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EDITORS

# INVESTING IN THE DISADVANTAGED

ASSESSING THE BENEFITS  
AND COSTS  
OF SOCIAL POLICIES



David L. Weimer  
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# Investing in the Disadvantaged

Assessing the Benefits and Costs of Social Policies

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## Juvenile Crime Interventions

Jeffrey A. Butts and John K. Roman

Economic analysis is increasingly influential in studies of juvenile justice policies and programs. The economic perspective considers the monetized costs and benefits of policies and programs designed to reduce juvenile crime. In other words, do the benefits of implementing a policy or program for juvenile offenders outweigh the costs? What are the costs and benefits of expanding rehabilitation and are they measurable? What are the costs and benefits of enhanced punishment? Are there particular types of offenders for whom one approach is more cost-effective than another? This chapter reviews the cost-benefit literature on juvenile crime reduction programs, proposes four existing program models that should be investigated for their potential cost-effectiveness and recommends four program models for further research in part because early evaluation studies indicate they are promising intervention models, but also because they are extremely popular with policymakers. As such, they are likely to be a part of the juvenile justice system for years to come.

### INVESTING IN CRIME REDUCTION

The onset and duration of criminal behavior by young offenders can be affected by a wide range of individual, family, and environmental factors. One of the central goals of the juvenile justice system is to identify and resolve those factors to prevent future crime, restore youth to full citizenship, and ensure the safety of communities. Achieving this goal requires the juvenile justice system to use a variety of intervention strategies. Incarceration is one strategy, but in many cases it is not desirable. For many, even most, youth in the juvenile justice system incarceration is impractical, inappropriate, or ineffective.

Each year in the United States, police make more than 2 million arrests involving youth under the age of eighteen. On any given day, however, only 65,000 youth are in long-term correctional facilities and residential centers (Snyder and Sickmund 2006, 200). Because the average length of stay in long-term juvenile facilities is approximately twelve to eighteen months, the odds of incarceration for the average youthful offender are in the range of forty-six to one (or 65,000 incarcerations for every eighteen months

of arrests at 2 million arrests per year). This is not surprising. Most youth in the juvenile justice system have not committed a serious crime that would qualify them for incarceration. According to recent national data, more than half of all juvenile arrests in 2005 involved youth accused of minor assaults, drug offenses, property offenses, and even lesser charges (Butts and Snyder 2006). Juvenile arrests for disorderly conduct in 2005 outnumbered arrests for aggravated assault by more than three to one (201,4000 arrests compared with 61,200). The number of juvenile vandalism arrests was nearly four times larger than the number of robbery arrests (104,100 versus 28,900). More juveniles were arrested for curfew violations (140,800) than for murder, rape, robbery, and aggravated assault combined (95,300).

Less serious crimes are often the first offenses committed by juveniles who then go on to commit serious and violent crime. Not all minor offenders graduate to serious and violent crime, but the majority of youth who do eventually commit serious crimes first come to the attention of law enforcement authorities for less serious offenses (Piper 1985). By the time a young offender has accumulated enough of a criminal record to justify the use of secure confinement the costs of the youth's behavior may be immense. One study estimated that the economy loses up to \$2 million for every youthful offender that goes on to become a career criminal as an adult, including actual damages, lost wages, and harm to victims (Cohen 1998).

The juvenile justice system needs to provide a serious and effective response for all youth, including those charged with nonviolent crimes, but how should policymakers target public investments in juvenile crime reduction? Which models and approaches are effective enough to justify their costs? How much should society invest in services for unincarcerated juvenile offenders? Incarceration is a relatively rare event in the juvenile justice system. Thus, most interventions will be implemented in the community. Clearly, community-based intervention for youthful offenders would be cost-effective if it prevented even a small number of young offenders from joining the ranks of career criminals. Failing to intervene could be expensive to society. Overintervening, however, could be costly too. Investing in community-based programs that deliver services to many youth but affect only a small number of future offenders could generate high costs without returning comparable benefits in reduced crime. How should policymakers maximize social investment in juvenile crime reduction? These questions must be answered by research into the costs and benefits of community-based interventions for young offenders.

#### PREVIOUS RESEARCH

Employing the logic of cost-benefit analysis (CBA) to assess the value of juvenile justice policies and programs is not simple. Many economic benefits that could result from crime-reduction interventions are intangible. It is difficult to calculate their monetary value. There is no crime-reduction marketplace where exchanges between buyers and sellers determine the value of one program versus another. No market exists to set the economic value of crime-related pain, suffering, and fear. Researchers must rely on proxy

markets, including expenditures on personal security measures and real estate prices in neighborhoods that may be affected by crime in varying degrees. For these reasons, economic analyses of individual interventions are still relatively rare.

Most crime-related scholarship involves econometric models that estimate the aggregate changes in crime that appear to be associated with the incapacitation or deterrent effects of policy alternatives (Becker 1968; Ehrlich 1973, 1981, 1996; Piehl and DiIulio 1995; Levitt 1996, 1998). These studies are often derived from rational choice theory and usually focus on changes in offender risks and rewards and how those changes affect the incidence and severity of crime (for rational choice theory, see Cornish and Clarke 1986). Most of these models rely on data about adult offenders. There is very little econometric literature on the effects of juvenile justice programs.

Some researchers have applied CBA models to the study of crime policy by linking quasi-experimental or experimental designs with shadow prices to observe the changes in economic efficiency associated with particular interventions (Cartwright 2000; Cohen 2000). There are two key challenges in such studies. The first is developing research designs that limit confounding explanations of observed behavior (Campbell and Stanley 1963; Cook and Campbell 1979; Mohr 1995). The second is developing robust estimates of the shadow price of crime in the absence of real market data. The second challenge has proven the more difficult obstacle to overcome.

It is relatively easy to add up the costs of investigating and adjudicating a crime, and to total the costs of rehabilitation or punishment. It is far more difficult to measure the costs of the harm associated with crime. The first research strategies to estimate the price of crime relied on variations in housing prices and wages. Neoclassical economic theory predicts that prices and wages will vary by the perceived risk of crime, and this variation can be used to infer the value of crime control interventions and the demand for public safety (Thaler 1978; Rosen and Thaler 1975; Clark and Cosgrove 1990). Ted Miller and Mark Cohen pioneered a second approach to estimating the cost of crime to victims, using jury awards and injury costs to tally the costs of crime. Their method used health service use data to estimate the costs associated with crime-related injuries, and applied the estimates to the distribution of injuries. The results were then mapped onto the distribution of injuries in all crimes to estimate the direct costs of crime (Cohen 1988; Miller, Cohen, and Rossman 1993; Miller, Cohen and Wiersma 1996; Rajkumar and French 1997; Cohen 2000; Miller, Fisher, and Cohen 2001; Cohen and Miller 2003). Most published estimates of the social costs of crime have relied on the Miller and Cohen jury-based estimates (Levitt 1996; Cohen and Miller 2003).

A third strategy for estimating the costs of crime relies on contingent valuation techniques, where survey data are used to estimate the public's willingness to pay to avoid crime (Cohen et al. 2004). All three approaches have limitations, however, and the estimates they produce vary widely. For instance, the average social cost of burglary is estimated to be \$2,500 using the jury award approach, but approximately \$25,000 using willingness-to-pay survey data. Again, almost all of these studies use data about adult crime. Only Miller, Fisher, and Cohen focused specifically on the social cost of crime by juvenile offenders (2001).



Some researchers have focused on the economic return from investments in early childhood programs for disadvantaged youth (Gramlich 1986; Greenwood et al. 1998). These studies have generally found that early intervention programs produce a number of long-term benefits including reductions in future offending, though Ned Gramlich argued that such benefits accrue to the community and not to program participants. Steven Aos and his colleagues reviewed research on early interventions targeting disadvantaged youth in general, including those involving nurse home visitation programs (Aos et al. 2001; for disadvantaged youth generally, see Lally, Mangione, and Honig 1987; Schweinhart, Barnes, and Weikart 1993; Pagani et al. 1998; Reynolds et al. 2000; for visitation programs, see Olds et al. 1998; Moore, Armsden, and Gogerty 1998). They applied a standardized CBA protocol to impute economic effects using findings from the literature on early interventions. Early intervention was cost-beneficial when benefits to both taxpayers and crime victims were taken into account, although most of the apparent benefits were at the community level in the form of reduced victimization.

One analysis of community-based interventions in Minnesota found that juvenile treatment programs based on cognitive-behavioral approaches were more cost-beneficial than programs that provided only monitoring and supervision (Robertson, Grimes, and Rogers 2001). Jonathan Caulkins and his colleagues evaluated the cost-effectiveness of school-based prevention programs in reducing future drug consumption and found the programs to be cost-competitive, but not always cost-effective (1999). In one of the most well-known economic analyses of juvenile justice interventions, Peter Greenwood and his colleagues examined four types of intervention programs for juvenile offenders (graduation incentives, parent training, behavioral supervision, and home visits) and compared their cost-effectiveness in terms of future offending with the cost-effectiveness of three-strikes policies (1998). The results showed that graduation incentives and parent training were more cost-effective than ensuring long sentences for offenders with three strikes laws.

Steve Aos and his colleagues reviewed the economic effectiveness of common program models for juvenile offenders, primarily the costs associated with justice system processing and the harm incurred by victims (2001). Several program models demonstrated positive returns, including juvenile court diversion services, intensive supervision programs, coordinated service-based programs, family-based therapy approaches, and juvenile sex offender programs. They also examined several clinically oriented intervention programs that used fixed protocols, including multisystemic therapy (MST), functional family therapy (FFT), and multidimensional treatment foster care (MTFC). Their review found these programs to be cost-beneficial in terms of reduced crime. In another thorough review of the literature, Peter Greenwood concluded that these same programs were, in fact, the only cost-effective interventions for juvenile offenders (2005).

#### CONTINUING THE SEARCH

Only a handful of intervention models have survived multiple clinical trials to demonstrate their cost-effectiveness in reducing juvenile crime. This is not to say, however, that

these models are the best and only interventions for youthful offenders. In fact, the vast majority of young people in the juvenile justice system may be ill-suited for clinical interventions such as MST and FFT. These models were designed to serve youth with serious behavioral problems. For example, MST was originally intended to address serious anti-social behavior, including chronic and violent offenders already at risk of out-of-home placement. Follow-up studies suggest that MST may be effective for youth involved in violent offenses, but it may not be effective for youth charged with less serious crimes (Henggeler et al. 2002).

Juvenile justice officials must continue to search for new program models and to test the cost-effectiveness of those models. In particular, practitioners should continue to create new interventions for the typical adolescent offender involved in property crime, minor drug use, and other less serious forms of delinquency. Even currently unproven programs may be found one day to be cost-effective for many of these youth.

The absence of evidence for program effectiveness is not proof of ineffectiveness. Developing strong and consistent research findings about particular program models is expensive and complex. Multiple investigators must work for years or even decades to accumulate the high-quality evidence needed to establish a program's impact and then to monetize its costs and benefits. This rarely happens, of course, but it would be foolish to stop the search for crime-reduction methods now simply because a few program models have already been proven effective—especially if previous studies were less than thorough or unbiased or if the existing research agenda was overly narrow. In a best-of-all-possible-worlds scenario where ample research investments followed intervention concepts naturally and without prejudice, using existing research to finalize a list of proven programs might be sensible. In our environment of competitive funding and politically oriented investment, however, relying exclusively on today's research to invest in tomorrow's social programs would stifle innovation and limit the overall impact of crime-reduction policies. Policymakers and researchers must continue to pursue new models.

There are potentially valuable but untested program models in juvenile justice that have not yet attracted the research investment required to generate sound evidence of cost-effectiveness. Many of these models would be difficult to evaluate, especially those that rely on community-based and nonclinical interventions. Funding agencies may be hesitant to invest their limited research budgets in community-based programs that do not take place in office settings and do not have controlled treatment modalities that can be measured with laboratory precision. Some effective programs may happen in courtrooms, community centers, and even neighborhoods where researchers cannot control the sequence and timing of critical events. Many researchers would be reluctant to invest their career capital in complex and constantly evolving community-based programs that depend on nonprofessional staff and volunteers. Researchers need reliable research partners, and programs that employ medical or clinical service providers are more adept at maintaining program fidelity and adhering to rigorous research designs. The resources necessary to generate high-quality research evidence are limited, and few funding agencies are likely to support expensive

studies of delinquency interventions falling outside the reassuring environs of the medical model.

For all of these reasons, there is still much work to be done in identifying cost-effective interventions for juvenile offenders, especially community-based interventions that do not involve confinement or incarceration. CBA will play an increasingly important role in the development of new program models in the juvenile justice system. Quantifying the monetary value of policy choices generates compelling evidence for policymakers and for society at large. Given limited resources, CBA helps policymakers identify the amount of resources consumed by a program or policy, how such programs and policies may affect relevant outcomes, and whether any particular program or policy is the most efficient use of resources.

#### AREAS FOR NEW RESEARCH

Four juvenile justice strategies offer promising opportunities for investment by researchers as well as the policymakers and funding organizations that support research. These strategies are mentoring programs, teen courts, juvenile drug courts, and systemic reform efforts. There are certainly other concepts and program models in juvenile justice that should be explored for their potential cost-effectiveness. These four models were chosen because they are popular interventions that are likely to be part of the juvenile justice system for years to come, and because they represent a broad spectrum of CBA considerations. Mentoring is a low-cost but large-scale program focused on at-risk youth. With so many youth participating in mentoring, even a small behavioral effect could be economically beneficial. Teen courts require more resources to operate, but they are targeted on first-time offenders and may yield significant benefits if successful. Juvenile drug courts require considerable amounts of resources, but they could generate even greater benefits if concentrated on youth involved with serious and harmful drug use. All three of these programs serve a distinct segment of the juvenile offender population. The fourth area of inquiry—systemic reform—focuses on large-scale changes in organization and policy that could affect all youth in the juvenile justice system. The costs of systemic reform could be substantial, but the potential benefits would be significant if such efforts improved the daily operations of the justice system.

##### Mentoring

Mentoring programs are increasingly popular for youth in the juvenile justice system. The most well-known mentoring program is Big Brothers/Big Sisters ([www.bbbs.org](http://www.bbbs.org)). Mentoring programs match at-risk youth with adult volunteers who pledge to provide them with support and a sense of connection. Mentors are not professional service providers; they are friends, confidants, and advisors for youth in need of adult support. Positive relationships with caring and consistent adults may influence youth development in several ways, such as protecting youth from psychosocial risk, enhancing their personal competence, and promoting their social integration into the world of adults and the

larger community. Mentoring relationships provide youth with opportunities to acquire academic skills and gain practical knowledge, and to develop a sense of efficacy through participation in joint activities and role modeling (Darling, Hamilton, and Niego 1994). Research supports the common sense notion that young people benefit from having a close, enduring relationship with a caring adult. Youth reporting a positive connection with at least one supportive adult engage in fewer risky behaviors, including substance abuse and delinquency (Aspy et al. 2004; Oman et al. 2004).

Mentoring evaluations suggest that youth who participate in mentoring relationships show improvements in self-efficacy and social competence with measurable reductions in problem behavior (Grossman and Tierney 1998; LoSciuto et al. 1996; Sipe 2002). Experimental evaluations of mentoring for juvenile offenders have found that program participation was associated with significant reductions in youth recidivism (Fo and O'Donnell 1975; O'Donnell, Lydgate, and Fo 1979). Other evaluations have been equivocal, however, possibly because of variations in their definition of risk status, the outcomes they measured, and the quality and duration of the mentoring relationships established by the programs (Jackson 2002; Keating et al. 2002; Royse 1998). Still, youth participants who report better relationships with mentors, as indicated by the frequency and consistency of contact, are generally likely to show more positive outcomes (LoSciuto et al. 1996; Slicker and Palmer 1993). Meta-analytic results support the general effectiveness of mentoring across a range of program types and youth populations (DuBois et al. 2002). Researchers also warn that harmful consequences may result from youth-mentor relationships that are short-lived and characterized by conflict and disappointment (Grossman and Rhodes 2002; Rhodes 2002).

To be effective, mentoring programs have to use proven practices in screening and training participants, making matches, and monitoring the relationships of youth and their mentors. Programs that provide appropriate structure and active support to participants seem to achieve better results. Best practices are particularly important for youth who have already experienced difficult or disrupted relationships with parents and family. Youth with previous relationship problems often harbor fears that others will not accept them, and may be especially sensitive to rejection (Downey et al. 1998; Rhodes 2002). Such youth may interpret even minor relationship difficulties as harbingers of coming rejection.

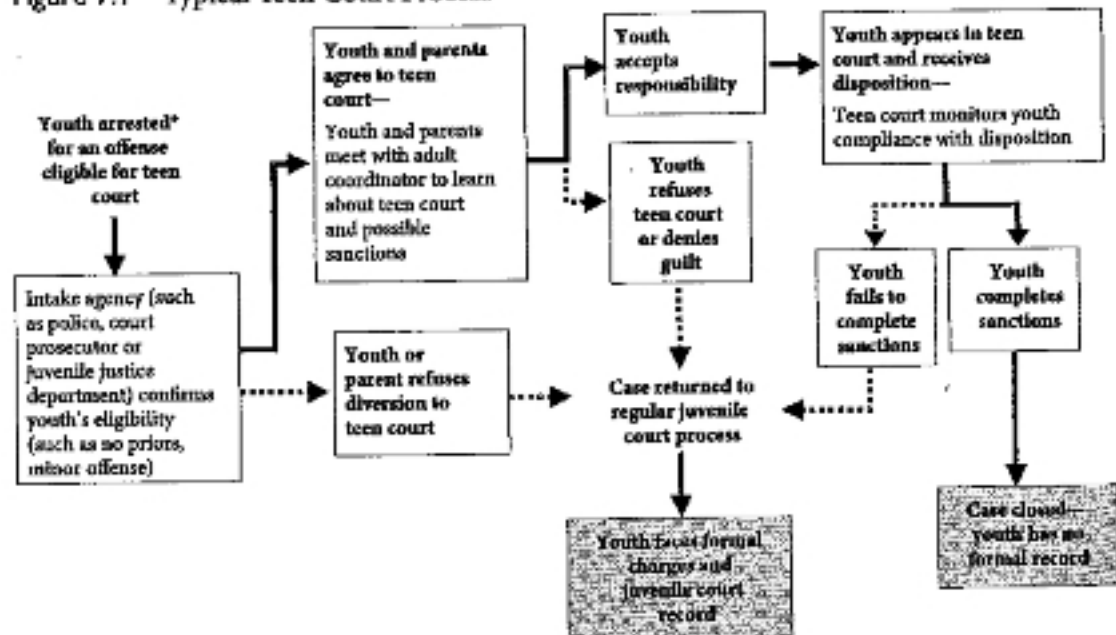
Mentoring programs appeal to funders in part because they function with largely voluntary labor. In a CBA, the social cost of a resource is measured as the opportunity cost of that resource. In other words, the price of a volunteer's time is equal to the hourly wage a program would have to pay for someone to perform the volunteer's particular task. In this framework, mentoring is not without cost. Mentors give their time and energy to the program, and this is a resource with value. If these costs were included in all CBAs of mentoring programs, it would clarify the true costs of the model. It would also help to test hypotheses about who makes the best mentors—that is, whether volunteers with higher or lower opportunity costs contribute differently to overall program effectiveness.

### Teen Courts

Teen courts are another program model that CBA researchers should investigate. Sometimes known as youth courts, peer courts, or peer juries, teen courts are informal diversion programs for young offenders. They are courtrooms in which all (or most) of the principal roles are filled by youth. Teenagers serve as the judges, attorneys, juries, clerks, and even bailiffs. The teen court process is typically used as a nonbinding, informal alternative to the regular juvenile court process. The sanctions a teen court imposes on young offenders do not have the force of law. Youth participate in teen court to avoid prosecution and adjudication in juvenile court. If youth refuse to complete the sanctions imposed in teen court, however, they may be returned to juvenile court to face formal handling and possible adjudication (figure 7.1).

Teen courts have become very popular in the United States. Growing from a handful of programs in the 1970s, there are now more than 1,000 programs in operation across the country, according to the Office of Juvenile Justice and Delinquency Prevention ([www.youthcourt.net](http://www.youthcourt.net)). The typical case in teen court involves a youth fourteen to sixteen years of age, in trouble with the police for the first time, and probably charged with vandalism, stealing, or another nonviolent offense. Participating in a teen court allows such youth to avoid what might have been the first stain on their legal record. In return, they are almost certain to get a rather stiff sentence compared with what they might have received in a traditional juvenile court. Most teen court defendants are required to do community service and many pay restitution. They may be ordered to write an apology letter to their parent or parents or to the victim or victims of their offense, and they may have to write

Figure 7.1 Typical Teen Court Process



Source: Butts, Beck, and Coggeshall 2002.

\* Not all teen court cases are prompted by arrest. Some courts accept school referrals (truancy, fighting, and the like); others accept traffic citations.

an essay about the effects of crime on communities. Some teen courts require defendants to return as jury members in other cases.

Studies of teen court programs have reported low rates of re-offending among former defendants. Researchers have often found rates of postprogram recidivism ranging from 3 to 10 percent within six to twelve months of an appearance in teen court (Butler-Mejia 1998; McNeece et al. 1996; SRA Associates 1995). A few researchers have found higher recidivism rates, but these are often evaluations of teen courts that accept adjudicated, rather than diverted juveniles. Kevin Minor and his colleagues, for example, found that nearly one-third of teen court alumni re-offended within one year, but the Kentucky program involved in that study handled youth referred to teen court as a dispositional alternative after juvenile court adjudication (Minor et al. 1999). The offenders it served could have been from a more delinquent population than would be true of the typical teen court caseload.

Despite their obvious promise, teen courts have not been evaluated with rigorous research designs. Even some of the best studies have relied on data from a single group of teen court cases at a single time, or they have used inadequate comparison groups (Garrison 2001; Harrison, Maupin, and Mays 2001; Minor et al. 1999; LoGalbo and Callahan 2001; Swink 1998; Wells, Minor, and Fox 1998). It is still not possible to reject the hypothesis that teen court outcomes are due to the preprogram characteristics of teen court clients rather than to effects of the program, that is, youth selected for teen court may be less likely to recidivate in the first place.

Some studies, however, have used acceptable comparison groups to measure the effects of teen courts on recidivism and they support the potential effectiveness of the model. Rod Hissong's evaluation of an Arlington, Texas, teen court compared recidivism among teen court defendants with a group of nonteen court participants matched on sex, race, age, and offense (1991). The analysis suggested that teen court participants were significantly less likely to re-offend than the comparison group, 24 percent versus 36 percent. In one of the more rigorous evaluations of teen courts to date, researchers from the Urban Institute studied teen courts in four jurisdictions: Alaska, Arizona, Maryland, and Missouri (Butts, Buck, and Coggeshall 2002). More than 500 teen court cases from the four sites were compared with similar cases handled by the traditional juvenile justice system. The study collected baseline data about youth and their parents or guardians, and tracked each youth for six months, measuring differences in recidivism between teen court youth and those processed in the traditional juvenile justice system. In three of the four study sites, recidivism was lower for teen court. In Alaska, for example, the difference was marked. The six-month recidivism figure for teen court cases was 6 percent, compared with 23 percent for juvenile court cases matched with the teen court sample on age, sex, ethnicity, and offense history. In Missouri, the recidivism rate was 9 percent in teen court and 27 percent in the traditional process, a striking and statistically significant difference.

Teen courts, however, are more than a method of reducing recidivism. The peer-to-peer justice provided by teen courts is believed to promote pro-social attitudes and to encourage civic engagement and social responsibility among young offenders as well as

among youth volunteers. Research suggests that an experience in teen court is associated with high levels of satisfaction with the court process, and enhanced perceptions of procedural justice (on the court process, see Butts, Buck, and Coggeshall 2002; Colydas and McLeod 1997; Reichel and Seyfrit 1984; Swink 1998; Wells, Minor, and Fox 1998; on procedural justice, see Butler-Mejia 1998). One study of a Florida program found that teen court positively affected defendant attitudes toward authority and understanding of the legal system (LoGalbo and Callahan 2001). Researchers surveyed 131 youth immediately after their initial interview with teen court staff and again when they completed the program. The survey asked participants about their knowledge of Florida laws and the justice system, their attitudes toward authority figures (such as police officers, judges, parents, teachers), their attitudes toward teen court and toward themselves, and their perception of the fairness of teen court procedures. The study found that teen court participation was associated with increased self-esteem and positive attitudes toward authority. In addition, recidivism was less likely among those defendants with improved attitudes toward figures of authority.

Strong client satisfaction was also reported by researchers in Kentucky (Wells, Minor, and Fox 1998). Exit interviews revealed high levels of satisfaction among 123 teen court participants, with 84 percent indicating that their sentences were fair. Several features of the teen court experience were cited positively by the Kentucky subjects, including educational advantages (37 percent) and the actual sentences youth received (21 percent). Teens also consistently indicated that the opportunity to serve as a teen court juror was an important, positive aspect of the teen court process.

Although no experimental studies have been conducted on the effectiveness of teen courts, there are many reasons to believe such programs are beneficial for youth participants and their communities. For one, the average annual cost of operating a teen court is just over \$30,000 (Butts and Buck 2000). Even a small effect on subsequent recidivism could justify the costs of such an affordable program model. Teen courts may be even more cost-effective because they depend largely on youth volunteers and the opportunity costs for juveniles involved in teen court are probably smaller than the opportunity costs for adults in mentoring programs. In addition to measuring recidivism, future CBA efforts should focus on other important teen court outcomes. As noted, teen courts are designed to improve pro-social attitudes and to encourage civic engagement and social responsibility among youth. Studies of teen courts could underestimate their benefits if these other outcomes are not monetized.

### Juvenile Drug Courts

Drug courts started twenty years ago and quickly became a prominent part of the justice system both for adults and juveniles. They use a persuasive combination of judicial authority and interorganizational coordination to motivate drug-involved offenders to stay in treatment and change their behavior. Drug court programs use case management to coordinate services, drug tests to monitor offender compliance, and frequent court hearings to review case progress and establish effective social bonds between offenders, judges, and other court staff. During drug court hearings, judges converse openly

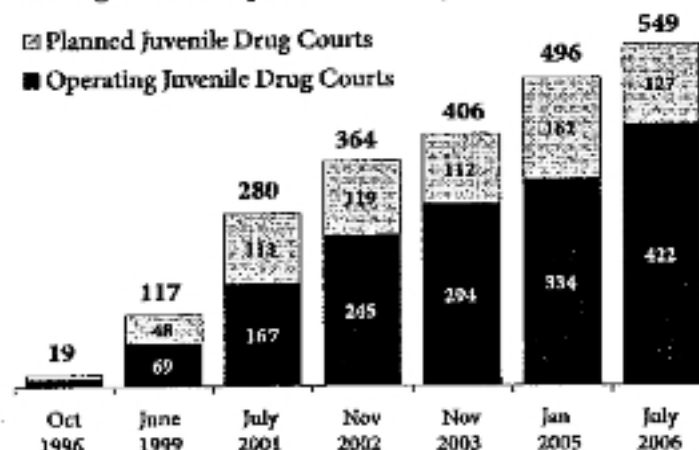
with offenders and their family members. The social dynamics of the courtroom may be a critical component in the effectiveness of drug courts, especially when they support procedural justice, or the visible signs of fairness that encourage offenders to accept the court process and to abide by its rules.

Drug courts are widely praised, from city halls and state capitols to the U.S. Congress and the White House. The National Drug Control Strategy of 2004 described the spread of drug courts as “one of the most promising trends in the criminal justice system” (The White House 2004, 6). The news media lavish even more attention on drug courts. Every month, hundreds of news stories about drug courts appear in American newspapers. On May 28, 2007, a Google News search of the term *drug court* found more than 600 news items published in the previous thirty days alone. Stories often quote judges and other court officials praising the drug court model, and they routinely depict the personal struggles and triumphs of drug court graduates.

First appearing in the mid-1990s, juvenile drug courts (JDCs) grew rapidly in the United States (figure 7.2). Still, only a handful of evaluations of juvenile drug courts had been published by the end of 2006. One of the first studies was a quasi-experimental evaluation in Utah (Parsons and Byrnes 1998). The study matched treatment cases (JDC) and comparison cases (not JDC) and found a statistically significant difference in the number of charges incurred by youth one year after intervention compared with one year before intervention. Participants in JDC had 1.1 fewer charges after intervention, and a comparison group had 0.6 fewer charges. Like many quasi-experimental designs, this study was open to criticism because the matching process failed to control sufficiently for potential bias. Youth in the treatment group turned out to have more extensive criminal histories than the comparison group youth. Thus, some of the difference detected by the study could have been due to a selection-regression artifact (Maltz and McCleary 1977).

The University of Akron conducted one of the first experimental JDC evaluations (Dickie 2002). The study found that youth involved in a JDC had fewer new charges than a comparison group, lower rates of positive drug screens, and higher rates of

Figure 7.2 Juvenile Drug Courts Expanded Quickly



Source: Authors. Based on data from the Drug Court Clearinghouse, American University, Washington, DC.



employment. The strength of the research, however, was compromised by the study's small sample size and high subject attrition. The study began with thirty comparison cases, and after twelve months only nine cases were still available for follow up. The findings were promising, but unpersuasive.

The University of Southern Maine tracked outcomes for 396 youth admitted to JDCs across the state (Anspach, Ferguson, and Phillips 2003; Ferguson, McCole, and Raio 2006). The study measured program completion rates, employment, school attendance, recidivism, and drug use among JDC participants and a matched comparison group. The results suggested that youth who completed JDC programs had lower recidivism rates (33 percent) than those who failed to complete JDC (48 percent), or those in the comparison group (43 percent). The design of the Maine study was similar to the first studies of adult drug courts. Researchers compared offenders in drug court with similar offenders who did not participate in drug court, sometimes including offenders who refused to participate in drug court (Rodriguez and Webb 2004; Thompson 2004). These studies help to underscore the potential of drug courts, but they involve serious threats to validity (selection effects, for example). As important, they rely on a black-box approach to conceptualizing the drug court process and this prevents them from disaggregating the effects of various drug court components (Bouffard and Taxman 2004; Sanford and Arrigo 2005).

In what is arguably the best JDC study published to date, the creators of multisystemic therapy conducted a randomized trial of 161 juvenile offenders assigned to four treatment conditions: (group 1) biannual juvenile and family court hearings with community services, (group 2) weekly drug court with community services, (group 3) drug court with multisystemic therapy (MST), and (group 4) drug court with MST and contingency management or behavioral intervention (Henggeler et al. 2006). The study asked whether JDC improved youth outcomes compared with traditional court, and whether integrating MST into juvenile drug court improved outcomes even further. The apparent answer in both cases was yes. Drug use by youths in groups 2, 3, and 4 decreased more than it did among those in group 1. Furthermore, groups 3 and 4 had stronger results than group 2, suggesting that the addition of MST led to better outcomes. The study was the most elaborate JDC evaluation so far, but it failed to address critical questions about JDC effectiveness. The study showed that JDC with MST is probably more effective than JDC without MST, but this is a test of MST, not JDC. The study's comparison of groups 1 and 2 did address the effectiveness of JDC, but the results showed only that weekly drug court hearings might be more effective than biannual juvenile court hearings. Is this a test of drug court or a test of frequent court appearances?

Researchers still need to address many unanswered questions about juvenile drug courts. If research finds that juvenile drug courts are effective in general, how does this help practitioners identify the specific elements that make effective programs, especially cost-effective programs? What is and what is not part of a juvenile drug court? Does it include the drug treatment provided to youth as part of their participation in JDC? If yes, does this mean that when youth are held in detention for violating drug court rules that detention is also a part of JDC? If JDCs coordinate their efforts with public schools, does

this make classroom teachers part of drug court? What are the most important components of JDC programs? Which components are supported by empirical evidence? Are some JDC practices actually counterproductive? Is court-ordered drug treatment for adolescents always better than treatment offered without the backing of judicial authority? Are the benefits of juvenile drug court to be found primarily in the frequency of court hearings? If so, would their cost-effectiveness actually be improved by reducing their use of substance abuse treatment and drug testing, both of which can be very expensive?

Researchers need to develop evidence about JDCs from theoretically informed evaluations that measure the effectiveness of specific procedures and practices. New studies should be guided by theories of how JDCs change youth behavior. Most previous studies have been nontheoretical, black-box evaluations. These studies may help to establish the efficacy of JDCs, but they do not address their effectiveness (Marlowe 2004). Many lessons learned from research on adult drug courts are not directly applicable to juvenile programs. Juvenile drug courts, and evaluations of juvenile drug courts, should fit the juvenile justice environment. Practitioners have made assertions about what they believe are the critical components and strategies in practice for juvenile drug courts (NDCI/NCJFCJ 2003), but researchers should test those assertions with rigorous evaluations.

One critical challenge that faces future economic studies of juvenile drug courts is the possibility that the programs have harmful effects on some participants, particularly youth who are referred to JDC programs for nonserious offenses combined with drug use. Unlike mentoring and teen courts, which are designed to prevent formal involvement in the juvenile justice system and the negative consequences that often accompany that involvement, juvenile drug courts sometimes take relatively minor offenders far deeper into the justice system than their criminal behavior alone would warrant (Butts and Roman 2004). Even assuming that JDC reduces offending and drug use during the period of program participation, researchers should establish whether JDC exposure leads to worse postprogram outcomes for nonserious offenders. A study that does not count these costs would overestimate the net benefits of the JDC intervention.

### Systemic Reform

The fourth research area recommended here is not a program or an intervention model for individual youth. Systemic reform is a strategy for improving the impact and efficiency of the juvenile justice system as a whole. Whether it concerns specific system components or all elements of the juvenile justice process, systemic reform is a potentially rich area for further research on the costs and benefits of juvenile justice policy. Systemic reform addresses organizational structures and procedures. By improving the efficiency of the process or the targeting of juvenile justice services, an effective reform strategy can result in large-scale benefits. Just a small increment of improvement—even 1 percent greater crime reduction—could generate significant economic returns. Two recent examples of systemic reform in the juvenile justice system focus

on secure detention and the coordination of substance abuse services for youthful offenders.

#### Juvenile Detention Alternatives Initiative

One of the most well-known systemic reform strategies of the past decade is the Juvenile Detention Alternatives Initiative (JDAI) funded by the Annie E. Casey Foundation of Baltimore, Maryland. The JDAI effort focuses on the use of secure juvenile detention facilities. Detention is analogous to jail in the criminal (adult) justice system. It is used to keep youth out of the community while they wait for juvenile court processing or while they wait to be placed in long-term correctional facilities or other placements after the court process has concluded. The JDAI encourages juvenile justice officials to reserve their costly detention resources for youth who really need to be securely confined, and to use community-based detention alternatives for other youth. Without strict monitoring, local jurisdictions often use juvenile detention for an inappropriately wide array of offenders, including youth charged with nonviolent offenses and those who could be supervised successfully and less expensively in nonconfinement settings.

The JDAI targets the problems that arise when youth are unnecessarily or inappropriately detained at great expense, with long-lasting negative consequences for both public safety and youth development. According to the Casey Foundation ([www.aecf.org/Home/OurWork/JuvenileJustice.aspx](http://www.aecf.org/Home/OurWork/JuvenileJustice.aspx)), the JDAI promotes changes to policies, practices, and programs that reduce reliance on secure confinement, improve public safety, reduce racial disparities and bias, save taxpayers' dollars, and stimulate overall juvenile justice reforms.

The initiative pursues these goals by providing support to state and local officials through direct technical assistance, conferences, and written materials. The areas of focus include the creation and operation of effective community-based programs, detention screening and risk assessment tools, and case flow management techniques to accelerate the legal processing of delinquency cases to minimize the time youth spend in detention awaiting the conclusion of court proceedings.

Starting in just four or five jurisdictions during the 1990s, the JDAI effort was working in more than seventy cities and counties by 2006 (JDAI News 2006). The results of the initiative appeared to be impressive, judging by the reported changes in two principal measures of possible impact—average daily detention populations and average lengths of stay in detention. In many of the state and local jurisdictions participating in JDAI, the size of juvenile detention populations decreased by 30 to 40 percent during the period of implementation, and the average length of stay in detention dropped by 10 to 20 percent (see, for example, JDAI News 2007). If these changes could be attributed to the JDAI effort, and if they could be sustained over time, the cost impact would be profound.

Of course, it is difficult to isolate the empirical results of JDAI. Like most systemic reform initiatives, JDAI was not implemented in a way that would facilitate rigorous evaluation. In addition, the primary implementation period overlapped almost precisely

with the drop in violent crime in the United States from 1995 to 2005 (Butts and Snyder 2006). Many jurisdictions in the United States saw a reduced demand for detention during that time simply because of the dramatic decline in youth violence. Some JDAI jurisdictions, however, became active in the initiative only in 2003 or 2004, when most of the impact of the nationwide crime decline had already occurred. In these jurisdictions, juvenile justice officials reported changes in the use of detention that were just as dramatic as in the other JDAI sites. For example, juvenile justice officials in New Jersey began to participate in the JDAI in 2004. By 2005, juvenile detention populations had dropped 11 percent in Atlantic County, 24 percent in Hudson, 35 percent in Camden, 38 percent in Monmouth, and 43 percent in Essex (JDAI News 2006). If only half the changes were attributable to JDAI, the economic benefits would easily pay for the costs of the initiative. Moreover, these reductions in detention occurred while violent crime in New Jersey remained largely unchanged. According to the FBI Uniform Crime Reports for 2006, violent crimes in New Jersey's largest cities increased just 1 percent between 2005 and 2006, which was similar to the national average of 1.3 percent (Federal Bureau of Investigation 2007).

### Reclaiming Futures

Another foundation-supported systemic reform effort focused on improving the coordination of substance abuse interventions for young offenders in ten communities across the United States. The Reclaiming Futures initiative was supported by the Robert Wood Johnson Foundation and began as a demonstration project in 2002 (Nissen et al. 2006). The goal was to enhance the integration of services for drug-involved youth in the juvenile justice system. Many youth involved in the juvenile justice system have emerging or established problems with substance abuse but few receive high-quality substance abuse services during their time under court supervision. Juvenile justice and drug treatment agencies do not often collaborate effectively. The top juvenile court officials often do not know the treatment providers in their own communities. Screening and assessment of young offenders is rarely consistent or comprehensive. Service providers and court officials do not often share information about specific youth and families. The court system frequently does not even know whether services are provided to youth as intended because treatment providers are not allowed, or at least they believe they are not allowed to share clinical information with officials outside their own agencies. Many youth simply ignore court orders to begin substance abuse treatment and neither the court nor the treatment agency has any idea that such gaps exist. Not only do many drug-involved youth fall through the cracks of the juvenile justice system, the entire system could be described as largely a sequence of cracks.

Reclaiming Futures was designed to address these systemic problems and to make the juvenile justice and substance abuse treatment systems more accountable to one another, to their mutual clients, and to the entire community. The initiative grew from previous systemic reform efforts in adolescent treatment, balanced and restorative justice, and children's mental health (Nissen et al. 2006; Bazemore 2006; Pires 2002). It relied on effective leadership, judicial commitment, active teamwork among treatment

providers and juvenile justice agencies, and broad community partnerships to alter the trajectory of substance abusing youth through (and beyond) the juvenile justice process. The central goal of Reclaiming Futures was to enhance each community's capacity to provide a comprehensive response to substance abuse problems among justice-involved youth by emphasizing interagency, community, and family collaboration.

A performance monitoring approach known as the Reclaiming Futures Model was developed from the ten-site demonstration (see [www.reclaimingfutures.org](http://www.reclaimingfutures.org)). The model was designed to help communities identify the strengths and weaknesses of their service systems and to create a shared approach for improving systems. The Model was essentially an interorganizational performance measurement framework that encouraged communities to ignore agency boundaries as they created system-level change. It encouraged communities to track youth across six key stages of the juvenile justice and treatment process: initial screening, assessment, care coordination, service initiation, service engagement, and service completion. At most stages, simple performance measures were suggested to assess implementation (process) and performance (outcome).

As part of a national evaluation of Reclaiming Futures, the Urban Institute and Chapin Hall at the University of Chicago conducted biannual surveys of professionals, family advocates, and community members in each of the participating sites. The surveys measured the coordination, quality, and effectiveness of the juvenile justice and substance abuse treatment systems by asking a series of fifty-eight questions that were then combined into thirteen indices of system quality. The pattern of responses suggested that Reclaiming Futures improved the efficacy of court-supervised interventions for youth. Most of the indicators measured by the evaluation improved significantly during the course of the initiative. Improvements were especially strong in the use of screening and assessment tools, treatment effectiveness, the use of client information to support treatment, family involvement in treatment, and overall systems integration. Each of these quality indicators improved between 19 and 28 percent (see table 7.1).

#### A RESEARCH AGENDA

All four programs and strategies described here have generated some evidence of effectiveness, but none has been subjected to rigorous CBA. The four strategies vary in the amount of investment they require, from very small programs that rely on volunteer labor (mentoring and teen courts), to relatively large programs that demand considerable staff time (juvenile drug courts), to potentially complex organizational change that depends on political skills and long-term effort (JDAI and Reclaiming Futures). The strategies described here also vary in their expected impact. Teen courts are short-term, low-dosage programs that could yield commensurately small behavioral changes, while mentoring and juvenile drug courts require prolonged and sometimes intense participa-

Table 7.1 Change in Indices of System Quality, by Percentage

Index	Possible Improvement Realized
Use of drug and alcohol assessments	28 *
Effectiveness of youth treatment	26 *
Use of client information	24 *
Family involvement	22 *
Overall system integration	19 *
Use of pro-social activities for youth	18 *
Data sharing by agencies	18 *
Resource management by agencies	16 *
Agency collaboration	14 *
Targeting of youth treatment	12 *
Cultural integration	11 *
Access to services by youth and families	9 *
Partner agency involvement	-2

Source: Authors' analysis. Data from National Survey of Reclaiming Futures, Urban Institute, Washington, DC.

Note: Possible improvement on an index is relative to the value of that index in the first of six surveys. Small changes in indices that started with high values could be more significant than larger changes in indices that started with low values. "Possible improvement realized" was calculated by taking the total difference in survey scores (Survey 6 - Survey 1), and then dividing by the possible improvement, or the maximum score minus the first score. Change indices were then rank ordered from largest to smallest percentage of possible improvement realized. For more information, see [www.reclaimingfutures.org](http://www.reclaimingfutures.org).  
\* Amount of change significantly different from zero according to *t*-test ( $p < .05$ ).

tion but may have strong effects on behavior. Each of the four strategies, however, is a promising area for future CBA work in the juvenile justice system.

Many challenges face CBA in juvenile justice. One significant challenge is that the lives of youth subjected to juvenile justice policies and programs are often closely intertwined with others—specifically, families and peers. If a program causes a youth to change behavior and the behavior in turn affects others outside the study framework, it can be very difficult to evaluate and monetize all program effects. The issue is not as academic as it appears. Consider the social cost of crime. What harm do victims suffer as a result of crime? How much work do they miss? How extensive are their related health costs? What is the value of the pain and fear associated with crime? The textbook approach is to adopt a social welfare perspective in which costs and benefits for all citizens are included in CBA, but this method is far from perfect, especially when programs affect only a few very young offenders charged with relatively minor crimes. Alternatives to this approach, however, present problems of their own. If a CBA counts only costs and benefits associated with the expenditures of public agencies, many of the gains and losses by participants would be excluded. There is a small literature on estimating the true costs of crime, but much more work needs to be done.

CBAs also vary according to their focus—namely, whether they focus on policies that affect groups and organizations or programs that affect individual behavior. The CBA method is generally designed to answer macro policy questions, such as whether overall

crime was reduced as a result of some particular action. Ironically, systemic reform strategies such as Reclaiming Futures and the Juvenile Detention Alternatives Initiative are more amenable to this type of analysis, but CBA is more commonly used in studies of programs that are designed to change individual behavior. In studies of individual behavior change, a great deal of attention is focused on issues of internal validity, for example, how to deal with the effects of selection and attrition. Few studies, however, expend much effort on the generalizability of their findings. For example, they rarely if ever use random controlled trial designs. Without rigorous findings on program outcomes, the precision of CBA is jeopardized.

There are two other important implications of these problems. First, programs may affect the behavior of individuals outside the study frame. Suppose juvenile drug courts increased general deterrence as the public learned that JDC programs can be more severe and more intrusive than traditional juvenile court practices. Individuals outside the treatment and comparison groups may change their behavior in important ways, but these changes would not be observed by CBA.

Second, because the sampling frames for many juvenile justice studies are limited, little if anything can be said about the most critical outcomes—reductions in the total amounts of crime and tangible public resources used in response. Many studies use individual recidivism as an outcome, rather than crime in total. A reduction in recidivism, by itself, says very little about reductions in crime. Similarly, a finding that the participants of a program used less detention bed space is not necessarily evidence that public resources were saved, because other juveniles may have used that space. Future CBAs of juvenile justice programs should address these issues directly by explicitly noting whether programs may have substantial costs and benefits that are outside the view of a particular analysis, and then by attempting to measure the effects of programs on crime, not merely recidivism.

Finally, CBA must be very careful in interpreting the effect of an intervention in the presence of rare or extreme events. Even in studies with very small samples, extreme events may occur. Mentoring, for example, is a relatively low-cost intervention. Suppose the evaluation of a mentoring program found that one individual in the comparison group committed a serious assault, was transferred to the adult criminal justice system, and sentenced to a long prison term. How should this be treated in a CBA framework? The literature would suggest putting a cost of several hundred thousand dollars on this one incident, which could be larger than the total costs of the mentoring program. If this one rare event were included, the analysis could suggest that mentoring programs yield benefits ten times or 100 times their cost. If the event were excluded, the program might not pass a cost-benefit test at all. Econometric solutions to this problem could be developed, and such an inquiry would be worthwhile for future studies. At the very least, research results should be presented transparently, with complete explanations of the role played by rare events and other concerns. Finally, it is important to present costs and benefits in sufficient detail so results can be presented not only as point estimates, but with appropriate confidence intervals as well.

## CONCLUSION

Research that examines juvenile justice programs from an economic or CBA perspective is a necessary and positive element of policy formation. The economic approach allows researchers to standardize the outcomes of diverse juvenile justice initiatives implemented in differing contexts and at highly varying scales. Without these methods, it would be difficult if not impossible to compare the relative value of programs and strategies for juvenile crime reduction. CBA, however, is not flawless. The methods of CBA should never be exempt from close and critical scrutiny. The assumptions used to construct CBA should always be examined for their accuracy and relevance by policymakers, practitioners, and other researchers interested in juvenile justice reform. CBA yields simple, easily digestible bottom lines that are welcomed by policymakers. It is precisely because CBA is so influential that its methods should be as transparent and accessible as possible.

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