alpha < .001$				
Total Number of Priors/Charges				
0	43.5%	40.4%	42.2%	3,380
1	24.6	22.5	23.7	1,899
2	11.8	13.7	12.7	1,016
3	7.2	8.4	7.7	618
4	4.4	5.3	4.8	383
5	2.7	3.1	2.8	228
6 & More	5.8	6.6	6.1	492
Total	100.0%	100.0%	100.0%	8,016
$\tau_c = .05$ $\alpha < .001$				
$\bar{x}$ =	1.52	1.73	1.61	8,016
s.d. =	2.46	2.67	2.56	

TABLE 2. (Continued)

	Youth Received No Subsidy	Youth Received Subsidy	Total	Number of Cases
Seriousness				
Victimless	4.3%	0.4%	2.5%	208
Minor General	2.7	0.5	1.7	140
Minor Property	17.1	2.4	10.4	850
Minor Personal	2.9	0.2	1.7	137
Moderate Property	26.2	23.1	24.8	2,029
Serious Property	25.0	41.1	32.4	2,651
Serious Personal	3.9	3.1	3.5	290
Very Serious Property	14.4	26.2	19.7	1,616
Very Serious Personal	3.5	3.0	3.3	267
Total	100.0%	100.0%	100.0%	8,188
τ_c = .31 α < .001				
$\bar{X}$ =	5.27	6.30	5.74	8,188
s.d. =	1.96	1.38	1.79	
Completion Status				
Successful	81.7%	90.2%	85.5%	7,119
Unsuccessful	18.3	9.8	14.5	1,203
Total	100.0%	100.0%	100.0%	8,322
phi = .12 α < .001				
Size of Monetary Restitution Order				
$1 - $41	21.0%	11.6%	15.2%	902
$42 - $90	18.5	18.8	18.7	1,108
$91 - $165	19.8	21.9	21.1	1,250
$166 - $335	19.8	23.2	21.8	1,299
$336 & Higher	20.9	24.5	23.2	1,374
Total	100.0%	100.0%	100.0%	5,933
τ_c = .12 α < .001				

receiving subsidies who were under 16 (46.7 percent). Moreover, the size of the monetary restitution order appears to have been considered when employment subsidies were offered. Nearly 48 percent of the youth receiving subsidies had monetary restitution orders of greater than $165 while 41 percent of youth not receiving subsidies had orders of this magnitude.

The other background characteristics presented in Table 2 appear not to have been given significant consideration when subsidies were provided. Annual household income, race, school status, sex, and the number of prior and concurrent offenses were all very weakly related to receipt of subsidy; none of the measures of association for these variables exceeded an absolute value of .06.

The results of a multivariate modeling of the provision of subsidies to youth in restitution projects which offer subsidies are presented in Table 3. These results show the effect of each of the background variables (independent variables) on the dependent variable (the provision of a subsidy) while statistically controlling for the other variables in the equation. The b coefficients, or unstandardized regression coefficients, show that on the average, the probability of receiving a subsidy improved by about seven percent for each step increase in offense seriousness, by about three percent for each additional $100 in monetary restitution ordered, by about six percent for nonwhites, and by less than one percent for each additional prior a youth had. In addition, the probability of receiving a subsidy declined (on average) by about three percent for each additional year of age, by about two percent for each

TABLE 3. MULTIVARIATE MODEL FOR THE PROVISION OF SUBSIDIES IN RESTITUTION PROJECTS THAT OFFER SUBSIDIES

Independent Variable	b	SE b	Beta
Offense seriousness (1 = Low; 9 = High)	.070	.004	.25
Size of monetary restitution order (in dollars)	.00031	.00003	.17
Age	-.030	.004	-.09
Race (1 = White; 2 = Nonwhite)	.062	.015	.06
Annual household income (in dollars)	-.000002	.0000008	-.04
Number of prior and concurrent offenses	.009	.003	.04
School status (1 = in school; 2 = other)	-.045	.020	-.03
Constant	(.463)	(.072)	

Multiple R = .369

R^2 = .136

N = 5,124

For this model, the dependent variable--Y--is the rate of the provision of subsidies where 1 = the provision of a subsidy and 0 = no subsidy.

additional $10,000 of income, and by about five percent for youth not in school.

All told, this multiple regression equation explains about 14 percent of the variance in the provision of subsidy dependent variable. This is a moderate-to-high amount of variance explained for these types of data (see e.g., Sechrest and Yeaton, 1982: 585) that suggests those independent variables strongly related to the subsidy variable in this equation do indeed play a part in the decision to provide job subsidies to these restitution youth. At the same time, the large amount of variance unexplained suggests that other, probably idiosyncratic, case-by-case factors also play an important role in the provision of subsidies to restitution youth.

THE EFFECT OF SUBSIDIES ON THE PERFORMANCE OF YOUTH IN RESTITUTION PROJECTS

Two measures will be employed in examining the impact of employment subsidization on youths' performance in restitution projects--the rate of the successful completion of restitution requirements and the in-program reoffense rate. The rate of successful completion of restitution requirements is defined as the proportion of closed cases completing their restitution requirements in full compliance with the original restitution order or with an adjusted order. Project-identified ineligibles are excluded from the rate (see Griffith, et al., 1982). The overall rate of successful completion for the juvenile restitution initiative is 86.2

percent. For projects offering subsidies it is 85.5 percent; for nonsubsidy projects, 86.9 percent (Table 1).

The bivariate relationship between the provision of a subsidy in projects that offer subsidies and the rate of successful completion was presented in Table 2 along with the other offender background variables. It reveals an 8.5 percent difference between subsidized and nonsubsidized restitution youth, with subsidized youth achieving the higher rate of successful completion (90.2 percent for subsidy youth, 81.7 percent for nonsubsidy).

Two multiple regression analyses were conducted to examine the independent effect of job subsidies on the rate of successful completion (i.e., the effect of subsidies after controlling for background characteristics and the size of the restitution order). Table 4 reveals that employment subsidies had a strong, independent effect on the successful completion rate. The provision of a subsidy increased the rate of successful completion by about 12 percent on the average, after controlling for the other variables in the linear regression equation. Thus, this analysis suggests that employment subsidies improve the rate of successful completion by a greater margin than the bivariate relationship earlier indicated.

In addition to the linear regression analysis presented in Table 4, a logistic regression analysis is also included. Logistic regression is particularly suited when one is analyzing a dichotomous dependent variable with a lop-sided distribution. The successful completion variable meets both these criteria, with a distribution of 86 percent successful and

TABLE 4. TWO MULTIVARIATE MODELS FOR THE SUCCESSFUL COMPLETION OF RESTITUTION REQUIREMENTS

Independent Variable	Linear Regression b	Linear Regression SE b	Logistic Regression b	Logistic Regression SE b
Subsidy (0 = no; 1 = yes)	.121	.010	1.134	.098
Size of monetary restitution order (in dollars)	-.00014	.00002	-.00095	.00016
Number of prior and concurrent offenses	-.012	.002	-.173	.024
Race (1 = white; 2 = nonwhite)	-.057	.011	-.479	.097
School status (1 = in school; 2 = other)	-.068	.013	-.476	.109
Offense seriousness (1 = low; 9 = high)	-.015	.003	-.143	.027
Annual household income (in dollars)	.000002	.0000005	.00002	.000006
Sex (1 = male; 2 = female)	-.051	.014	-.473	.129
Constant	(1.123)	(.032)	(4.212)	(.313)
	Multiple R = .261			
	R^2 = .068		D = .064	
	N = 5,124		N = 5,126	

For the linear regression model the dependent variable--Y--is the rate of completion of restitution requirements where 1 = successful completion and 0 = unsuccessful completion.

For the logistic regression model the dependent variable--L--is a natural logarithm. The rate of successful completion of restitution requirements for this model is computed by the following formula where Y is the same as above:

$$Y = \frac{e^L}{1 + e^L}$$

14 percent unsuccessful. The individual b coefficients generated in the logistic regression are not directly comparable with the linear regression's b coefficients, since the former are logarithms and their effect changes depending on the values of each independent variable in the equation. That is, whether the size of the restitution order is small or large, whether the number of priors is low or high, whether a youth is in school or not, etc., will all have an influence on the impact that the provision of a subsidy will have on a youth's probability of successful completion of restitution requirements, according to the logistic regression results.

Both the linear regression and the logistic regression equations have fairly moderate goodness-of-fit coefficients--the linear equation explained 6.8 percent of the variance in successful completion; the logistic, 6.4 percent. Thus, while the b coefficients are not directly comparable across the two equations, their ability to account for the variance in successful completion is similar. We will return to these two models after examining the other performance measure in this section, the in-program reoffense rate.

The in-program reoffense rate both is similar to and differs from the more traditional recidivism rate. It is similar to a recidivism rate in that the in-program reoffense rate is also based on whether youth have committed subsequent delinquent offenses. It differs in that recidivism usually includes only offenses committed after release from a treatment program, while the in-program reoffense rate includes only offenses committed after referral to the program but before release (Schneider, et

al., 1982: 95-124). The in-program reoffense rate we are examining excludes all status offenses and traffic offenses; moreover, cases closed as project-identified ineligibles and open cases are excluded.

In-program reoffense rates up through one year of time in program are presented in Table 5. These data reveal no significant differences at the .05 level (according to the Lee-Desu statistic) between either youth in projects offering subsidies and youth in projects not offering subsidization, nor between youth who were in projects offering subsidization who received subsidies and those who did not receive them. On the average across the first 12 monthly in-program reoffense rates, the differences between subsidy and nonsubsidy projects were 0.2 percent; the difference between youth receiving subsidies and those not receiving them in projects which offered subsidies, 0.8 percent. Overall, in each instance, subsidies were associated with slightly higher in-program reoffense rates, although this pattern tended to oscillate. In particular, youth receiving subsidies in projects that offered them tended to have lower in-program reoffense rates than nonsubsidized youth for the first four months of in-program risk time, but the next eight months of in-program risk time revealed subsidized youth to have higher in-program reoffense rates than their nonsubsidized counterparts.

Keeping in mind the differences in background characteristics between subsidized youth and nonsubsidized youth, additional survival analyses were conducted to attempt to determine if background characteristics were suppressing the relationship between subsidization and in-program reoffense rates. Other analyses have revealed that priors and, to a

TABLE 5. IN-PROGRAM REOFFENSE RATES FOR NONSUBSIDY PROJECTS AND SUBSIDY PROJECTS; AND FOR NONSUBSIDIZED YOUTH IN SUBSIDY PROJECTS AND SUBSIDIZED YOUTH IN SUBSIDY PROJECTS

	Nonsubsidy Projects	Subsidy Projects	Nonsubsidized Youth	Subsidized Youth
1-Month Rate	3.8	3.1	3.3	2.8
2	5.6	5.0	5.4	4.5
3	7.8	6.9	7.1	6.6
4	10.3	9.0	9.1	8.8
5	12.4	11.0	10.8	11.3
6	14.0	13.3	12.8	14.0
7	15.7	15.3	15.1	15.6
8	16.9	17.1	16.6	17.8
9	18.8	18.7	17.9	20.0
10	19.7	20.5	19.7	21.6
11	20.8	21.6	20.9	22.6
12-Month Rate	21.4	23.0	22.1	24.3
	Lee-Desu statistic = 3.22, df = 1 ns		Lee-Desu statistic = 0.365, df = 1 ns	
	N = 13,244		N = 8,058	

lesser degree, offense seriousness (particularly the distinction between personal and property offenses) were related to in-program reoffending (Schneider, et al., 1982: 111-113).

The additional survival analyses examined the relationship between subsidies and in-program reoffending while controlling for referral offense seriousness, number of priors and concurrent charges, and size of the monetary restitution order. The results suggest that the relationship between subsidization and in-program reoffending might be stronger than indicated earlier. In particular, controls for priors show that subsidized youth with two priors had in-program reoffense rates averaging 5 percent lower ($p < .01$) than youth without subsidies; with three priors, 2.7 percent lower ($p < .12$); with four priors, 3.7 percent lower ($p < .11$); and with six or more priors, 6.4 percent lower ($p < .12$). On the other hand, subsidized youth with no priors averaged reoffense rates 3.2 percent higher ($p < .03$) than nonsubsidized youth, and subsidized youth with five priors had reoffense rates 7.7 percent higher ($p < .13$). Controls for offense seriousness produced no changes, while controls for size of the restitution order produced only minor, variable changes in the relationship between subsidies and in-program reoffense rates.

At the beginning of this paper, the question was posed whether subsidies might actually increase recidivism rates by acting as an incentive for youth to commit delinquent acts. While these data cannot directly support or repudiate that argument, they do strongly suggest that job subsidies, at worst, have no effect on rates of in-program reoffending and, at best, might result in some reduction in youths' levels of delinquent activity while in restitution projects.

JOB SUBSIDIZATION AND FAILURE VULNERABILITY

While the effect of job subsidies on the levels of in-program reoffending is mixed, the effect of job subsidies on rates of successful completion is clear: job subsidies increase the probability of youth successfully completing monetary restitution requirements by 12 percent on the average. Yet, while this average figure is useful, it does not tell the whole story. It does not shed light on how the rates of successful completion for youth from certain subpopulations might be affected when subsidies are offered. That is to say, is the effect of subsidies on rates of successful completion the same across all youths, or do some youth benefit more from the provision of a subsidy and some less? Since restitution projects have only limited amounts of subsidy dollars available, how can they most efficiently target their subsidy expenditures? Which youth benefit most from the provision of a subsidy, and which benefit least?

Failure Vulnerability Defined

To answer these questions, a measure of failure vulnerability was developed. The measure is composed of background variables along with the size of the restitution order--all of which were revealed to be related to successful completion (see Griffith, et al., 1982). From this set of variables, five types of youth were derived, representing five levels of failure vulnerability ranging from low to high (Table 6). The values each of these five types of youth were assigned on these variables were

TABLE 6. LEVELS OF FAILURE VULNERABILITY AND SUCCESSFUL COMPLETION

Independent Variables	Level of Failure Vulnerability				
	High	Medium High	Average	Medium Low	Low
Size of $ Restitution Order	$580	$250	$129	$64	$25
Race	Nonwhite	Nonwhite	White	White	White
Annual Household Income	$3,450	$7,680	$12,000	$17,000	$25,000
Number of Priors and Concurrent Charges	4	2	1	0	0
School Status	Not in School	Not in School	In School	In School	In School
Sex	Female	Female	Male	Male	Male
Level of Offense Seriousness	Serious Personal	Very Serious Property	Serious Property	Moderate Property	Minor Property
Linear Regression	Predicted Successful Completion Rate				
With Subsidy	65%	74%	97%	102%	107%
Without Subsidy	53%	62%	85%	90%	95%
Logistic Regression Model					
With Subsidy	54%	74%	95%	97%	98%
Without Subsidy	28%	48%	87%	91%	94%

determined based on the variables' relationships to successful completion. For example, size of restitution order was negatively related to successful completion: the larger the order, the lower the probability of successful completion. Thus, the high failure vulnerability types were assigned large restitution orders; the average failure vulnerability type, an average size restitution order; and the low failure vulnerability types, small orders. The specific dollar amount assigned to each of these five types was based on the distributional characteristics of the monetary restitution order variable. The average type was given the median value--50th percentile--on the monetary restitution order variable, which was $129. The types rated medium-low and medium-high on the failure vulnerability index were given scores in the 30th ($64) and 70th ($250) percentiles on the monetary restitution order variable, respectively. While types rated low and high on the index were given scores in the 10th ($25) and 90th ($580) percentiles, respectively. Thus, each adjoining rating on the failure vulnerability index was a 20 percentile change in the monetary restitution order variable. This same method of assigning scores was used for the annual income variable, the number of priors variable (although, since slightly under 50 percent of all referrals had no priors or concurrent offenses, both the low and medium-low failure vulnerability types were assigned zero priors), and the offense seriousness variable.

For dichotomous variables--race, school status, sex--the average failure vulnerability type was assigned the modal characteristic of that variable; thus, the average failure vulnerability type was scored as

white, in school, and male. The higher failure vulnerability types were assigned values associated with lower rates of successful completion--i.e., nonwhite, not in school, and female. While the lower failure vulnerability types were assigned the opposite score of the high failure vulnerability types which, since the variables were dichotomous, was the same score as the average failure vulnerability type.

Rates of Successful Completion, Subsidies, and Failure Vulnerability

The characteristics of the five failure vulnerability types were analyzed in the two multivariate models of successful completion--the linear regression and logistic regression models presented earlier--to assess how youth of different types of failure vulnerability benefit from the provision of subsidies. The results of these analyses are presented at the bottom of Table 6, and in Figures 1 through 3.

The linear regression model reveals, as expected, a constant effect of subsidies across all types of failure vulnerability. For each level of failure vulnerability, the predicted rate of successful completion is 12 percent higher when a subsidy is present. This can be seen clearly in Figure 1 where the area between the solid line (subsidy) and the dotted line (no subsidy) remains constant across all five failure vulnerability levels.

This constant effect from the linear regression model, however, produces some odd results across the different levels of failure vulnerability. At the low and medium-low levels, the 12 percent boost in the rate of successful completion when a subsidy is provided results in a

Figure 1.
Predicted Rates of Successful Completion by Levels of Failure Vulnerability for Linear Regression Model

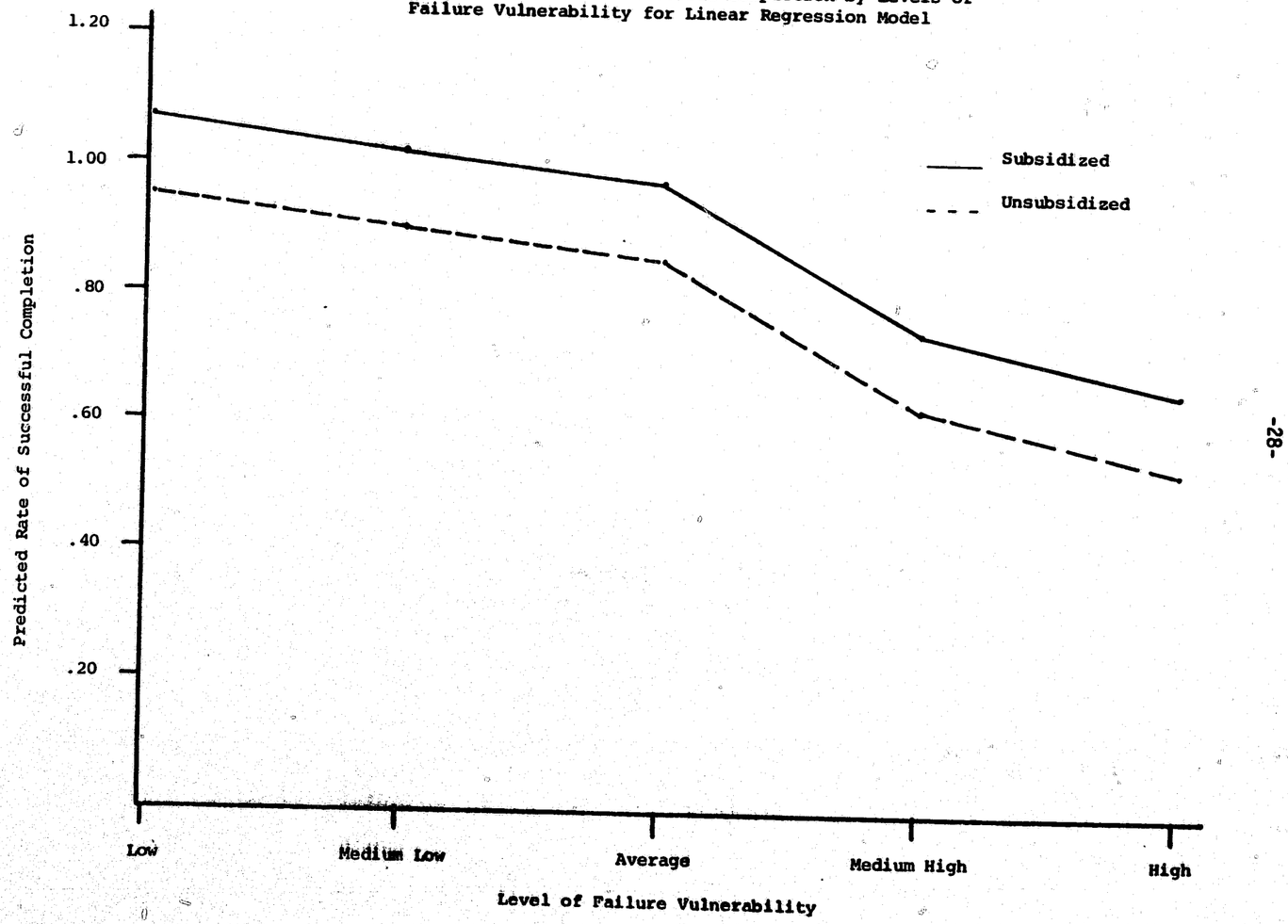


Figure 2.
Predicted Rates of Successful Completion by Levels of Failure Vulnerability for Logistic Regression Model

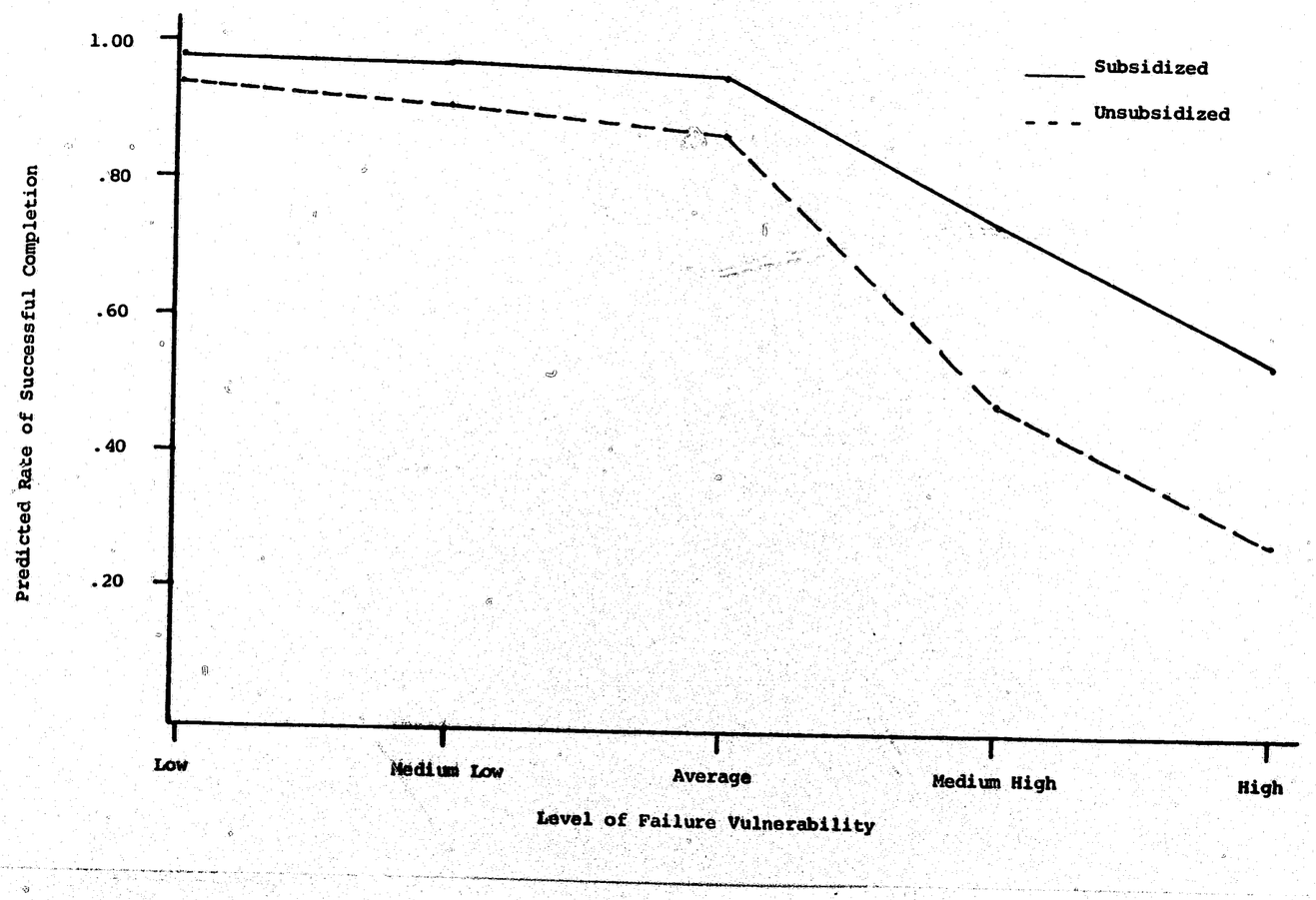
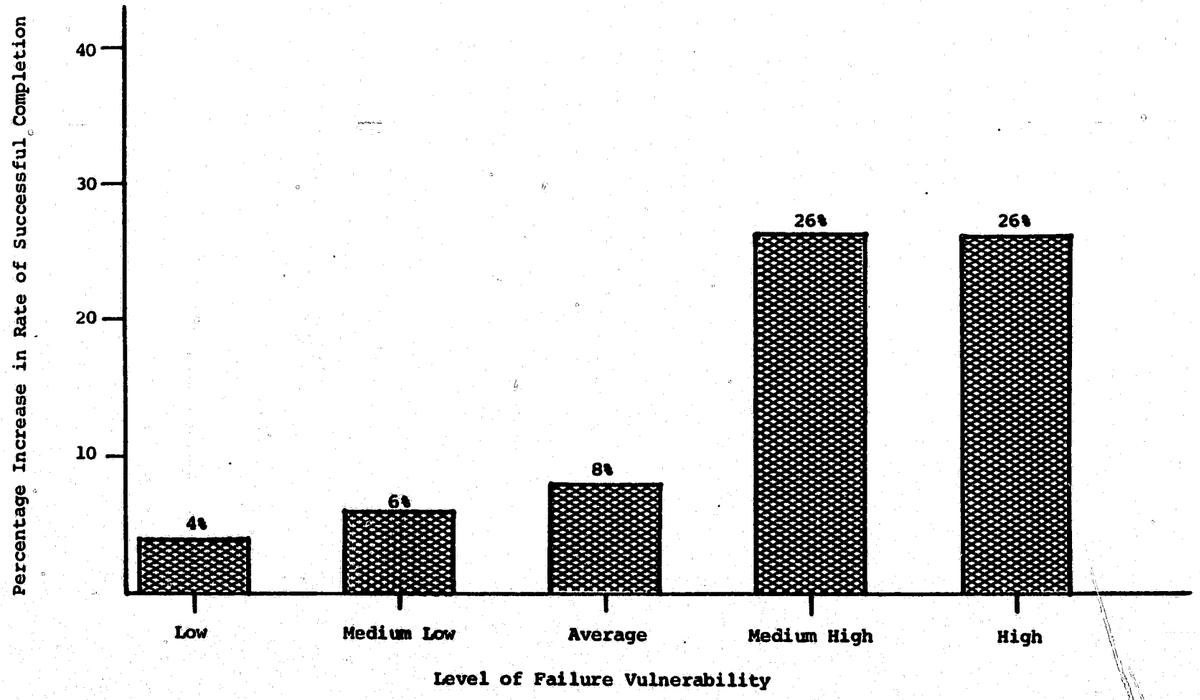


Figure 3.
Percentage Increases in Rates of Successful Completion by Levels of Failure Vulnerability for the Logistic Regression Model



predicted rate greater than unity--102 percent for the medium-low level and 107 percent for the low level. That is, the characteristics of this linear regression model preclude any differential effects across levels of failure vulnerability. Thus, the model "forces" a 12 percent increase in the rate of successful completion for a low failure vulnerability type when five percent is the maximum possible for a 100 percent successful completion rate.

The logistic regression model, on the other hand, will not predict effects resulting in an outcome of greater than unity, and it allows for differential effects across a population. At the bottom of Table 6, and in Figures 2 and 3, the results of the logistic regression modeling are presented. These findings suggest that subsidies have their greatest effects on youth at the highest levels of failure vulnerability (Figure 2). A high failure vulnerability youth without subsidization has only a 28 percent probability of successfully completing restitution; with a subsidy this estimate increases to 54 percent, an increase of 26 points. Similarly, the predicted increase for a medium-high failure vulnerability youth is 26 points; but an average youth is only predicted to have an increase of eight points; a medium-low youth, six points; and a low youth, four points (Figure 3).

Discussion

At this juncture, however, an important question arises: Is either of these two models correct, and if so, which one? Earlier, it was noted that each model explained about the same amount of variance in the

dependent variable--6.8 percent for the linear and 6.4 percent for the logistic regression model. Moreover, both are similar in predicting the successful completion rate for the average youth in the initiative. The initiative-wide rate was 86.2 percent; the linear model predicted 85 percent (without subsidization) and the logistic model predicted 87 percent.

Where the two models differ is in how they predict rates for low and high failure vulnerability youth. The linear model "overpredicts" the effect of subsidies on low failure vulnerability youth, and the logistic model predicts differential effects across the five different types. The next step, thus, is to attempt to validate the model by examining actual initiative referrals who meet the five criteria of failure vulnerability. The problem encountered in this attempt is that few referrals exactly meet all seven characteristics simultaneously, so that any findings can only be viewed as tentative.

The results of this attempt to validate the model are presented in Table 7. These findings suggest two things. First, they reveal that subsidies do have differential effects across different levels of failure vulnerability. Low and medium-low failure vulnerability youth obtain no increase in their successful completion rates by receiving subsidies. Youth of average failure vulnerability who received subsidies had rates of successful completion about 9.3 percent higher than those who did not. (The logistic model predicted eight percent for these youth; the linear model, 12 percent.) While youth of high failure vulnerability receiving subsidies had rates 50 percent higher than those not receiving

TABLE 7. OBSERVED RATES OF SUCCESSFUL COMPLETION FOR FOUR LEVELS OF FAILURE VULNERABILITY*

	Level of Failure Vulnerability			
	Low	Medium Low	Average	High
Unsubsidized	100.0% (n= 6)	97.5% (n=80)	87.5% (n=16)	33.3% (n= 3)
Subsidized	100.0% (n= 1)	96.8% (n=32)	96.8% (n=31)	83.3% (n=12)

*The Medium High failure vulnerability level was dropped due to too few cases.

subsidization. Second, these findings, as just mentioned, suggest that subsidies do have their weakest effect on low failure vulnerability youth and their greatest impact on high failure vulnerability referrals.

Taking these findings in conjunction with the problems outlined above with the linear regression model, one is led to conclude that the logistic model more closely models the impact of employment subsidies on the ability of youth to complete restitution requirements. If one accepts this finding, then one is led to some important conclusions and suggestions about the provisions of subsidies to restitution referrals. Specifically, these findings suggest that where subsidy dollars are scarce, they can be used most effectively when applied disproportionately to those youth with the greatest likelihood of failing to complete their restitution requirements. If a project were to receive 100 youth who could be broadly classified as moderate to high failure vulnerability types, and if all were provided a subsidy, our data suggest that about 25 of them would succeed in completing their requirements where they might otherwise have failed. On the other hand, if a project received 100 low to medium-low failure vulnerability youth, and provided all of them a subsidy, only about five of them would succeed in completing their restitution who would not have done so without the subsidy. Put more succinctly, low failure vulnerability youth are going to complete their restitution requirements whether they receive a subsidy or not, high failure vulnerability youth will have a much greater chance of completing their restitution if they receive employment subsidization.

SUMMARY AND CONCLUSIONS

At the beginning of this paper, it was noted that the issue of subsidization was embodied by four questions. These questions and the summarized answers to them are presented below.

1. How do referrals to projects that offer subsidies differ from referrals to projects that do not? Referrals to subsidy projects tend to have larger monetary restitution orders, slightly higher levels of offense seriousness, more priors, and lower household incomes. Referrals to projects that do not offer employment subsidies tend to be slightly older, with more nonschool youth and nonwhites.

2. In projects offering subsidies (N = 51), which factors influenced whether or not individual youths would receive subsidization? The major factors taken into account in the decision to provide subsidization appear to have been the level of offense seriousness (referrals with more serious levels received subsidies), age (younger offenders tended to receive subsidies more often), and size of the monetary restitution order (large orders were subsidized more frequently than small).

3. What were the effects of subsidies on the performance of these youth in restitution projects? Subsidies produced, on the average, about a 12 percent increase in the level of successful completion of restitution requirements, and subsidies did not appear to have a significant effect on the level of in-program reoffending.

4. Which types of offenders benefited most from the receipt of employment subsidies? In terms of the successful completion of

restitution requirements, youth who had a higher probability of failing their restitution requirements tended to receive the greatest benefit from the provision of a subsidy.

It must be emphasized, however, that the findings presented in this paper are not based on data collected from a true experimental design. The decisions to provide or not to provide subsidies to these youth were not based on the random assignment of youth into or out of a subsidy treatment, rather the decisions were based on both systematic and idiosyncratic criteria. Thus, while these findings are cogent and make some degree of intuitive sense, they must still be regarded as suggestive. Additional research containing true experimental research designs is needed to make a definitive determination of the effect of subsidies on the performance of youth in juvenile restitution programs.

REFERENCES

Griffith, W. R., A. L. Schneider, and P. R. Schneider (1982). Rates of Successful Completion of Restitution Requirements in Juvenile Restitution Projects: A Multivariate Analysis. Eugene, Oregon: Institute of Policy Analysis.

Office of Juvenile Justice and Delinquency Prevention (1980). Policy Statements-Restitution by Juvenile Offenders: An Alternative to Incarceration. Washington, D.C.: Law Enforcement Assistance Administration, U.S. Department of Justice.

Office of Juvenile Justice and Delinquency Prevention (1978). Restitution by Juvenile Offenders: An Alternative to Incarceration. Washington, D.C.: Law Enforcement Assistance Administration, U.S. Department of Justice.

Schneider, P. R., A. L. Schneider, W. R. Griffith, and M. J. Wilson (1982). Two-Year Report on the National Evaluation of the Juvenile Restitution Initiative: An Overview of Program Performance. Eugene, Oregon: Institute of Policy Analysis.

Schneider, P. R., A. L. Schneider, P. D. Reiter, and C. M. Cleary (1977). Restitution Requirements for Juvenile Offenders: A Survey of Practices in American Juvenile Courts. Juvenile Justice 28 (4): 43-56.

Sechrist, L., and W. H. Yeaton (1982). Magnitudes of Experimental Effects in Social Science Research. Evaluation Review 6 (5): 579-600.

END