

Costs and Benefits of a Targeted Intervention Program for Youthful Offenders: The YouthBuild USA Offender Project

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ABSTRACT

A great many intervention and prevention programs exist with respect to dealing with juvenile delinquency, but most of these do not get evaluated, and of those that do get evaluated, few are successful in reducing criminal activity. Further, most of these studies do not undertake cost/benefit analyses of the program. This paper reports on an outcome and cost/benefit evaluation of a targeted intervention program aimed at youthful offenders, the YouthBuild Offender Program. This program is a targeted intervention focusing on low-income, 16-24 year-old criminal offenders. Using data on 388 offenders, we find: (1) evidence of reduced recidivism and improved educational outcomes that exceed our expectations based on similar cohorts, and (2) considerable evidence consistent with a positive benefit-cost ratio, indicating that every dollar spent on the YouthBuild Offender Project is estimated to produce a social return on investment between \$10.80 and \$42.90, with benefits to society ranging between \$134,000 and \$536,000 per participant at a cost to society of about \$12,500. Theoretical, empirical, and policy related issues and future directions are outlined.

Table of Contents

Executive Summary	3
A. Introduction	3
B. Demographics of YouthBuild Offender Project Participants	4
C. Outcome Measures	5
D. Comparison of YouthBuild Offender Sample to Similar Youth	7
E. Potential Costs and Benefits of YouthBuild Offender Project	8
G. Concluding Remarks	11
Full Report	14
I. Introduction	14
II. Background on the YouthBuild Program	15
III. The YouthBuild USA Offender Project	19
IV. Demographics of YouthBuild Offender Project Participants	20
V. Outcome Measures	21
VI. Comparison of YouthBuild Offender Sample to Similar Youth	29
VII. Potential Costs and Benefits of YouthBuild Offender Project	35
VIII. How Do YouthBuild Offender Project students compare to other YouthBuild Students?	41
IX. Concluding Remarks	43
Tables	
Table 1 - Characteristics of YouthBuild Offender Project Graduates and Dropouts at time of Entry	48
Table 2 - Program Outcomes for YouthBuild Offender Project Graduates and Dropouts	49
Table 3 - YouthBuild Offender Project Outcomes by Location	50
Table 4 - YouthBuild Offender Project Outcomes by Site Characteristics	51
Table 5 - Probit Regression Analysis of YouthBuild Offender Project Outcomes	52
Table 6 - Treatment Effect Model on YouthBuild Offender Project Outcomes	53
Table 7 - Two-year Recidivism Rate in Philadelphia Cohort Data versus Overall Recidivism Rate in YouthBuild Offender Project Sample	54
Table 8 - High School and GED Graduation Rate for Drop-Outs	55
Table 9 - Potential Costs and Benefits of YouthBuild Offender Project	56
Table 10 - Comparison of YouthBuild Graduates to Dropouts	57
Table 11 - Educational Attainment and Recidivism for YouthBuild Graduate	58
References	59
Appendix	
Table A-1 – Characteristics of YouthBuild Graduates and Dropouts at time of Entry	60
Table A-2 - Program Outcomes for YouthBuild Graduates and Dropouts	61

Executive Summary

A. Introduction

This study analyzes the costs and benefits of the YouthBuild USA Offender Project - a targeted intervention focusing on 16 to 24 year old criminal offenders. YouthBuild is a comprehensive program targeting low-income young adults with troubled pasts. The program includes a “combination of education, skill-building, counseling, leadership development, community service, positive values and relationships, high standards of behavior, and clear pathways to a productive future” (Leslie, 2007: 1). A brief description of the program follows:

During the 9- to 24-month, full-time YouthBuild program, youth spend half of their time learning construction trade skills by building or rehabilitating housing for low-income people; the other half of their time is spent in a YouthBuild classroom earning a high school diploma or equivalency degree. Personal counseling and training in life skills and financial management are provided. The students are part of a mini-community of adults and youth committed to each other’s success and to improving the conditions in their neighborhoods. (Leslie, 2007: 8)

YouthBuild USA is a national non-profit founded in 1990. The national office supports a local network of YouthBuild programs. Since 1994, more than 76,000 young people have been served by the program, and they have helped create more than 17,000 units of affordable housing.

In 2004, YouthBuild USA was funded by the U.S. Department of Labor to identify and grant money to local programs to add program participants under an

incarcerated youth re-entry program – called the YouthBuild Offender Project. To be eligible, program participants had to “fit into one or more of three categories” (Leslie, 2007: 18):

- Young people who have been referred by the courts to YouthBuild as a diversion program to avoid incarceration, including those on probation; or
- Young people, having served time in prison or jail, referred by the criminal justice system to YouthBuild in a coordinated re-entry process, including those on parole; or
- Young people who find their own way to YouthBuild—having been convicted of a crime and served time in prison or jail previously—who still need education or job training opportunities.

YouthBuild USA subsequently awarded grants to 30 local YouthBuild sites chosen to include both urban and rural areas as well as a wide geographic dispersion. The selection criteria ensure that the programs being evaluated in this study are not randomly chosen and instead are among the best YouthBuild sites. Thus, while it might not be appropriate to “scale up” any program outcome findings, it would be appropriate to identify these outcomes as representative of what a well-run local YouthBuild site can hope to achieve.

B. Demographics of YouthBuild Offender Project Participants

Overall, 388 participants were included in this study. Data were collected from the fourth quarter of 2004 through the second quarter of 2007. The average age of participants at entry was 19.6 years; 85% were male, and 24% were White. Only 6% of participants had a high school degree and 5% had a GED at the time of entry (see Table 1). While virtually all participants by design had official criminal records, about 46% had

a prior felony conviction, 60% had served time in juvenile detention and 40% had served time in an adult correctional facility.¹

C. Outcome Measures

Table 2 reports on outcome measures – including a comparison of YouthBuild graduates and dropouts. On average, we have data for 10.3 quarters (about 31 months). While the average student spends 3.6 quarters (10.8 months) in the YouthBuild program, graduates spend on average 4.0 quarters (12 months) compared to only 2.4 quarters (7.2 months) for dropouts ($p < .01$).

Excluding those who enter with a high school diploma or GED, 46% of YouthBuild participants obtain a degree or GED within the time period being measured. YouthBuild graduates are more likely to graduate from high school or obtain a GED compared to YouthBuild dropouts (58% versus 18%; $p < .01$). Note that this comparison excludes the 11% of YouthBuild students who enter with a high school degree or GED.

Overall, YouthBuild graduates also have lower criminal offending rates. First, we report on the percent of students who have at least one ‘failure’ (i.e. convicted or incarcerated for a new crime or have their parole revoked from a previous offense) within the approximately 10 reporting quarters. Of those who graduate from YouthBuild, 11% are convicted of a crime but not incarcerated, compared to 14% of those who drop out. However, this difference is not statistically significant ($p < .44$). On the other hand, significant differences are found for the fraction of students who are convicted of crimes in which some time is served (15% for graduates versus 27% for dropouts; $p < .01$); and

¹ Note that about half of those program participants who served time in an adult correctional facility had also served time in a juvenile facility. Thus, a large number of these program participants are apparently recidivists.

the fraction whose parole is revoked (13% versus 29%; $p < .01$). Combined, we find that 28% of YouthBuild graduates have at least one of these three ‘failures’ during the 10 quarters, compared to 44% of dropouts ($p < .01$).

While we analyzed the impact of various program characteristics on outcomes, only one program feature had a significant effect on outcomes – the YouthBuild USA National Schools Initiative (“NSI”). The NSI sites received grants from the Bill and Melinda Gates Foundation through YouthBuild USA and are all diploma-granting schools authorized by their respective state or local authorities. They received targeted training and technical assistance from YouthBuild USA designed to improve their educational outcomes and prepare youth for college. NSI sites have a statistically significantly higher high school/GED graduation rate (56% versus 40%, $p < .01$ – shown in Table 4). Not surprisingly, the difference is even more striking when looking at GED and high school graduation rates separately. 39% of program participants in NSI sites ultimately graduated high school compared to only 6% of participants at non-NSI sites. On the other hand, while 17% of participants at NSI sites received a GED, 35% of those who were at non-NSI sites were awarded a GED.

While these univariate comparisons (shown in Table 2) suggest that YouthBuild graduates have significantly better outcomes than those who drop out of the YouthBuild program, this does not necessarily mean that we can attribute these better outcomes to the program itself. Thus, a series of multiple regression analyses (Tables 5 and 6) attempt to control for some of the other factors that might contribute to favorable outcomes. Based on data availability, we were able to control for pre-entry criminal record, educational and work status, living situation, and a few demographic characteristics. We also control

for program characteristics such as the number of years the site had been a HUD-sponsored program, urban/rural, and the National Schools Initiative. Tables 5 and 6 confirm our main results – that graduates of the YouthBuild Offender Project display significant positive outcomes in terms of educational attainment and reduced recidivism – compared to participants who do not complete the program.

D. Comparison of YouthBuild Offender Sample to Similar Youth

While we have found significant increases in high school or GED graduation rates and what appear to be improvements in offending behavior following participation in the YouthBuild program, we do not know if these positive outcomes are the result of the YouthBuild program itself or if participants would have had similar outcomes in the absence of program participation. For example, it is possible that YouthBuild participants are a highly selected sample of students who are motivated to further their education and refrain from criminal offending – and would have done so regardless. Ideally, potential participants would be randomly assigned to a treatment and control group so that we could compare outcomes in these two groups.

Absent such an experimental design, we are able to make some comparisons to a similar youth cohort. In the case of criminal outcomes, we have compared the YouthBuild sample to the Second Philadelphia Birth Cohort sample (“Philadelphia Cohort”) – a comprehensive dataset of police contacts for all youth born in Philadelphia in 1958 and who resided in the City until age 18 (Figlio, Tracy and Wolfgang, 1994). The recidivism rate for YouthBuild Offender Project students is lower than that of the Philadelphia Cohort offenders, and this difference is statistically significant. For example,

the 232 students we have identified as being between ages 16 and 23 at entry (most comparable to the Philadelphia Cohort sample) have a recidivism rate of 33.3% ($p < .04$ – see Table 7). The results are stronger if we limit our comparison to YouthBuild Offender Project graduates – where the recidivism rate is only 28.3% overall. We also compared the recidivism rate of YouthBuild Offender Project participants to those of individuals with prior convictions who were released from state prisons (as reported by the Bureau of Justice Statistics), and find that their overall recidivism rate is between 3.4% and 5.7% lower. For YouthBuild Offender Project graduates, it is between 8.4% and 11.4% lower. *Overall, we estimate the YouthBuild Offender Project participants have a recidivism rate that is 3.4% to 9.0% lower than expected.*

In the case of high school graduation, the best data available on the likelihood that high school dropouts will subsequently graduate with a degree or GED is the National Longitudinal Survey of Youth. Compared to an estimated 2-year cumulative graduation or GED rate of about 12-15% and a 3-5 year rate of 18-20% for youth that originally drop out of high school, the graduation rate for YouthBuild participants is 46.1% within 10 quarters (2.5 years) – more than twice the national average for high school dropouts. The high school graduation rate for those who successfully complete the YouthBuild Offender Project program is 58%. *Overall, we estimate the YouthBuild Offender Project participants have a 23.2% higher high school graduation or GED rate than expected.*

E. Potential Costs and Benefits of YouthBuild Offender Project

In this section, we provide some preliminary estimates of the costs and potential benefits of the YouthBuild program by comparing outcomes to similar cohorts. We do this for both educational attainment and recidivism, two key life course outcomes.

Since our report focuses on estimating the benefits of YouthBuild, we utilize external estimates of the costs of the program for comparison purposes. We estimate the social cost of the YouthBuild Offender Program to be \$12,500 in 2006 dollars, while the total program cost is \$17,000. The latter figure includes transfer payments to program participants for stipends while they are working on the program training and service site producing affordable housing. Neither figure includes the cost of construction material used to build houses under the program. We exclude these costs as they are transfers and/or otherwise provide benefits to society that are not accounted for in the cost-benefit analysis.

According to a recent study of the value of a high school education, Cohen and Piquero (2007) estimate the present value of future benefits from saving a youth from dropping out of high school to range between \$420,000 and \$630,000 (in 2006 dollars). Applying this to the 23.2% excess graduation rate yields potential educational benefits of \$97,000 to \$146,000 per program participant. If this were the only benefit of the YouthBuild program, the benefit-cost ratio would thus range from 7.8 to 11.7 based on \$12,500 cost per participant. Even if we use the higher program cost of \$17,000, the benefit cost ratio would range from 5.7 to 8.6.

In terms of reduced criminal activity, we estimate that between 3.4% and 9% of participants who otherwise would have been expected to recidivate, were not convicted of any crimes (or parole violations) during 8-10 quarters following program entry. Cohen and Piquero (2007) estimate the present value of costs imposed by a lifetime of crime from age 18 to range between \$2.0 and \$4.3 million. Thus, if the YouthBuild program were able to divert 3.4% to 9% of its participants away from a lifetime of crime, the

benefits per participant would range between \$68,000 and \$390,000. If this were the only benefit of the YouthBuild program, the benefit-cost ratio would thus range from 5.4 to 31.2 based on \$12,500 cost per participant. Even if we use the higher program cost of \$17,000, the benefit cost ratio would range from 4.7 to 26.9.

Combined, educational and crime reduction benefits from the YouthBuild Offender Project are thus estimated to range between \$134,000 and \$536,000. The benefit-cost ratio is thus estimated to range between 10.8 and 42.9 based on the social costs of \$12,500 per participant, or 7.9 to 31.5 based on the program costs of \$17,000. Put differently, every dollar spent on the YouthBuild Offender Project will return between about \$7.90 and \$31.50 to taxpayers and others who donate to the program. These figures are shown in Table 9.

Finally, in addition to the educational and crime reduction benefits, we note that approximately 40% of program participants reportedly had a substance abuse problem at the time of entry. While there are no program outcomes available on this dimension, we note that Cohen and Piquero (2007: Table 10) estimate the present value of lifetime costs for a heavy drug abuser at age 18 to range from \$950,000 to \$1.1 million. To the extent the YouthBuild Offender Project reduces substance abuse among its participants, additional benefits might accrue.

Other benefits which anecdotally have been reported for numerous YouthBuild graduates were also outside of this study and not measurable, such as improved parental responsibility and support; positive role-modeling for younger relatives and community youth; and increased care-taking responsibility for older family members. Many of the

youth had been gang-involved, and the benefits of ending that involvement are not measured.

G. Concluding Remarks

This paper sought to examine several crime and non-crime outcomes among graduates and dropouts from the YouthBuild Offender Project, to compare their experiences with other similar samples of youth on crime and non-crime outcomes, and to present an initial benefit-cost calculation for program participation.

While our outcome analyses are all consistent with YouthBuild goals and we find significant support for a finding that this program yields a large positive benefit-cost ratio, we note several important limitations, which also are relevant to much of the prevention/intervention literature. First, the YouthBuild sample had a rather short-term follow-up period – about 18 months after completion of the program. It is possible that after a period of time, the short-term deterrent effects observed with respect to crime could dwindle. Nevertheless, our preliminary benefit-cost analysis suggests that the payback period from crime reduction could be as little as one year – and a recent study of older YouthBuild graduates finds significant evidence of a long-term positive outcome for many participants (Hahn et al., 2004). Second, we have studied 30 YouthBuild sites that were chosen based on criteria that favored a successful outcome because of an a priori assessment by the national YouthBuild office that these local sites were well operated and fulfilled their (and DOL's) criteria for a likely successful outcome. Thus, our main findings should be considered an assessment of well-designed and operated YouthBuild programs, and may not be generalizable to all YouthBuild programs and sites. Third, while we have utilized external comparison data and the best statistical

techniques available to isolate the benefits of the YouthBuild program, we cannot entirely rule out the possibility that program participants were simply highly motivated individuals who would have otherwise been successful, although the shortage of opportunities for young adults with a criminal record, even when motivated, makes this less likely. Ideally, potential participants would be randomly assigned to a treatment and control group so that we could compare outcomes in these two groups.

With these caveats in mind, several key findings emerged from our analysis. First, YouthBuild Offender Project graduates are more likely to graduate from high school or obtain a GED compared to dropouts from the program. Second, overall, YouthBuild Offender Project graduates have lower criminal offending rates than those who drop out of the program. Third, when we compared the recidivism rate of YouthBuild students to two different samples of criminal offenders, we found that the YouthBuild sample has a lower recidivism rate. In the case of high school or GED graduation, we also found that YouthBuild participants who entered the program as high school dropouts were significantly more likely to graduate with a high school diploma or GED than other high school dropouts.

Finally, we provided some preliminary estimates of the costs and benefits of the YouthBuild program by comparing educational attainment and recidivism outcomes to similar cohorts. Combined, the potential benefits from the YouthBuild Offender Project are thus estimated to range between \$134,000 and \$536,000. The costs of the program are estimated to be \$17,000 – or \$12,500 if only ‘social costs’ (excluding transfers in the form of trainee stipends are excluded). The benefit-cost ratio is thus estimated to range between 10.8 and 42.9 based on the social costs, or 7.9 to 31.5 based on the program

costs. Put differently, every dollar spent on the YouthBuild Offender Project will return between about \$7.90 and \$31.50 to taxpayers and others who donate to the program. In terms of social costs, every dollar spent is estimated to return between \$10.80 and \$42.90.

While our benefit-cost analysis focuses on the two program outcomes we have been able to estimate – recidivism and educational attainment, the YouthBuild program targets other socially desirable outcomes – including reduced drug abuse and increased civic engagement (e.g., voter registration, community service, etc.).

Taken together, these results offer a promising picture of the YouthBuild Offender Project as an effective approach to reduce recidivism and improve educational outcomes. While the above figures are based on 388 participants in the first year of the YouthBuild Offender Project, we also analyzed 409 participants from year two. While the follow-up period is necessarily shorter, the results are consistent with the year one outcomes. Finally, we attempted to generalize to the overall population of YouthBuild graduates by examining a sample of 1691 YouthBuild participants. While it is not possible to fully assess benefits and costs because the outcomes data are not as comprehensive as they are for the Offender Project, we note that the data that are available suggests similarly positive outcomes - comparable to the Offender Project sample. Since all participants are put through the same program and are mixed together at the local sites, we suspect that if better follow-up data were available, a favorable benefit-cost analysis would also be found.

Full Report

I. Introduction

This study analyzes the costs and benefits of the YouthBuild USA Offender Project - a targeted intervention focusing on 16 to 24 year old criminal offenders. Juvenile delinquency and criminal activity has always been a central concern among academics, policy-makers, politicians, and the general public. Rates and trends of juvenile delinquency have varied over time, and rose to national attention in the late 1980s/early 1990s with the emergence of the crack epidemic and the toll it exerted on adolescents—particularly African-American adolescents in the United States. Although the crime rates of juveniles trended downward throughout the 1990s and early 2000s, there has been a general uptick in their level of criminal activity – especially violent criminal activity in certain locales. In the meantime, while high school graduation rates have hovered around 80-85% for more than a decade, the changing global landscape makes educational attainment more of a priority than ever, especially because of the linkage between (lack of) educational attainment and criminal activity

A wide range and large number of ‘stay-in-school,’ delinquency, and crime prevention and intervention programs are targeted at children and adolescents. These programs include a wide ranging array of treatment and service options. The efficacy and effectiveness of the majority of these programs is mixed and varies according to many criteria. Nevertheless, several of these efforts have been found to improve educational outcomes and lower delinquent and criminal activity, but the long-term effectiveness of reduced crime is less developed, and the costs/benefits associated with

these efforts with respect to crime and non-crime outcomes has been ill-studied (see reviews in Aos et al., 2004, 2006; Greenwood, 2006).

We begin our analysis of the YouthBuild Offender Project with a brief background on the YouthBuild program in Section 2. Next, in Section 3, we describe the YouthBuild USA Offender Project. Section 4 describes program participants including background demographic information including a comparison of participants who successfully complete the YouthBuild program as well as those who drop out. Our analysis of program outcomes is contained in Section 5, where we assess the recidivism rate and educational attainment of both YouthBuild graduates and dropouts. Section 6 compares the outcome measures from the YouthBuild sample to similar youth cohorts. We find evidence of reduced recidivism and improved educational outcomes that exceed our expectations based on similar cohorts. Section 7 compares the potential benefits of the YouthBuild Offender Project to its costs and finds considerable evidence consistent with a positive benefit-cost ratio. Section 8 considers the extent to which our findings on the YouthBuild Offender Project can be generalized to other YouthBuild programs. Finally, Section 9 summarizes our findings and offers both some cautionary statements and suggestions for future research.

II. Background on the YouthBuild Program

YouthBuild is a comprehensive program targeting low-income young adults with troubled pasts. The program includes a “combination of education, skill-building, counseling, leadership development, community service, positive values and relationships, high standards of behavior, and clear pathways to a productive future” (Leslie, 2007: 1). A brief description of the program follows:

During the 9- to 24-month, full-time YouthBuild program, youth spend half of their time learning construction trade skills by building or rehabilitating housing for low-income people; the other half of their time is spent in a YouthBuild classroom earning a high school diploma or equivalency degree. Personal counseling and training in life skills and financial management are provided. The students are part of a mini-community of adults and youth committed to each other's success and to improving the conditions in their neighborhoods. (Leslie, 2007: 8)

YouthBuild USA is a national non-profit founded in 1990. The national office supports a local network of YouthBuild programs. Since 1994, more than 76,000 young people have been served by the program, and they have helped create more than 17,000 units of affordable housing.²

There have been several prior studies of YouthBuild students. The most recent study by Hahn et al. (2004) surveyed several thousand YouthBuild graduates from 73 sites and interviewed 57 randomly selected graduates from 8 sites. The written survey yielded a 22.3% response rate, (882 graduates), and reportedly found considerable self-reported success among these respondents. For example, 59.2% reported having a GED or high school diploma following the YouthBuild program, compared to 21.7% who reported coming into the program with a degree. Self-reported use of illegal drugs dropped considerably, as did the recidivism rate. Of course, this is a highly selected sample as we would expect the "failures" from the program to be more likely to fail to

² Personal correspondence with Dorothy Stoneman, President and Founder of YouthBuild USA, December 31, 2007.

respond to the follow-up survey or to not be located by survey researchers during the follow-up period. Nevertheless, the survey findings were consistent with the randomly drawn smaller sample of detailed interviews. Overall, this is a useful, preliminary survey and the study highlights some of the potential benefits from the program. Certainly, a significant number of program graduates attributed the YouthBuild program with helping to turn their lives around.

A study in Minnesota attempted to conduct a benefit–cost analysis for the State of their investment in YouthBuild (Minnesota Department of Employment and Economic Development, 2003). Purely from the perspective of state expenditures, it was estimated that Minnesota’s budget saved about \$3.00 for every dollar it spent on the YouthBuild program.³ About one-third of this benefit was estimated to be additional tax revenue collected from YouthBuild graduates who now have higher earnings, while the remainder of the benefit is estimated to be reduced prison costs due to lower recidivism. While interesting, one cannot generalize from this study to other states or to an overall social benefit-cost study, primarily because the study limited its focus to direct expenditures. For example, the State of Minnesota spent an average of only \$2,200 per program participant – probably about 15% of total program costs. However, benefits are also likely to be under-estimated, as they exclude reduced costs associated with re-arrests, trials, probation, etc. and instead focus solely on reduced prison costs.

More recently, Leslie (2007) reported on the first wave of the YouthBuild USA Offender Project (the subject of this study), and compared outcomes to short-term program targets. For example, Leslie (2007: 3) reported a high school or GED

³ Over a four year period, program costs were estimated to be \$3.5 million compared to \$10.8 million in benefits (MDEED, 2003: Figure 6).

completion rate of 150 out of 388, or 38.5%, compared to a target rate of 34.2% (115 out of 325 targeted for entry). Wages were reportedly \$8.94 per hour compared to a target of \$8.00, and recidivism was estimated to be 25% compared to a target of only 15%. While useful as a measure of outcome, Leslie's (2007) study does not attempt to compare these outcomes to what might have been expected of this population absent the YouthBuild program, and thus is limited in its ability to assess program effectiveness.

Finally, the U.S. GAO (2007) recently issued a report noting the lack of consistently recorded data on the YouthBuild program and thus the inability to track the performance outcomes of YouthBuild graduates. While YouthBuild programs routinely collect data on attendance, completion, high school and GED acquisition, and job placement throughout the program, follow-up data on how YouthBuild graduates fare post-graduation is scant. Although graduates are supposed to be followed at 6, 12 and 24 months post-graduation, the data that are collected is limited. For example, the only recidivism measure is whether or not the individual was in jail at the time of a regularly scheduled follow-up survey. Even then, only a small fraction of program graduates are followed-up systematically and thus even the data that are collected are subject to selectivity bias. Further, only graduates are surveyed, so we do not know what happened with those who dropped out of the program. However, the data used for this study focuses on a specific YouthBuild project where data has been rigorously collected every quarter for both graduates and dropouts – the YouthBuild USA Offender Project, which is described in the next section.

III. The YouthBuild USA Offender Project

In 2004, YouthBuild USA was funded by the U.S. Department of Labor to identify and grant money to local programs to add program participants under an incarcerated youth re-entry program. To be eligible, program participants had to “fit into one or more of three categories” (Leslie, 2007: 18):

- Young people who have been referred by the courts to YouthBuild as a diversion program to avoid incarceration, including those on probation; or
- Young people, having served time in prison or jail, referred by the criminal justice system to YouthBuild in a coordinated re-entry process, including those on parole; or
- Young people who find their own way to YouthBuild—having been convicted of a crime and served time in prison or jail previously—who still need education or job training opportunities.

YouthBuild USA subsequently awarded grants to 30 local YouthBuild “according to the following DOL-established criteria” (Leslie, 2007: 15):

Performance. Site demonstrates successful outcomes and operates high-quality programs and services;

Community linkages. Site demonstrates effective partnership building, is supported within the community, and is viewed as a community resource;

Outreach and recruitment capacity. Site demonstrates an ability to reach the intended target population; and

Leadership. Site demonstrates the ability to mobilize resources and staff, and can quickly and effectively operationalize grant components.

The 30 sites that were chosen include both urban and rural areas as well as a wide geographic dispersion. Of course, the selection criteria ensure that the programs we are evaluating in this study are not randomly chosen and instead are among the best YouthBuild sites. Thus, while it might not be appropriate to “scale up” any program

outcome findings, it would be appropriate to identify these outcomes as representative of what a well-run local YouthBuild site can hope to achieve. Moreover, it is important to keep in mind that by design, all YouthBuild Offender participants have criminal records – whereas not all YouthBuild program participants have prior records. By design, participants in the Offender Project are mixed with other YouthBuild students and in general, offenders are integrated with non-offenders to avoid a segregated environment and to avoid creating a negative incentive among the youth who want to enter YouthBuild.

IV. Demographics of YouthBuild Offender Project Participants

Table 1 compares the demographic characteristics, employment history, criminal background and living situation at the time of entry into the YouthBuild program. In addition to reporting the overall demographics, we also compare those who ultimately graduated from the program to those who dropped out. While those who ultimately graduate and those who drop out of YouthBuild are very similar in background, there are some important differences. Overall, 388 participants were included in this study. Data were collected from the fourth quarter of 2004 through the second quarter of 2007.

Characteristics that are similar (i.e., the reported differences are not statistically significant) include average age at entry (19.5 for YouthBuild graduates versus 19.9 for dropouts; $p < .18$);⁴ male (85% for both); non-whites (78% for graduates and 72% for

⁴ Note that while our sample size is 388, not all variables are available for the entire sample. In the case of age, we only have the date of birth for 265 students. However, most variables are available for the vast majority of the sample.

dropouts; $p < .28$); married (1% for graduates and 3% for dropouts; $p < .45$); and high school or GED degree at entry (11% for both).

One variable that varies considerably is household income, with graduates coming from a higher income household (\$9,573 versus \$7,023; $p < .03$). Perhaps more importantly, and as would be expected, dropouts have worse criminal records than do graduates. For example, while 42% of graduates enter with a prior felony conviction, the felony conviction rate for dropouts is 57% ($p < .02$). Similarly, 57% of graduates served time in a juvenile detention center, versus 68% of dropouts ($p < .04$); and dropouts also are more likely to have served time in an adult correctional facility (48% versus 36%, $p < .05$). Finally, the living situation of YouthBuild students at the time of entry also varies by graduation status. For example, 2% of graduates were homeless, compared to 5% of dropouts ($p < .07$); 1% of graduates lived in a half-way house, compared to 6% of dropouts ($p < .01$); and while 67% of graduates lived with their parents, only 53% of the dropouts did as well ($p < .01$).

V. Outcome Measures

Table 2 reports on several outcome measures we have available on a consistent basis – including a comparison of YouthBuild graduates and dropouts. First, note that the data are collected and reported on a quarterly basis. On average, we have data for 10.3 quarters (about 31 months) - 10.4 quarters for graduates and 10.0 quarters for dropouts ($p < .01$). While the average student spends 3.6 quarters (10.8 months) in the YouthBuild program, graduates spend on average 4.0 quarters (12 months) compared to only 2.4 quarters (7.2 months) for dropouts ($p < .01$).

Excluding those who enter with a high school diploma or GED, 46% of YouthBuild participants obtain a degree or GED within the time period being measured. YouthBuild graduates are more likely to graduate from high school or obtain a GED compared to YouthBuild dropouts (58% versus 18%; $p < .01$). Note that this comparison excludes the 11% of YouthBuild students who enter with a high school degree or GED.

Overall, YouthBuild graduates also have lower criminal offending rates. First, we report on the percent of students who have at least one ‘failure’ (i.e., convicted or incarcerated for a new crime or have their parole revoked from a previous offense) within the approximately 10 reporting quarters. Of those who graduate from YouthBuild, 11% are convicted of a crime but not incarcerated, compared to 14% of those who drop out. However, this difference is not statistically significant ($p < .44$). On the other hand, significant differences are found for the fraction of students who are convicted of crimes in which some time is served (15% for graduates versus 27% for dropouts; $p < .01$); and the fraction whose parole is revoked (13% versus 29%; $p < .01$). Combined, we find that 28% of YouthBuild graduates have at least one of these three ‘failures’ during the 10 quarters, compared to 44% of dropouts ($p < .01$).

It is possible that the reason students drop out of YouthBuild is the fact that they are convicted of a crime or their parole is revoked. Thus, in the next set of comparisons, we have only counted failures that occurred in quarters after the student leaves the YouthBuild program (either through graduation or dropping out). We find virtually identical results. For example, while 17% of YouthBuild graduates have any violation after their graduation, 33% of YouthBuild dropouts have a violation following their leaving the program ($p < .01$).

Finally, we measure offending rates by quarter (instead of by student), and obtain similar results. While this approach is probably a more accurate reflection of offending rates, we have some concern about measurement. As we understand it, the data are supposed to reflect whether or not a new conviction occurred during that quarter, for example. However, in some cases “new” convictions with incarceration occur in consecutive quarters. Thus, it is possible that this really reflects one conviction with a period of incarceration that spans several quarters. Nevertheless, we have calculated the percentage of quarters in which a violation is reported – with results very similar to that based on the student-by-student measurement.

Table 3 compares program outcomes by location. There were 30 sites in 29 cities (with St. Louis, MO having two different sites). Program participation ranged from 8 to 24 students per site. YouthBuild graduation rates ranged from a low of 29% in Kincaid, WV to 100% in Los Angeles, Philadelphia, and Springfield, MA. Similarly, high school or GED completion rates (for those who entered the program without a degree) ranged from a low of 0% in Kincaid, WV to 100% in Philadelphia. Since the sample sizes are relatively small within each site, it is not appropriate to draw any definitive conclusions about success rates across locations. However, it appears that outcomes vary considerably across sites. For example, comparing two sites with a large number of participants, New Waverly, TX (n=24) and Richmond, CA (n=18), we find that New Waverly had a higher YouthBuild graduation rates (79% versus 67% respectively). However, New Waverly had a lower high school/GED graduation rate (45% versus 61%) and a higher recidivism rate both throughout the program (33% versus 22%) and after program departure (29% versus 6%). Note that New Waverly is unique among the 30 sites, as it takes place at a

residential correctional facility – and thus offenders and non-offenders are not integrated into the program. However, due to small sample sizes, the only comparison between New Waverly and Richmond that is statistically significant is the post-YouthBuild recidivism rate ($p < .05$). Taken as a whole, however, an Anova test rejects the hypothesis that each outcome measure is identical across cities.

Table 4 compares program outcomes by site characteristics. First, we compare urban to rural. Note that some sites were identified as being “part rural” and these have been recoded as “urban” as they appeared closer to the urban category in terms of outcomes. YouthBuild graduation rates are higher in urban areas (72% versus 60%), although this is only statistically significant at $p < .08$. However, there is no significant difference between high school and GED rates between urban (46%) and rural (48%) sites. Program participants in rural sites are also more likely to recidivate (40% versus 32% at any time following entry into YouthBuild; and 30% versus 19% after program departure). Again, however, these differences are not statistically significant at conventional levels. We also compare outcomes based on site participation in three grant programs run by YouthBuild USA with local YouthBuild programs – the National Schools Initiative (“NSI”), Americorps National Direct (which provides funding and personnel for local YouthBuild programs), and Americorps Education Award (which provides scholarship money to participants who fulfill their service hours). The National Schools Initiative sites have received grants from the Bill and Melinda Gates Foundation and “have evolved into diploma-granting schools chartered by states or certified as

alternative schools by local superintendents.”⁵ In the sample participating in this program, these are the only sites that are able to grant high school diplomas themselves.

As shown in Table 4, NSI sites have a statistically significantly higher high school/GED graduation rate (56% versus 40%, $p < .01$). Not surprisingly, the difference is even more striking when looking at GED and high school graduation rates separately. 39% of program participants in NSI sites ultimately graduated high school compared to only 6% of participants at non-NSI sites. On the other hand, while 17% of participants at NSI sites received a GED, 35% of those who were at non-NSI sites were awarded a GED. While NSI participants also have a lower recidivism rate, these differences are not statistically significant. The other two (AmeriCorps) grant programs provide funding and/or personnel to local sites but do not involve program development.⁶ We found no significant differences in program outcomes for those receiving funding under these latter two grant programs.

While the univariate comparisons in Table 2 suggest that YouthBuild graduates have significantly better outcomes than those who drop out of the YouthBuild program, this does not necessarily mean that we can attribute these better outcomes to the program itself. Table 5 attempts to control for some of the other factors that might contribute to favorable outcomes. Based on data availability, we were able to control for pre-entry

⁵ See http://www.youthbuild.org/site/c.htIRI3PIKoG/b.2440391/k.4109/National_Schools_Initiative_Network.htm. Also see <http://www.gatesfoundation.org/UnitedStates/Education/TransformingHighSchools/Schools/ModelSchools/>.

⁶ See http://www.youthbuild.org/site/c.htIRI3PIKoG/b.1267789/k.93F8/Grants_and_Loans.htm.

criminal record, educational and work status, living situation, and a few demographic characteristics. We also control for program characteristics such as the number of years the site had been a HUD-sponsored program, urban/rural, and the National Schools Initiative.

The first column reports on a probit regression equation where the dependent variable is whether or not the participant ultimately graduated from YouthBuild.⁷ Participants who previously served time – either in a juvenile detention or adult correctional facility – were less likely to successfully graduate from the program. Aside from these two variables, the only variable that approaches statistical significance is the urban program variable – with urban programs experiencing a higher YouthBuild graduation rate.

The second probit regression equation in Table 5 estimates the probability of any criminal violation (conviction, incarceration, or parole violation) per quarter. Graduating from YouthBuild is negatively and significantly ($p < .01$) associated with recidivism. On the other hand, males and participants with a prior adult corrections history have a significantly higher recidivism rate. Males have about a 61% higher recidivism rate ($p < .01$) and having a prior adult correctional history increases the probability of recidivism by about 30% ($p < .05$).

The third column reports on a probit regression that estimates the probability of high school graduation or GED (for those who entered the program without a degree). Once again, the most significant explanatory variable is graduation from YouthBuild.

⁷ A probit regression is regression equation which estimates the effect of several independent variables on one, binary dependent variable. By including several independent variables, one can interpret the effect of each variable, controlling for (or holding constant) the effects of the other independent variables.

The only other significant variable is the National Schools Initiative program variable, which is also positive, indicating that NSI sites have a higher probability of high school graduation or GED. Finally, the last column repeats this analysis but instead measures the probability of high school graduation (excluding those who obtain only a GED). The basic result is similar – YouthBuild graduation is a highly significant explanatory variable. The only other variables that are now significant and all positively affect high school graduation rates are being married, living with parents, or living by oneself.

While Table 5 is consistent with our earlier findings and suggests that graduation from the YouthBuild program yields positive outcomes, we cannot attribute the successful outcomes to the program due to sample selection concerns.⁸ For example, are participants that drop out of YouthBuild also those who would otherwise have high recidivism rates and be less likely to graduate from high school? To control for this possibility as best we can absent a randomized design, we adopt a “treatment effects” model (see Rosenbaum and Rubin, 1983), where participants are assigned to either a treatment (YouthBuild graduate) or control (YouthBuild dropout) group. We model this as a two-stage process, where we first estimate the probability of a participant graduating from YouthBuild. In the second stage, we have controlled for this selection bias and thus estimate the effect of the treatment (YouthBuild graduation) itself.

Table 6 reports on our findings from the treatment effects model. Stage 1 estimates the probability that the participant graduated from the YouthBuild program. In this equation, we use variables from Table 5 that are participant-specific and that are not fixed demographic characteristics. As shown, the most important explanatory variables

⁸ More broadly, the issue of ‘sample selection’ bias deals with the fact that something about the person (measured and/or unmeasured) influences the outcome of interest.

are prior criminal history – in particular, spending time in either a juvenile detention center or adult prison lowers the probability of graduating from the program by about one-third. While we also control for high school diploma or GED at entry, working prior to entry, and living arrangements, none of these variables are statistically significant.

Stage 2 of our treatment effects model examines program outcomes. First, the dependent variable is high school or GED graduation. Since this is only estimated for those who enter YouthBuild without a degree, it reduces the sample size to 343. The main finding is that controlling for the estimated YouthBuild graduation probability, the graduation coefficient is +1.20 and highly significant ($p < .01$). Thus, Youthbuild graduates are more likely to graduate with a high school degree or GED. The only other statistically significant variable is the National Schools Initiative, which once again is positively related to high school or GED completion. The second column repeats the analysis – with virtually identical results – restricting the outcome variable to high school graduation (i.e., excluding GED).

The third regression estimates the fraction of quarters in which any criminal or parole violation occurs. Again, controlling for our estimated YouthBuild graduation rate, we find that graduating from the YouthBuild program significantly reduces the probability of a violation (coefficient -0.37; $p < .013$).⁹ Although not reported in Table 6, we also estimated similar regression models including all variables in the first stage and only including the new ‘estimated graduation rate’ and the actual graduation variable in the second stage. We also included dummy variables for each site in the first stage. In all cases, the coefficient on the YouthBuild graduation variable is highly significant. Also

⁹ Although not reported here, similar results emerge when measuring the dependent variable based only on post-departure from the YouthBuild program.

not shown, we have replicated these results including an age variable for those cases where we have estimates of the participant's age – again, with the same substantive findings. In all cases, graduating from the YouthBuild Offender Project significantly reduced the probability of recidivism.

VI. Comparison of YouthBuild Offender Sample to Similar Youth

While we have found significant increases in high school or GED graduation rates and what appear to be improvements in offending behavior following participation in the YouthBuild program, we do not know if these positive outcomes are the result of the YouthBuild program itself or if participants would have had similar outcomes in the absence of program participation. For example, it is possible that YouthBuild participants are a highly selected sample of students who are motivated to further their education and refrain from criminal offending – and would have done so regardless. Ideally, potential participants would be randomly assigned to a treatment and control group so that we could compare outcomes in these two groups.

Absent such an experimental design, we are able to make some comparisons to a similar youth cohort. In the case of criminal outcomes, we have compared the YouthBuild sample to the Second Philadelphia Birth Cohort sample (“Philadelphia Cohort”) – a comprehensive dataset of police contacts (obtained from the Juvenile Aid Division of the Philadelphia Police Department) for all youth born in Philadelphia in 1958 and who resided in the City until age 18 (Figlio, Tracy and Wolfgang, 1994). The Philadelphia Cohort data are among the best data sources for studying long-term patterns of juvenile delinquency and criminal activity (Piquero, Farrington, and Blumstein, 2003).

As shown below, the Philadelphia Cohort sample allows us to identify youth at any age by prior police contact status.¹⁰ Since virtually all YouthBuild students enter with a prior offending record, we can use these two samples for comparison purposes.

We compared the “recidivism rate”¹¹ of YouthBuild students to that of the Philadelphia Cohort sample. As shown in Table 2, we have approximately 10 quarters of data on the YouthBuild students – including their time in the program. Table 7 examines the “recidivism rate” for the Philadelphia cohort by age. For the Philadelphia Cohort sample, for example, 16 year olds are those youth who had at least one police contact at age 16. The recidivism rate is defined as the percentage of these 16 year olds who had at least one police contact at either age 17 or 18. Thus, 45.0% of 16 year olds in the Philadelphia Cohort who had a police contact that year had at least one additional police contact between ages 17 and 18. In the case of the YouthBuild students, we do not know when their pre-entry police contacts occurred – but we do know that 100% of those entering the program had a prior police contact.¹² In the Philadelphia Cohort sample, we

¹⁰ In the case of juveniles, prior police contacts in the Philadelphia Cohort data include many incidents that are not crimes (e.g., truancy). We have eliminated from consideration any police contacts where there was no alleged criminal offense. Even then, however, not all of these police contacts ultimately result in an arrest as police will sometimes refer the youth to a remedial program without a formal arrest. Thus, in the case of juveniles, our measure of recidivism might not be completely comparable. However, in the case of adults, the Philadelphia Cohort data only include arrests.

¹¹ Recidivism in the Youthbuild Offender Project refers to any conviction, incarceration or parole revocation, while recidivism in the Philadelphia Cohort data refers to any police contact involving a criminal offense (in the case of juveniles) or any arrest (in the case of adults).

¹² Prior police contact in the case of our YouthBuild sample means that the individual entered the program with at least one prior misdemeanor or felony conviction. Although 8 out of the 388 had prior police contact information missing, a prior history of serving in

cannot measure the recidivism rate for those older than 23, since we only have complete two-year follow-up data on this cohort through age 25. Table 7 compares these recidivism rates year-by-year. First, we compare the Philadelphia Cohort to the sample of all YouthBuild Offender Project students – including those who drop out of the program. Next, we compare them to successful graduates of the program. In all cases, the YouthBuild sample has an equal or lower recidivism rate.

Combined, the recidivism rate for YouthBuild Offender Project students is lower than that of the Philadelphia Cohort offenders, and this difference is statistically significant. This is measured both with the full sample of YouthBuild students and with those whose age at entry is known to be between age 16 and 23 (n=232).¹³ For example, compared to the Philadelphia Cohort recidivism rate of 39.6%, the full sample of 388 YouthBuild students have a recidivism rate of 32.7% ($p < .01$). Alternatively, the 232 students we have identified as being between ages 16 and 23 at entry have a recidivism rate of 33.3% ($p < .04$). The results are stronger if we limit our comparison to YouthBuild Offender Project graduates – where the recidivism rate is only 28.3% overall. Note that we have also been overly conservative in our comparison by including the entire time period, averaging 10 quarters. If we restrict our analysis to 8 quarters to be consistent with the Philadelphia Cohort sample, the recidivism rate is only 30.7% (or 25.0% for the YouthBuild Offender Project graduates). Thus, between 6% and 9% fewer YouthBuild

jail or prison – or being referred by a court in pre-trial diversion - was a prerequisite to entering the Youthful Offender Project.

¹³ Although most entering YouthBuild students are within the 16-23 year old range, not all birth dates are recorded in the data; thus we have shown these figures both ways.

participants were recidivists than would have been expected compared to the Philadelphia Cohort sample.

While the above comparison is not perfect – as our measures of recidivism are not identical - we also note that our comparison group is much closer to the YouthBuild sample than any other dataset we are aware of. In fact, the Philadelphia Cohort sample includes individuals who were arrested but never convicted; hence we might expect a higher recidivism rate if we could restrict the Philadelphia Cohort sample to only those with prior convictions. On the other hand, since the Philadelphia Cohort data include police contacts that do not ultimately result in a conviction or parole violation, it is possible that the “conviction” or “parole violation” recidivism rate is higher. One other dataset we are aware of that compares recidivism rates of individuals with prior convictions was collected by the Bureau of Justice Statistics (Langan and Levin, 2002). In a study of many thousand prisoners released from state prisons in 1994 and followed for three consecutive years post-parole, they found that 29.9% were rearrested within 6 months, 44.1% within one year, 59.2% within two years, and 67.5% within three years of their release. This is considerably higher than the recidivism rate for the Philadelphia Cohort – which is to be expected since the sample of offenders in the prisoner release study is restricted to those who served time in prison – while the Philadelphia Cohort sample includes those whose charges were dropped, acquitted at trial, convicted but placed on probation, etc. The “reconviction” rate for these released prisoners was 10.6% after 6 months, 21.5% after one year, 36.4% after two years, and 46.9% after three years. This compares to the YouthBuild Offender Project “reconviction” rate of 33% overall (28% for graduates) over 10 quarters (30 months), or 30.7% (25.0% for graduates) over

two years. Thus, the reconviction rate for the average YouthBuild Offender Project student (including those who drop out) is between 3.4% and 5.7% lower than the average state prisoner releasee in 1994 as reported by BJS. For YouthBuild Offender Project graduates, it is between 8.4% and 11.4% lower.¹⁴

In the case of high school graduation, the best data available on the likelihood that high school dropouts will subsequently graduate with a degree or GED is the National Longitudinal Survey of Youth (“NLSY97”).¹⁵ The NLSY97 cohort began in 1997 with about 9,000 youth age 14 to 21 at the time, with follow-up interviews annually. Thus, we are able to estimate the percentage of high school dropouts who ultimately obtain their high school diploma or GED after originally dropping out of high school. Table 8 reports these graduation rates. For example, for respondents who had dropped out in 1998, 8.4% had received their high school diploma or GED after one year, 11.6% by year two, and 16.8% by year 5. Overall, Table 4 suggests a 2-year cumulative graduation or GED rate of about 12-15% and a 3-5 year rate of 18-20% for youth that originally drop out of high school. This is similar to findings from an earlier study of the NLSY79 by Mishel and Roy (2006: 18) who report a 22.3% completion rate after about 13 years.¹⁶

¹⁴ The 3.4% and 8.4% figures are based on comparing the 30-month YouthBuild reconviction rate to the two-year rate in the BJS study, while the 5.7% and 11.4% figures are based on the 24-month YouthBuild reconviction rate.

¹⁵ See <http://www.bls.gov/nls/nlsy97.htm> for details. The figures reported here have been computed directly from these survey data.

¹⁶ Mishel and Roy report that 8.5% of respondents had dropped out at the time of initial ‘completion’ of their schooling, compared to 6.6% at final follow-up. Thus, 1.9% of the population subsequently received a high school degree or GED, which represents 22% of those who initially dropped out ($1.9/8.5 = 22.3\%$).

In the YouthBuild sample, 43 out of 388 entered with a high school degree or GED. Of the remaining 345 high school dropouts, 159 (46.1%) received their GED or high school degree at some point within the time period measured (10 quarters on average). This is more than three times the two-year graduation rate in the NLSY97 survey and more than twice the 3-5-year graduation rate. Interestingly, the high school/GED graduation rate for those who drop out of the YouthBuild Offender Project program is very similar to the NLSY97 survey – about 18%. The high school graduation rate for those who successfully complete the YouthBuild Offender Project program is 58%, a difference that is highly statistically significant ($p < .01$).

The 388 YouthBuild Offender Project students analyzed above were those who entered in the first year of the program beginning as early as the fourth quarter of 2004; hence we have the longest time series (about 2.5 years) from which to follow their progress. In addition, we also examined the second year cohort – those entering beginning the third quarter 2005, with a follow-up of less than two years from the date of entry. This cohort of 409 participants had virtually identical demographic characteristics at program entry and outcomes after exit. Tables A-1 and A-2 in an Appendix replicate Tables 1 and 2 for this second year cohort. We have not combined these cohorts because of the difference in length of follow-up time periods. However, a simple comparison of Tables 2 and A-2 confirms and reinforces our findings from the first year cohort. In fact, the only apparent difference is that the second year cohort's re-offending rate is lower for YouthBuild graduates and higher for YouthBuild dropouts. For example, comparing the last rows in both tables where we are able to standardize the outcome measures on the basis of the percentage of quarters in which there is a "failure," we find that in both

cohorts, “any violation” is found 7% of the time. Yet, in the year 1 cohort, YouthBuild graduates fail 5% of the time compared to only 4% in the year 2 cohort. Similarly, we find that YouthBuild dropouts fail 11% of the time in the year 1 cohort, compared to 15% of the time for year 2 cohorts. Overall, though, we find consistency in the outcomes across the two cohorts.

VII. Potential Costs and Benefits of YouthBuild Offender Project

While we do not have a randomized controlled experiment in which to compare identical YouthBuild participants to non-participants, we can provide some preliminary estimates of the costs and potential benefits of the YouthBuild program by comparing outcomes to similar cohorts. We do this for both educational attainment and recidivism, two key life course outcomes. Since our report focuses on estimating the benefits of YouthBuild, we utilize external estimates of the costs of the program for comparison purposes.

Mitchell et al. (2003) evaluated the YouthBuild Program under a contract awarded by the U.S. Department of Housing and Urban Development - one of the major grant supporters of the program. They reported the average cost per program participant to be \$14,830 in 2001 dollars, or \$20,302 when construction costs are included (Mitchell et al., 2003: 73). They also note that trainee stipends accounted for approximately 27% of program budgets (excluding construction costs). Thus, approximately \$4,004 per program participant was spent on trainee stipends. Combining the trainee stipends with construction costs, about half of the cost of the YouthBuild program (\$9,476) is transferred to participants or used for constructing low cost housing and hence provides a direct transfer benefit that is likely to exceed its social costs. The other half (\$10,826)

would be considered the social cost of the program. Converting these figures to 2006 dollars (increasing by 15% to account for the increase in average hourly wage rates in the U.S.), we thus estimates social costs to be \$12,500, and total program costs (excluding construction materials) to be \$17,000. In comparison, the costs of incarcerating an adult for one year average about \$25,000 (BJS, 2004), and the costs of incarceration in a typical juvenile facility for the same one-year period are much higher, typically in the order of \$100,000 (Nagin et al., 2006).

As noted above, the high school graduation rate for those who enter the program without a high school degree or GED was 46.1% (159 out of 345) within about 10 quarters of beginning the YouthBuild program (or 58% for those who successfully graduate from the program). This compares to a 3-5 year graduation rate of previous high school dropouts from the NLYS study of no more than 20%. Thus, in the absence of participating in the program, we would have expected no more than 69 (20% of 345) participants to graduate after originally dropping out (if we were to apply the NLSY97 figures to the YouthBuild data). Thus, as many as 90 (159 - 69) out of 388 program participants received a high school or GED degree as a result of the YouthBuild program. This represents a 23.2% “excess” graduation rate.

One measure of improved educational attainment is the value of additional employment opportunities and wages. While the YouthBuild data provide some evidence on improved educational outcomes, it lacks any data on earnings post-graduation and only sporadic data on pre-entry earning capacity. For example, we have pre-entry earnings data on only 57 out of the 388 participants, and earnings data during the program for 160 participants. The average pre-program earnings for those 57 students

were \$225 per week, while the average earnings during the program for the 160 students with data was \$326 per week. For those 28 students where we have both data, average earnings did increase – from \$254 to \$347 per week ($p < .01$). Of course, earnings during the YouthBuild program are largely obtained through the program itself – and hence a better assessment would be to compare post-graduate earnings. In the absence of such data, we compare lifetime earnings of generic high school graduates to high school dropouts.

According to a recent study of the value of a high school education, Cohen and Piquero (2007) estimate the present value of future benefits from saving a youth from dropping out of high school to range between \$420,000 and \$630,000 (in 2006 dollars). Applying this to the 23.2% excess graduation rate yields potential educational benefits of \$97,000 to \$146,000 per program participant. If this were the only benefit of the YouthBuild program, the benefit-cost ratio would thus range from 7.8 to 11.7 based on \$12,500 cost per participant. Even if we use the higher program cost of \$17,000, the benefit cost ratio would range from 5.7 to 8.6. Put differently, to “break even” at a cost of \$12,500 per program participant, between 2% and 3% of all YouthBuild participants would have to obtain a high school or GED degree as a result of the program, while we estimate the actual rate to be 23.2%. Note that some of these benefits are “non-pecuniary” (such as the value of a more informed public, health benefits from better education, etc.) Even focusing solely on the lost productivity and value of fringe benefits, potential benefits total \$350,000 – or \$81,000 per program participant – significantly higher than the costs.

As noted above, we estimate that between 3.4% and 9% of participants who otherwise would have been expected to recidivate, were not convicted of any crimes (or parole violations) during 8-10 quarters following program entry. Cohen and Piquero (2007) estimate the present value of costs imposed by a lifetime of crime from age 18 to range between \$2.0 and \$4.3 million. If the YouthBuild program were able to divert 3.4% of its participants away from a lifetime of crime, the benefits per participant would range between \$68,000 and \$146,000. At a 9% rate, the benefits per participant would range between \$180,000 and \$390,000. If this were the only benefit of the YouthBuild program, the benefit-cost ratio would thus range from 5.4 to 31.2 based on \$12,500 cost per participant. Even if we use the higher program cost of \$17,000, the benefit cost ratio would range from 4.7 to 26.9. Put differently, to “break-even” at a cost of \$17,000 per participant, this program would need to only “save” between 0.4% and 0.8% of its participants from a life of crime – whereas we estimate the program success rate to range from 3.4% to 9% - about 10 times the break-even level.

As an even more conservative estimate of the potential value of the crime reduction benefits of the YouthBuild program, Cohen and Piquero (2007: Table 8) report on the year-by-year costs imposed by high rate offenders. Between ages 20-24, costs imposed annually are estimated to range between about \$200,000 and \$500,000 per offender. Assuming 3.4% of YouthBuild participants are diverted from this path, benefits per participant would range between \$6,800 and \$17,000 after just one year of reduced criminal activity. At a success rate of 9%, benefits would range between \$18,000 and \$45,000. In other words, the program could pay back its costs solely from crime reductions within about one or two years.

It is important to realize that the crime reduction benefits of the YouthBuild program estimated above are only illustrative. These benefits are based on the “high risk” offender in Cohen and Piquero (2007), defined to be those with six or more police contacts throughout their lifetime. While we know that 100% of YouthBuild Offender Project participants had at least one prior conviction or court diversion, we do not know how many actual police contacts they had (or would likely have had in the future). As an alternative – and even more conservative measure, Cohen and Piquero (2007: Table 6) report that the present value of lifetime costs for those offenders who have two or more police contacts over their lifetime ranges between \$1.1 and \$1.6 million. Using this lower level of criminal activity as a base, if YouthBuild is able to divert program participants from a lifetime of crime, the benefits per program participant are estimated to range between \$37,000 and \$54,000 based on a 3.4% success rate, and between \$99,000 and \$144,000 based on 9%.

Combined with the estimated range of \$97,000 to \$146,000 benefits from improved educational attainment, the total benefits from the YouthBuild Offender Project are thus estimated to range between \$134,000 and \$536,000 – excluding any potential benefits from reduced drug abuse. The benefit-cost ratio is thus estimated to range between 10.8 and 42.9 based on the social costs of \$12,500 per participant, or 7.9 to 31.5 based on the program costs of \$17,000. Put differently, every dollar spent on the YouthBuild Offender Project will return between about \$7.90 and \$31.50 to taxpayers and others who donate to the program. In terms of social costs, every dollar spent is estimated to return between \$10.80 and \$42.90. These figures are shown in Table 9.

Finally, we note that approximately 40% of program participants reportedly had a substance abuse problem at the time of entry. While there are no program outcomes available on this dimension, we note that Cohen and Piquero (2007: Table 10) estimate the present value of lifetime costs for a heavy drug abuser at age 18 to range from \$950,000 to \$1.1 million. (Heavy drug abusers were defined as the 3.5 million Americans who reported using cocaine, crack, methamphetamine or heroin in the previous month based on a recent drug abuse survey, SAMHSA, 2007.) Ignoring crimes committed by drug abusers (since crimes are already accounted for in the reduced recidivism estimates), and simply focusing on reduced productivity, medical costs, etc., the costs range between \$230,000 and \$350,000. To see the potential value of the YouthBuild Offender Project, if only 10% of program participants with substance abuse problems overcome a heavy drug abuse problem, the benefit “per participant” would range from \$9,000 to \$14,000 – nearly the cost of the program itself. Put differently, at a cost of \$25,000 per program participant, the YouthBuild Offender Project would break-even solely on the drug abuse reduction benefits if between 7% and 11% of program participants were diverted from a heavy drug abuse career. Since approximately 40% of program participants reportedly entered with a drug abuse problem, this would require a ‘success’ rate of 17.5% to 27.5% for those entering with a drug abuse problem. These figures are only illustrative however, as we do not know what fraction of the 40% of YouthBuild participants are “heavy drug abusers” – the definition used by Cohen and Piquero (2007), which is more restrictive than simply drug abusers “in need of treatment.” Thus, while we have provided a break-even analysis for drug abuse, we have no data on which to estimate the likely drug abuse benefits of the YouthBuild program at this time.

VIII. How Do YouthBuild Offender Project students compare to other YouthBuild Students?

While this paper largely analyzes the YouthBuild Offender Project, the model used for that program is virtually identical to that of the more general YouthBuild program itself – with the key difference being that the Offender Project specifically targeting offenders. To compare the outcomes of the YouthBuild Offender Project to the overall YouthBuild program, we obtained data on 1,694 YouthBuild students where sufficient demographic information as well as prior educational and offending records existed. Though not a random sample, there is no reason to believe it is biased in any way – other than perhaps coming from locations that are better organized (as they are more likely to systematically collect data).

Of the 1694 incoming YouthBuild students, 1003 (59.2%) ultimately graduated from the program. This is lower than the 70.1% graduation rate for the 388 YouthBuild Offender Project participants. As shown in Table 10, the profile of YouthBuild graduates and dropouts vary. For example, YouthBuild graduates entered the program with a higher educational attainment on average (10.3% graduates entering with a degree versus 7.5% of dropouts). They were also less likely to have a criminal background.

While the profile of the typical YouthBuild student is similar to that of the YouthBuild Offender Project participant, they are not identical. For example, while about 2/3 of YouthBuild students are male, this figure is higher (85%) for the YouthBuild Offender Project. The YouthBuild Offender Project students are also slightly more likely to have a high school diploma or GED at entry (11%) compared to the overall sample (9.1%). Similarly, while virtually all YouthBuild Offender Project students entered with a

prior criminal record, only about 2/3 of the more general YouthBuild sample have a prior arrest or criminal record.

Similar to our finding in the YouthBuild Offender Project, there are some important differences in the backgrounds of those students who drop out of YouthBuild compared to those who successfully graduate. The most significant difference appears to be that YouthBuild dropouts are less likely to enter with a high school degree or GED (7.5%) compared to YouthBuild graduates (10.3%). They are also slightly less likely to have a prior criminal record (63% versus 68%). These figures are shown in Table 10.

Unlike the YouthBuild Offender Project, no follow-up data exists on dropouts of the standard YouthBuild program. Thus, we cannot directly compare their post-YouthBuild educational attainment or criminal offending records. However, graduates of the YouthBuild program are monitored at the date of graduation, and every six months for the first two years. Table 11 reports on the follow-up information that is available for YouthBuild graduates. At the time of their graduation from the program, 50.5% of those who entered without a high school degree or GED had received one. This increases to 51.4% at 6-months following graduation, 58% after 12 months and 68.9% after 24 months. This compares favorably with the 58% of YouthBuild Offender Project graduates who reportedly received a high school degree or GED at some point during their follow-up period – which averages approximately 20 months following graduation (see Table 2). While promising, it is important to note that these high school graduation rates might be biased as they are not based on the full sample of 1003 graduates. For example, the 58% graduation rate is based on 296 reports – only 30% of the sample, and the 68.9% rate is based on 49 reports – only 5% of the sample. It is quite possible that the

“successful” graduates are those who continue to report and the “unsuccessful” ones “drop out” of the system and are not included in the follow-up data.

Although not entirely comparable, the recidivism rate of YouthBuild graduates also appears to compare favorably (and likely is less than that of graduates of the YouthBuild Offender Project). While the latter have a recidivism rate of 17% within the 20-month time period following graduation (defined as either a new criminal conviction, incarceration, or parole revocation), between 6% and 12% of YouthBuild graduates overall spend some time in jail over the course of 12-24 months following their graduation. As shown in Table 11, 4.5% of graduates with only 6-months of follow-up reportedly were in jail. This increases to 6.4% for those with 12-months follow-up, and 12.2% for graduates who have been followed for 24 months. However, these figures are likely to be somewhat higher due to missing data¹⁷ and they also exclude offending behavior that does not result in incarceration.

IX. Concluding Remarks

This paper sought to examine several crime and non-crime outcomes among graduates and dropouts from the YouthBuild Offender Project, to compare their experiences with other similar samples of youth on crime and non-crime outcomes, and to present an initial benefit-cost calculation for program participation.

While our outcome analyses are all consistent with YouthBuild goals and we find significant support for a finding that this program yields a large positive benefit-cost

¹⁷ Note that while we have data on 49 individuals at 24 months post graduation, the intermediate data (e.g., 6-months or 12-months follow-up) is not always available. For example, we only have 30 of these individuals at 6 months. Thus, the 12.2% recidivism rate is an underestimate.

ratio, we note several important limitations, which also are relevant to much of the prevention/intervention literature. First, the YouthBuild sample had a rather short-term follow-up period – about 18 months after completion of the program. It is possible that after a period of time, the short-term deterrent effects observed with respect to crime could dwindle.¹⁸ Additionally, we do not know if YouthBuild graduates will, in fact, continue being productive members of society with respect to other non-crime outcomes (employment, relationships, etc.). Nevertheless, our preliminary benefit-cost analysis suggests that the payback period from crime reduction could be as little as one year. Moreover, a recent study of older YouthBuild graduates finds significant evidence of a long-term positive outcome for many participants (Hahn et al., 2004). Second, we have studied 30 YouthBuild sites that were chosen based on criteria that favored a successful outcome because of an a priori assessment by the national YouthBuild office that these local sites were well operated and fulfilled their (and DOL's) criteria for a likely successful outcome. Thus, our main findings should be considered an assessment of well-designed and operated YouthBuild programs, and may not be generalizable to all YouthBuild programs and sites. However, a more limited analysis (due to data availability) of a random sample of all YouthBuild participants suggests that our finding of a high graduation rate and low recidivism is likely to carry over to the program as a whole – although we are unable to quantify this effect. Third, we cannot definitively attribute the positive outcomes to YouthBuild itself. This is so because we do not know if these positive outcomes are the result of the YouthBuild program or if participants would have had similar outcomes in the absence of program participation. While we have

¹⁸ Nevertheless, our preliminary benefit-cost analysis suggests that the payback period from crime reduction could be as little as one year.

utilized external comparison data and the best statistical techniques available to isolate the benefits of the YouthBuild program, we cannot entirely rule out the possibility that program participants were simply highly motivated individuals who would have otherwise been successful. Ideally, potential participants would be randomly assigned to a treatment and control group so that we could compare outcomes in these two groups.

With these caveats in mind, several key findings emerged from our analysis. First, YouthBuild Offender Project graduates are more likely to graduate from high school or obtain a GED compared to dropouts from the program. Second, overall, YouthBuild Offender Project graduates have lower criminal offending rates than those who drop out of the program. Third, to gain a better sense of how the YouthBuild Offender Project sample is a reasonable approximation to other criminological studies of crime and non-crime outcomes, we undertook two unique comparisons. When we compared the recidivism rate of YouthBuild students to that of the Second Philadelphia Birth Cohort sample, a birth cohort of over 27,000 individuals born in Philadelphia in 1958 who resided in the City until age 18, we found that in all age-matched comparisons, the YouthBuild sample has an equal or lower recidivism rate. Combined, the recidivism rate for the YouthBuild sample is lower and statistically significant. In the case of high school graduation, we compared the YouthBuild sample to members of the National Longitudinal Survey of Youth, which began in 1997 with about 9,000 youth age 14 to 21 at the time. We estimated the percentage of high school dropouts who ultimately obtained their high school diploma or GED after originally dropping out of high school. We found that YouthBuild participants were more than three times as likely to graduate with a high school degree or receive a GED within two years as the NLSY97 sample. The

two-year YouthBuild high school or GED graduation rate is more than twice the 3-5-year graduation rate of the NLSY97 sample. Interestingly, the high school/GED graduation rate for those who drop out of YouthBuild was very similar to the NLSY97 survey – about 20%.

Finally, we provided some preliminary estimates of the costs and benefits of the YouthBuild program by comparing educational attainment and recidivism outcomes to similar cohorts. With respect to educational attainment, when we apply the excess graduation rate (exhibited by the YouthBuild Offender Project sample), potential educational benefits range from \$97,000 to \$146,000 per program participant. Further, we estimate the potential reduction in recidivism for YouthBuild Offender Project participants to range between 3.4% and 9%. Based on the benefits from these youth avoiding a future lifetime of crime, the benefits per participant would range between \$37,000 and \$390,000.

Combined, the potential benefits from the YouthBuild Offender Project are thus estimated to range between \$134,000 and \$536,000. The costs of the program are estimated to be \$17,000 – or \$12,500 if only ‘social costs’ (excluding transfers in the form of trainee stipends are excluded). The benefit-cost ratio is thus estimated to range between 10.8 and 42.9 based on the social costs, or 7.9 to 31.5 based on the program costs. Put differently, every dollar spent on the YouthBuild Offender Project will return between about \$7.90 and \$31.50 to taxpayers and others who donate to the program. In terms of social costs, every dollar spent is estimated to return between \$10.80 and \$42.90.

While our benefit-cost analysis focuses on the two program outcomes we have been able to estimate – recidivism and educational attainment, the YouthBuild program

targets other socially desirable outcomes – including reduced drug abuse and increased civic engagement (e.g., voter registration, community service, etc.). While we do not have program outcomes on these measures, we have made some hypothetical estimates of the value of substance abuse reductions. We calculated that if 10% of program participants with substance abuse problems overcame a “heavy drug abuse” problem, the benefit “per participant” would range from \$9,000 to \$14,000 – nearly the cost of the program itself.

Taken together, these results offer a promising picture of the YouthBuild Offender Project as an effective approach to reduce recidivism and improve educational outcomes. While the above figures are based on 388 participants in the first year of the YouthBuild Offender Project, we also analyzed 409 participants from year two. While the follow-up period is necessarily shorter, the results are consistent with the year one outcomes. Finally, we attempted to generalize to the overall population of YouthBuild graduates by examining a sample of 1691 YouthBuild participants. While it is not possible to fully assess benefits and costs because the outcomes data are not as comprehensive as they are for the Offender Project, we note that the data that are available suggests similarly positive outcomes - comparable to the Offender Project sample. Since all participants are put through the same program and are mixed together at the local sites, we suspect that if better follow-up data were available, a favorable benefit-cost analysis would also be found.

Table 1**Characteristics of YouthBuild Offender Project Graduates and Dropouts at time of Entry**

	Total	YB Graduate	YB Dropout	Sample sizes (Grad/Drop/Total)	p-value
Demographics					
Age	19.62	19.50	19.90	166 / 99 / 265	0.18
Male	0.85	0.85	0.85	272 / 116 / 388	0.92
Non-White	0.76	0.78	0.72	272 / 116 / 388	0.24
Married	0.02	0.01	0.03	272 / 116 / 388	0.45
High School or GED at entry	0.11	0.12	0.11	272 / 116 / 388	0.96
High School at entry	0.06	0.07	0.05	272 / 116 / 388	0.59
GED at entry	0.05	0.05	0.06	272 / 116 / 388	0.61
Household Income	\$8,784	\$9,573	\$7,023	199 / 89 / 288	0.03
Working at entry	0.09	0.09	0.10	272 / 116 / 388	0.64
PRIOR RECORD					
Prior arrest	0.97	0.96	0.99	268 / 111 / 379	0.11
Prior misdemeanor	0.70	0.69	0.73	226 / 96 / 322	0.44
Prior felony	0.46	0.42	0.57	232 / 97 / 329	0.02
Served time in juvenile detention	0.60	0.57	0.68	272 / 116 / 388	0.04
Served time in adult correctional facility	0.40	0.36	0.48	271 / 116 / 387	0.03
Intensive aftercare program at time of entry	0.33	0.30	0.40	271 / 116 / 387	0.05
Substance abuse problem at time of entry	0.41	0.42	0.37	170 / 68 / 238	0.43
Undergoing substance abuse treatment at time of entry	0.14	0.13	0.17	163 / 65 / 228	0.51
LIVING SITUATION					
Living in group home	0.02	0.01	.02	272 / 116 / 388	0.85
Living in half-way house	0.03	0.01	0.06	272 / 116 / 388	0.01
Homeless	0.03	0.02	0.05	272 / 116 / 388	0.07
Living in public housing	0.10	0.09	0.12	272 / 116 / 388	0.33
Foster child	0.04	0.04	0.04	272 / 116 / 388	0.90
Student on public assistance	0.28	0.28	0.28	272 / 116 / 388	0.98
Family on public assistance	0.32	0.30	0.34	272 / 115 / 387	0.51
Lives with parents	0.63	0.67	0.53	272 / 116 / 388	0.01
Lives by self	0.10	0.08	0.15	272 / 116 / 388	0.07

Table 2

Program Outcomes for YouthBuild Offender Project Graduates and Dropouts

	Total	YB Grad	YB Drop Out	Sample sizes (Grad/Drop/Total)	p-value
Number of Quarters in Program	3.6	4.0	2.4	258 / 106 / 364	0.00
Number of Quarters after Program	6.8	6.4	7.6	258 / 106 / 364	0.00
Total Number of Quarters	10.3	10.4	10.0	272 / 116 / 388	0.00
High School/GED after Program entry (only those who entered without degree, n=345)	0.46	0.58	0.18	242 / 103 / 345	0.00
- High School after Program entry (n=345)	0.19	0.24	0.05	242 / 103 / 345	0.00
- GED after Program entry (n=345)	0.28	0.34	0.14	242 / 103 / 345	0.00
PERCENT of STUDENTS (a) After Entry					
Convicted of crime	0.12	0.11	0.14	272 / 116 / 388	0.44
Incarcerated	0.18	0.15	0.27	272 / 116 / 388	0.00
Parole revocation	0.18	0.13	0.29	272 / 116 / 388	0.00
Any of the above	0.33	0.28	0.44	272 / 116 / 388	0.00
PERCENT of STUDENTS (b) After Departure					
Convicted of crime	0.06	0.05	0.09	263 / 108 / 371	0.16
Incarcerated	0.13	0.09	0.21	263 / 108 / 371	0.00
Parole revocation	0.12	0.08	0.20	263 / 108 / 371	0.00
Any of the above	0.21	0.17	0.33	263 / 108 / 371	0.00
PERCENT of QUARTERS (a) After Entry					
Convicted of crime	0.02	0.01	0.02	272 / 116 / 388	0.28
Incarcerated	0.03	0.02	0.05	272 / 116 / 388	0.00
Parole revocation	0.03	0.02	0.05	272 / 116 / 388	0.00
Any of the above	0.08	0.06	0.12	272 / 116 / 388	0.00
PERCENT of QUARTERS (b) After Departure					
Convicted of crime	0.01	0.01	0.02	253 / 106 / 359	0.12
Incarcerated	0.03	0.02	0.05	253 / 106 / 359	0.02
Parole revocation	0.03	0.02	0.04	253 / 106 / 359	0.01
Any of the above	0.07	0.05	0.11	253 / 106 / 359	0.00

Note: convictions and incarcerations are only counted if the offense occurred subsequent to program entry. Parole revocations are for incidents that occur after entry – even if the underlying crime was committed prior to entry.

Table 3**YouthBuild Offender Project Outcomes by Location**

City	N	YB Graduation	Any Violation Post Entry	Any Violation Post Departure	High School or GED for those entering w/o Degree	
					N	Mean
Albany, NY	11	0.73	0.00	0.00	11	0.18
Bemidji, MN	11	0.55	0.73	0.64	10	0.70
Bloomington, IL	8	0.88	0.38	0.13	4	0.75
Brockton, MA	11	0.82	0.09	0.00	9	0.56
Brownsville, TX	9	0.56	0.33	0.22	9	0.44
Chula Vista, CA	11	0.64	0.18	0.18	11	0.27
Columbus, OH	15	0.87	0.27	0.13	15	0.20
Flushing, NY	15	0.67	0.53	0.13	13	0.38
Fresno, CA	16	0.44	0.50	0.38	11	0.09
Gardena, CA	16	0.56	0.50	0.50	15	0.67
Honolulu, HI	8	0.75	0.25	0.13	8	0.50
Kincaid, WV	14	0.29	0.29	0.00	8	0.00
Lebanon, OR	8	0.63	0.38	0.38	8	0.75
Los Angeles, CA	15	1.00	0.27	0.13	14	0.57
Madison, WI	12	0.67	0.33	0.17	8	0.63
New Waverly, TX	24	0.79	0.33	0.29	22	0.45
New York, NY	12	0.58	0.25	0.25	10	0.40
Newark, NJ	19	0.74	0.32	0.11	19	0.37
Petersburg, VA	11	0.82	0.18	0.09	11	0.36
Philadelphia, PA	10	1.00	0.30	0.30	10	1.00
Portland, ME	10	0.70	0.30	0.30	10	0.40
Portland, OR	15	0.80	0.13	0.13	15	0.67
Richmond, CA	18	0.67	0.22	0.06	18	0.61
Rockford, IL	11	0.64	0.27	0.18	11	0.36
Roxbury, MA	17	0.53	0.35	0.12	15	0.33
Springfield, MA	9	1.00	0.33	0.33	8	0.63
St Louis, MO (1)	15	0.67	0.80	0.47	15	0.40
St Louis, MO (2)	12	0.83	0.33	0.17	8	0.38
Trenton, NJ	14	0.79	0.29	0.21	11	0.64
Waukegan, IL	11	0.64	0.27	0.18	8	0.38
Total	388	0.70	0.33	0.21	345	0.46

Table 4**YouthBuild Offender Project Outcomes by Site Characteristics**

Site Characteristic (number of participants)	YB Grad.	High School or GED (number in parenthesis)	HS (number in parenthesis)	GED (number in parenthesis)	Percent Students with Any Violation after Entry	Percent Students with Any Violation after Departure
Urban* (303)	0.72	0.46 (273)	0.21 (273)	0.26 (273)	0.32	0.19
Rural (85)	0.60	0.48 (72)	0.10 (72)	0.38 (72)	0.40	0.30
(p-value)	(0.085)	(0.785)	(0.030)	(0.047)	(0.202)	(0.072)
National Schools Initiative: Yes (150)	0.69	0.56 (132)	0.39 (132)	0.17 (132)	0.35	0.25
No (238)	0.71	0.40 (213)	0.06 (213)	0.35 (213)	0.32	0.18
(p-value)	(0.625)	(0.003)	(0.000)	(0.0005)	(0.578)	(0.145)
Americorps National Direct: Yes (138)	0.67	0.49 (118)	0.11 (118)	0.38 (118)	0.35	0.23
No (250)	0.72	0.44 (227)	0.22 (227)	0.23 (227)	0.32	0.20
(p-value)	(0.273)	(0.412)	(0.009)	(0.003)	(0.578)	(0.406)
Americorps Education Award: Yes (109)	0.75	0.46 (97)	0.26 (97)	0.21 (97)	0.30	0.20
No (279)	0.68	0.46 (248)	0.16 (248)	0.31 (248)	0.34	0.21
(p-value)	(0.169)	(0.944)	(0.031)	(0.053)	(0.709)	(0.209)

* Includes some sites that are listed as “part rural.”

Table 5: Probit Regression Analysis of YouthBuild Offender Project Outcomes

	Graduate from YB		Any Violation Post-entry		HS or GED Graduate		HS Grad.	
	Coeff.	p-val		p-val	Coeff.	p-val	Coeff.	p-val
YB Graduate	---	---	-0.37	0.014	1.22	0.000	1.38	0.000
Student Characteristics								
Prior juvenile detention	-0.28	0.062	-0.07	0.655	0.05	0.725	0.23	0.246
Prior adult corrections	-0.36	0.014	0.30	0.050	-0.10	0.535	0.03	0.882
Incarcerated at entry	-0.40	0.429	0.63	0.245	0.85	0.202	--- *	---
High school or GED at entry	0.11	0.617	0.34	0.114	---	---	---	---
Working prior to entry	0.04	0.859	-0.12	0.633	-0.04	0.878	0.36	0.162
Student on public assistance	0.10	0.633	0.14	0.369	0.001	0.995	-0.07	0.758
Living with parents	0.12	0.475	0.20	0.248	0.03	0.853	0.99	0.000
Living by self	-0.20	0.446	-0.04	0.864	0.43	0.157	0.99	0.001
Living in halfway house	-0.64	0.189	0.42	0.259	-0.37	0.558	--- *	---
Male	0.05	0.820	0.61	0.003	0.03	0.897	-0.44	0.071
Non-White	0.02	0.884	0.16	0.370	0.03	0.860	0.07	0.795
Married	-0.26	0.569	-0.01	0.983	0.56	0.271	1.33	0.014
Program Characteristics								
Years of HUD funding	0.15	0.503	-0.02	0.297	-0.01	0.752	0.05	0.086
National Schools Initiative	-0.05	0.721	0.11	0.437	0.62	0.000	1.63	0.000
Urban	0.40	0.087	-0.47	0.043	-0.24	0.262	-0.03	0.904
Constant	0.33	0.191	-0.66	0.054	-1.12	0.002	-3.82	0.000
Number of observations		387		387		344		344
Pseudo R-squared		0.051		0.070		0.144		0.357

* dropped from regression as these variables perfectly predict the dependent variable

Table 6

Treatment Effect Model on YouthBuild Offender Project Outcomes

(a) Stage 1: Probability of Graduating from YouthBuild

	Coefficient	p-value
Prior juvenile detention	-0.32	0.025
Prior adult corrections	-0.34	0.015
Incarcerated at entry	-0.33	0.516
High school or GED at entry	0.07	0.767
Working prior to entry	0.004	0.984
Student on public assistance	0.03	0.865
Living with parents	0.19	0.233
Living by self	-0.23	0.339
Living in halfway house	-0.52	0.200
Constant	0.79	0.000
Number of observations		387
Pseudo R-squared		0.042

(b) Stage 2: Outcome from YouthBuild Program

	Dep Var: High School or GED Graduate	p-value	Dep Var: High School Graduate		Dep Var: Any Violation Post- entry/Quarters	p-value
Estimated YB Graduate	-0.29	0.679	0.45	0.640	-0.52	0.411
YB Graduate	1.20	0.000	1.25	0.000	-0.37	0.013
Male	-0.04	0.830	-0.39	0.094	0.61	0.003
Non-White	0.02	0.939	0.08	0.751	0.23	0.198
Married	0.60	0.247	1.28	0.048	-0.15	0.791
Years of HUD funding	-0.01	0.671	0.03	0.319	-0.04	0.077
National Schools Initiative	0.56	0.000	1.52	0.000	0.13	0.353
Urban	-0.31	0.177	0.11	0.703	-0.36	0.086
Constant	-0.66	0.246	-3.03	0.000	-0.09	0.863
N		344		344		387
Pseudo R-2		0.134		0.3039		0.048

Table 7**Two-year Recidivism Rate in Philadelphia Cohort Data****versus Overall Recidivism Rate in YouthBuild Offender Project Sample**

Age	Philadelphia Cohort		YouthBuild Students (combined)			YouthBuild Graduates only		
	Number	Recidivism rate (2 years)	N	Recidivism Rate (10 quarters)	p- value	N	Recidivism Rate (10 quarters)	p-value
16	1793	45.0%	11	18.2%	.053	8	0%	---
17	1593	32.7%	41	34.2%	.848	29	34.5%	.844
18	1080	40.3%	49	38.8%	.829	32	21.9%	.019
19	919	40.9%	40	27.5%	.068	25	24.0%	.064
20	797	41.4%	36	38.9%	.762	24	33.3%	.420
21	804	40.3%	29	37.9%	.798	14	33.3%	.589
22	753	40.0%	20	15.0%	.007	10	0%	---
23	752	35.6%	16	31.3%	.721	8	37.5%	.920
24			14	42.9%				
25			7	28.6%				
Combined age 16-23		39.6%	232	33.3%	.045	143	27.3%	.000
Combined entire YB sample		39.6%	388	32.7%	.004	272	28.3%	.001

Table 8

High School and GED Graduation Rate for Drop-Outs

National Longitudinal Youth Survey 1997

Drop-out in year:	Year 1	Year 2	Year 3	Year 4	Year 5
1998 (n=560)	8.4%	11.6%	12.7%	13.7%	16.8%
1999 (n=350)	6.9%	14.4%	14.8%	15.0%	15.8%
2000 (n=330)	9.6%	15.0%	18.3%	20.1%	---
2001 (n=240)	7.8%	11.9%	13.7%	---	---

Table 9

Potential Costs and Benefits of YouthBuild Offender Project

	Benefits	“Social” Benefit-Cost Ratio (\$12,500 cost)	“Program” Benefit-Cost Ratio (\$17,000 cost)
Education Alone			
Min.	\$97,000	7.8	5.7
Max.	\$146,000	11.7	8.6
Crime Alone			
Min.	\$37,000	3.0	2.2
Max.	\$390,000	31.2	22.9
Combined			
Min.	\$134,000	10.8	7.9
Max	\$536,000	42.9	31.5

Note: “Social” benefit-cost ratio ignores transfer payments. “Program” benefit-cost ratio is based on the actual out-of-pocket costs to YouthBuild (including grant money received). See text.

Table 10**Comparison of YouthBuild Graduates to Dropouts****Demographics, Prior Educational Attainment and Criminal Background**

	YouthBuild Graduates (n=1003)	YouthBuild Dropouts (n=691)	p-value
Prior HS or GED	0.103	0.075	0.000
Male	0.68	0.65	0.290
Non-White	0.73	0.74	0.724
Married	0.04	0.04	0.853
Household Income	\$10,071	\$9,052	0.039
Prior arrest	0.60	0.65	0.049
Prior misdemeanor	0.42	0.47	0.040
Prior felony	0.21	0.24	0.167
Prior juvenile detention	0.29	0.39	0.000
Prior adult corrections	0.22	0.27	0.013
Any prior offense	0.68	0.63	0.022
Prior substance abuse	0.34	0.40	0.022

Table 11**Educational Attainment and Recidivism for YouthBuild Graduates**

	YB Drop- Outs (n=691)	At exit (n=1003)	6-months (n=434)	12-months (n=296)	24-months (n=49)
Prior HS/GED	.075	.103	.081	.074	.082
HS/GED for those entering w/o	---	.505	.514	.580	.689
Prior offense	.683	.629	.673	.676	.714
In Jail at 6-months	---	---	.045	.036	.133
In Jail at 12-months	---	---	---	.068	.067
In Jail at 24-months	---	---	---	---	.100
In Jail (per person)	---	---	.045	.064	.122

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Table A-1**Characteristics of YouthBuild Graduates and Dropouts at time of Entry****Year 2 Cohort (n=409)**

	Total	YB Graduate	YB Dropout	Sample sizes (Grad/Drop/Total)	p-value
Demographics					
Age	19.46	19.43	19.52	141 / 84 / 225	0.787
Male	0.84	0.84	0.84	273 / 136 / 409	0.912
Non-White	0.74	0.75	0.72	273 / 136 / 409	0.460
Married	0.02	0.02	0.01	273 / 136 / 409	0.792
High School or GED at entry	0.07	0.08	0.06	273 / 136 / 409	0.428
High School at Entry	0.05	0.05	0.05	273 / 136 / 409	0.994
GED at Entry	0.02	0.03	0.01	273 / 136 / 409	0.155
Household Income	\$ 9,621	\$ 9,904	\$ 8,902	208 / 82 / 290	0.494
Working at entry	0.10	0.12	0.07	273 / 136 / 409	0.106
PRIOR RECORD					
Prior arrest	0.96	0.98	0.90	256 / 126 / 382	0.000
Prior misdemeanor	0.69	0.72	0.63	238 / 102 / 340	0.081
Prior felony	0.47	0.49	0.42	235 / 100 / 335	0.218
Served time in juvenile detention	0.54	0.57	0.49	272 / 136 / 408	0.161
Served time in adult correctional facility	0.36	0.37	0.36	272 / 136 / 408	0.885
Intensive aftercare program at time of entry	0.41	0.42	0.39	273 / 136 / 409	0.543
Substance abuse problem at time of entry	0.38	0.36	0.46	183 / 65 / 248	0.131
Undergoing substance abuse treatment at entry	0.14	0.13	0.16	171 / 63 / 234	0.638
LIVING SITUATION					
Living in group home	0.02	0.01	0.02	273 / 136 / 409	0.587
Living in half-way house	0.02	0.02	0.01	273 / 136 / 409	0.386
Homeless	0.01	0.01	0.01	273 / 136 / 409	0.528
Living in public housing	0.10	0.10	0.08	273 / 136 / 409	0.483
Foster child	0.03	0.03	0.04	273 / 136 / 409	0.531
Student on public assistance	0.18	0.16	0.21	273 / 136 / 409	0.264
Family on public assistance	0.36	0.32	0.43	273 / 135 / 408	0.028
Lives with parents	0.70	0.68	0.76	273 / 136 / 409	0.097
Lives by self	0.08	0.09	0.07	273 / 136 / 409	0.621

Table A-2: Program Outcomes for YouthBuild Graduates and Dropouts

Year 2 Cohort (n=409)

	Total	YB Grad	YB Drop Out	Sample sizes (Grad/Drop/Total)	p-value
Number of Quarters in Program	3.16	3.42	2.42	240 / 85 / 325	0.000
Number of Quarters after Program	3.26	3.08	3.76	240 / 85 / 325	0.000
Total Number of Quarters	6.42	6.50	6.19	240 / 85 / 325	0.024
High School/GED after Program entry (only those who entered without degree, n= 297)	0.40	0.52	0.09	218 / 79 / 297	0.000
High School after Program entry (only those who entered without degree, n= 297)	0.135	0.18	0.00	218 / 79 / 297	0.000
GED after Program entry (only those who entered without degree, n= 297)	0.269	0.33	0.09	218 / 79 / 297	0.000
PERCENT of STUDENTS (a) After Entry					
Convicted of crime	0.25	0.15	0.45	273 / 136 / 409	0.000
Incarcerated	0.28	0.19	0.48	273 / 136 / 409	0.000
Parole revocation	0.30	0.19	0.53	273 / 136 / 409	0.000
Any violation	0.36	0.25	0.59	273 / 136 / 409	0.000
PERCENT of STUDENTS (b) After Departure					
Convicted of crime	0.03	0.01	0.07	240 / 85 / 325	0.001
Incarcerated	0.08	0.06	0.13	240 / 85 / 325	0.051
Parole revocation	0.07	0.04	0.16	240 / 85 / 325	0.000
Any violation	0.13	0.08	0.26	240 / 85 / 325	0.000
PERCENT of QUARTERS (a) After Entry					
Convicted of crime	0.02	0.02	0.04	240 / 85 / 325	0.011
Incarcerated	0.01	0.01	0.02	240 / 85 / 325	0.016
Parole revocation	0.03	0.02	0.06	240 / 85 / 325	0.000
Any violation	0.06	0.04	0.12	240 / 85 / 325	0.000
PERCENT of QUARTERS (b) After Departure					
Convicted of crime	0.01	0.004	0.03	219 / 83 / 302	0.017
Incarcerated	0.03	0.02	0.05	220 / 83 / 303	0.083
Parole revocation	0.03	0.01	0.08	220 / 83 / 303	0.000
Any violation	0.07	0.04	0.15	220 / 83 / 303	0.000

Note: convictions and incarcerations are only counted if the offense occurred subsequent to program entry. Parole revocations are for incidents that occur after entry – even if the underlying crime was committed prior to entry.