

# The Economics of Juvenile Jurisdiction

A WHITE PAPER FROM THE RESEARCH ROUNDTABLE ON ESTIMATING THE  
COSTS AND BENEFITS OF THE SEPARATE JUVENILE JUSTICE SYSTEM

August 2005

John Roman  
Justice Policy Center  
The Urban Institute  
2100 M Street NW  
Washington, DC 20037  
<http://www.urban.org>  
(202) 833-7200

Jeffrey A. Butts  
Chapin Hall Center for Children at the  
University of Chicago  
1313 East Sixtieth Street  
Chicago, IL 60637  
<http://www.chapinhall.org>  
(773) 753-5900

© The Urban Institute  
2100 M Street NW  
Washington, DC 20037

The Urban Institute is a nonprofit policy research and educational organization established in Washington, D.C., in 1968. Conclusions or opinions expressed in Institute publications are those of the authors and do not necessarily reflect the views of officers or trustees of the Urban Institute, its advisory groups, or any organization that provides financial support to the Institute.

## The Economics of Juvenile Jurisdiction

Debates about whether to handle young offenders in the criminal or juvenile justice system traditionally focus on moral and legal principles, developmental differences between juveniles and adults, and the relative effectiveness of prevention versus punishment. This white paper examines the feasibility of adding an economic perspective to the debate. It considers the tools of cost-benefit analysis and how they might be employed to assess the economic consequences of criminal versus juvenile justice. In other words, do the benefits of using a separate system for juvenile offenders outweigh the costs? What are the costs and benefits of criminal court trials for young people and are they measurable? Are there particular types of offenders or particular court cases for which one system of justice is more cost-effective than the other?

This paper grows out of a meeting organized by the MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice (<http://www.mac-adoldev-juvjustice.org>). The Research Roundtable on Estimating the Costs and Benefits of the Separate Juvenile Justice System was held in 2004 at the Urban Institute in Washington, D.C. The Research Roundtable included experts in adolescent development, juvenile justice, public policy, and economics. Members of the roundtable reviewed various approaches for analyzing the costs and benefits of juvenile versus criminal justice and considered a range of methods for conducting research on the topic. The Urban Institute drew upon the comments of participants to prepare this paper. The discussion that follows describes the conclusions of the Research Roundtable and recommends a potential research agenda for investigating the economic consequences of legal decisionmaking in cases involving youthful offenders.

### Acknowledgements

This white paper was produced for the Research Roundtable on Estimating the Costs and Benefits of the Separate Juvenile Justice System, a project conducted by the Urban Institute's Justice Policy Center. The project was supported by the MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice, directed by Dr. Laurence Steinberg of Temple University. Several current and former staff members from the Urban Institute provided assistance in the formulation and preparation of this report, including Courtney Schafer, Michael Kane, Lisa Brooks, and Demelza Baer-Bositis.

## Introduction

The members of the Research Roundtable on Estimating the Costs and Benefits of the Separate Juvenile Justice System reviewed a wide range of issues that could be relevant in future research on the economic implications of criminal versus juvenile justice. The discussion did not identify all such issues, nor did it resolve all the issues identified, but the results of the meeting may represent the beginning steps of an effective research agenda on the topic. The Research Roundtable focused on practical challenges. Definitional problems, data limitations, and the uncertainties of policy implementation will likely complicate any effort to conduct an analysis on this topic. The goal of the roundtable was not to design the perfect plan for conducting an economic analysis but to address the issues likely to be involved in such an analysis and to advise the MacArthur Network on feasible approaches that could inform the development of future policies. Before attending the meeting, the members of the roundtable were asked to consider six key questions:

1. Should an economic analysis limit itself to practical policy options in the debate between juvenile and criminal justice, or would it be useful to model the costs and benefits of complete abolition of the juvenile justice system as a way of addressing fundamental questions?
2. Should an economic analysis attempt to incorporate a true cost-benefit approach or only a comparison of cost-effectiveness?
3. Should an economic analysis focus on “crimes averted” as the primary outcome of interest, or should other outcomes be considered, including those at the individual level (e.g., educational achievement, labor market success) and the social level (e.g., fear of crime)?
4. What time frame should be considered in such an analysis: (1) short-term differences in sanctions imposed and hypothetical crimes averted from each sentence, or (2) long-term outcomes, including offending patterns over entire criminal careers and the full costs of victimization at the community and societal levels?
5. Regardless of the form of analysis, what constraints do researchers face in obtaining data about the justice system and its outcomes?
6. Should decisions about the type of analysis to be used in such a study be shaped, at least in part, by how well the research will be understood and consumed by elected officials, the media, and the public? Can research on this topic be both accurate and influential?

## Cost-benefit analysis

Cost-benefit analysis (CBA) is a decisionmaking model that investigates third-party intervention into a private market. Economic theory posits that intervention by a third party (defined as someone

other than the buyer or seller of a good or service) can alter the efficiency of a market. If intervention in a market increases efficiency—for example, the regulation of monopolies—it will yield benefits. If intervention makes a market less efficient—for example, increased costs of processing transfer payments—it will yield negative returns. The traditional goal of CBA is to measure such changes in efficiency (Gramlich 1981).

Changes in efficiency are generally measured by observing changes in prices and the quantity of goods exchanged. Governments, however, routinely intervene in markets where it is impossible to attach economic value to the goods being exchanged. Suppose, for example, that the federal government intervened in the health care market by changing Medicare to expand coverage for a drug that was purely palliative—that is, a drug that reduces pain and suffering but does not remedy the underlying medical condition. An economic analysis would compare the costs of the new coverage to its benefits, which in this case would be improvement in a patient's quality of life and subjective sense of well-being. These benefits are largely intangible. Thus, it would be difficult to calculate their monetary value.

Similar limitations apply when CBA models are used to assess the impact of crime and justice policies. Crime policy affects a wide range of individual and organizational behaviors, and not all of these behaviors have a market analogue. It is difficult to conceive of a true marketplace for justice, where exchanges between buyers and sellers set the value of one policy versus another. There is no

### Research Roundtable on Estimating the Costs and Benefits of the Separate Juvenile Justice System

The goal of the Research Roundtable was to assist the MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice in beginning an examination of the economic consequences of decisions to handle young offenders in the juvenile justice system versus the criminal (adult) justice system. Members of the Research Roundtable included experts in adolescent development, juvenile justice, public policy, and economics. The authors drew upon the views and comments of roundtable participants in preparing this report.

#### Members of the Research Roundtable

Shawn Bushway University of Maryland	Edward Mulvey* University of Pittsburgh
Jeffrey Butts*** University of Chicago	Daniel Nagin Carnegie-Mellon University*
Mark Cohen Vanderbilt University	John Roman Urban Institute
Jeffrey Fagan* Columbia University	Peter Reuter University of Maryland
Gerald Gaes National Institute of Justice	Robert Schwartz* Juvenile Law Center
Laurie Garduque John D. and Catherine T. MacArthur Foundation	Howard Snyder National Center for Juvenile Justice
Daniel Mears*** Florida State University	Laurence Steinberg** Temple University
Anne Morrison Piehl Harvard University	Jeremy Travis*** John Jay College of Criminal Justice
	Christy Visher Urban Institute

\* Member of MacArthur Foundation Network  
\*\* Director of MacArthur Foundation Network

\*\*\* Formerly employed by the Urban Institute

marketplace to determine the economic value of crime-related pain, suffering, and fear. Estimates for the value of these outcomes cannot be readily extracted from financial records or observable market behavior. Researchers must therefore rely on prices in other markets to estimate the economic value of crime-related program outcomes. For example, expenditures on personal security measures and fluctuations in real estate prices could be used as proxies for the outcomes of particular crime policies.

You want to do cost-benefit analysis when you have a range of policy options to consider and they have costs and outcomes that are not directly comparable. One policy may be strong on X but weak on Y, while another is strong on Y but weak on Z. We use dollars to commensurate. That's why we do cost-benefit analysis.

– Daniel Nagin

For these reasons, economic analyses of crime control policies are relatively rare. Most academic scholarship in this field focuses on econometric models that predict changes in crime from incapacitation and deterrent effects (Becker 1968; Ehrlich 1973, 1981, 1996; Piehl and DiIulio 1995; Levitt 1996). Many studies are derived from rational choice theory, and they usually focus on how changes in offender risks and rewards affect the incidence and severity of crime. The few models that do exist usually rely on data about adult offenders. As yet, there is no comparable body of literature on the economic implications of juvenile justice.

Other researchers have tried to apply cost-benefit models to the study of crime policy by linking quasi-experimental or experimental designs with price data to observe changes in economic efficiency associated with particular interventions (Cartwright 2000; Cohen 2000). There are two key challenges in such studies: (1) developing research designs that limit confounding explanations of observed behavior (Campbell and Stanley 1963; Cook and Campbell 1979; Mohr 1995); and (2) developing robust estimates of prices in the absence of real market data. To date, researchers have been more successful in overcoming the first challenge. Most studies of this type have relied on the work of Ted Miller and Mark Cohen to estimate prices (Miller, Cohen, and Rossman 1993; Cohen, Miller, and Rossman 1994; Miller, Cohen, and Wiersma 1996; Cohen 1998; Miller, Fisher, and Cohen 2001). Among these studies, only Miller, Fisher, and Cohen (2001) focused specifically on the costs of crime (price) with juvenile offenders.

Some studies have focused on the economic returns of investing in early childhood programs for disadvantaged youth (Gramlich 1986; Greenwood et al. 1998). These studies have generally found that early intervention programs produce long-term benefits, including reductions in future offending (although Gramlich argues that these benefits accrue to the community and not to program participants).

Steve Aos and his colleagues (2001) reviewed the research on early interventions targeting disadvantaged youth (Lally et al. 1987; Schweinhart, Barnes, and Weikart 1993; Pagani et al. 1998; Reynolds et al. 2000) and those involving nurse home visitation programs (Olds et al. 1997; Olds, Henderson, et al. 1998; Olds, Mihalic, et al. 1998; Moore, Armsden, and Gogerty 1998), and applied a standardized cost-benefit protocol to impute economic impact using the study findings. Generally, the review found early intervention to be cost-beneficial when both benefits to taxpayers and crime victims were taken into account, although, again, most benefits were at the community level in the form of reduced victimization.

Aos and his colleagues also reviewed economic evidence on the effectiveness of juvenile offender programs in terms of reductions in criminal justice system costs and reduced costs to victims. Programs demonstrating positive returns included juvenile court diversion services, intensive supervision programs, coordinated service-based programs, family-based therapy approaches, and juvenile sex offender programs (Aos et al. 2001). Juvenile boot camps and “scared-straight” programs, however, were found to result in higher recidivism rates for program participants.

Aos and colleagues also examined studies of intervention programs for juveniles and families that used fixed protocols, including Multi-Systemic Therapy (MST), Functional Family Therapy (FFT), Aggression Replacement Training (ART), Multidimensional Treatment Foster Care (MTFC), and the Adolescent Diversion Project (ADP). Generally, their review found these programs to be cost-beneficial in terms of reduced crime. A similar analysis of community-based intervention techniques for juvenile offenders in Minnesota found that treatment programs based on cognitive-behavioral approaches were more cost-beneficial than traditional probation or programs providing only strict monitoring and supervision (Robertson, Grimes, and Rogers 2001). However, the study did not find significant reductions in costs to the justice system for the intensive supervision program (ISP) relative to traditional probation. The difference between these results and the more favorable evaluations of ISP in the Aos et al. study were likely due to the fact that only direct, short-run marginal benefits to the local justice system were considered in the Minnesota study.

Caulkins and his colleagues (1999) 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. A well-known study by Greenwood et al. (1998) examined four types of intervention programs for juveniles (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. The results showed that graduation incentives and parent training were more cost-effective than ensuring long sentences for offenders with “three strikes.”

While the crime and economics literature is beginning to grow, cost-benefit analysis is still relatively new in the evaluation of policies and programs to reduce crime. It is very likely, however, that cost-benefit analysis will play an increasingly important role in policy formulation. Quantifying the monetary value of policy choices can be compelling evidence for policymakers and for society at large. Given limited resources, cost-benefit analysis helps policymakers to 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. If methodological complexities and data limitations can be overcome, it could be useful to apply these approaches to the debate over whether young offenders should be handled in the juvenile justice system or the criminal justice system.

### Policy definitions

To frame this discussion properly, we need to clarify the meaning of the terms “juvenile justice” and “criminal justice.” In their most basic sense, these terms refer to the legal distinction between the law violations of children (juvenile delinquents) and adults (criminals). Every jurisdiction in the United States recognizes some period of legal childhood, during which law violations are considered more of a social welfare problem than a legal problem, but the extent and nature of these distinctions vary. Many jurisdictions, for example, have completely separate court facilities for juveniles, often known as family courts or juvenile courts. Other jurisdictions use the same courtrooms and the same judges for juveniles and adults, but juveniles are technically charged with delinquency while adults are charged with criminal offenses.

Some jurisdictions have specialized police units for dealing with young people, but most do not. Nearly all jurisdictions have a separate facility for holding arrested youth pending court proceedings (i.e., detention), even if it is only a separate wing of the local jail. Every jurisdiction has at least some access to separate facilities for housing juveniles during the period of their disposition (i.e., sentence), but the nature of the facilities varies greatly, from group homes and residential treatment centers to boot camps and youth correctional institutions. In short, the juvenile justice system—much like the criminal justice system—is a *mélange* of continually evolving laws, policies, and practices shaped by the competing interests of agencies and individuals.



Distinctions between crime and delinquency are continually changing. Especially during the past 30 years, state and local governments throughout the United States have been slowly undoing many traditional features of the juvenile justice system and introducing procedures and policies that resemble those of the criminal system (Butts and Mitchell 2000). In some states, entire portions of the juvenile court's original caseload have been reassigned to the criminal court. In Connecticut, New York, and North Carolina, for example, juvenile court jurisdiction ends on a youth's 16th birthday and the criminal court has original jurisdiction over all law violations by youth ages 16 and 17. About a dozen other states—including Georgia, Illinois, Massachusetts, Michigan, and Texas—place all 17-year-olds in criminal court. Many people think anyone under age 18 is a juvenile, but this is not true. Once youth have exceeded their state's upper age of juvenile court jurisdiction, they are legally adults for the purposes of criminal prosecution (Snyder and Sickmund 1999).

**It is almost easier to define what the juvenile justice system is *not*, rather than what it is.**

The juvenile justice system is . . .

. . . not responsible for all youth crime.	Many young people are handled by default in the criminal (or adult) justice system. Although youth below age 18 are minors in most legal contexts, children as young as 10 may be legally defined as adults for the purpose of prosecution. If all juveniles were suddenly moved to adult courts, the number of young people affected would vary according to each state's current system of laws and policies.
. . . not always built around a juvenile court.	Not all jurisdictions have separate and distinct juvenile courts. Some place youthful offenders in a division of probate court or other branches of the civil or criminal court systems. Others handle delinquent offenders in family courts. Particularly small, rural jurisdictions may handle juveniles and adults in the same court, albeit with different procedures and separate paperwork.
. . . not the only reason we have juvenile courts.	Juvenile and family courts have many other responsibilities. In addition to cases involving delinquent youth, they handle status offenders (youth charged with noncriminal law violations such as truancy and curfew), cases of child abuse and dependency, adoption, and parental custody disputes. Even if all crimes involving young offenders were transferred to criminal court, some form of juvenile court for nondelinquent children would have to continue.
. . . not only about courts.	Operating the separate juvenile justice system requires more than courts. Specialized probation agencies, adolescent treatment providers, juvenile detention centers, and youth correctional institutions are all part of the larger juvenile justice system. These agencies exist even in jurisdictions without specialized or separate juvenile courts.
. . . not the only option for maintaining special treatment of youth.	The legal separation between juvenile and criminal law could be abolished and all criminal acts moved to the criminal court system, but this would not end the juvenile justice system. Young offenders would still likely be dealt with differently at arrest, conviction, and sentencing. Courts would still have to make special arrangements for young people when ordering services, supervision, and incarceration. At the most basic level, the separate juvenile justice system is defined by the distinctive legal rights and procedures involved in the adjudication and disposition of juvenile offenders. All other activities typically associated with juvenile justice are characteristic of the justice system, not the <i>juvenile</i> justice system.



In many states, the privilege of juvenile status can be withdrawn on a case-by-case basis. More than half the states have implemented some form of automatic criminal court transfer or “statutory exclusion” laws, where various combinations of offense and age result in a youth being immediately removed from juvenile court to face charges in criminal court (Griffin 2003). In some states, a case is automatically under the jurisdiction of the criminal court as soon as a prosecutor files certain violent charges against youth—typically those at least 14 or 15 years of age. A growing number of states (about half) have enacted “blended sentencing” provisions. In these states, youth charged with serious offenses or those with lengthy prior records may be handled in the juvenile system initially, and their sentences can continue in the adult system after they are administratively transferred to adult prison at age 18.

Even when young people are charged, tried, and sentenced under juvenile law, the procedures and policies governing their experiences in the justice system may depart significantly from traditional notions of juvenile justice. In some jurisdictions, juvenile court dispositions are constrained by guidelines and rules that limit judicial discretion, once a key feature of the traditional juvenile justice system. Nearly all jurisdictions have reduced the confidentiality provisions that once kept the media and the public from learning the identity of juvenile offenders. In a few states, juvenile courts have adopted procedural elements formerly reserved for adult courts, including juries and speedy trial provisions.

## Policy choices

Every state currently has a separate justice system for juveniles, but what could happen if lawmakers made different choices about the types of youth that should be handled in that system? What would be the economic consequences of restricting (or expanding) use of the juvenile justice system? The answer depends on what policy changes were implemented and whether access to the juvenile system was changed for all youthful offenders or only some. In the view of the Research Roundtable, three basic options are available to U.S. policymakers who want to modify the use of the juvenile system: (1) complete abolition of the juvenile justice system, (2) legal abolition of the juvenile system with reinvention of a juvenile-like system within the criminal system, and (3) incremental jurisdictional changes.

### Complete Abolition

Policymakers could end the debate over juvenile justice by eliminating all laws and policies that differentiate the illegal acts of young people from the illegal acts of adults. They could end the

separate legal process for youth and require all juvenile justice programs and agencies to close. To respond to crime by young offenders, states would likely have to expand the capacity of their criminal courts and institutions. All young offenders formerly handled in the juvenile system would immediately fall under the jurisdiction of the expanded criminal justice system, thus ending any formal consideration of age in the justice system. All criminal acts would simply be crimes, independent of the age of the person who committed them. At best, an offender's age could be introduced as a mitigating factor at trial, similar to the way courts now inquire about a person's competence to assist in his or her own defense.

The Research Roundtable concluded that outright abolition was unlikely in the United States, and, therefore, an analysis of the costs and benefits of abolition would not contribute meaningfully to future policy discussions.

#### Legal Abolition with Reinvention

Lawmakers could also reinvent the juvenile justice system under different arrangements. The legal concept of "delinquency" could be stricken from state statutes so that all law violations were treated under the criminal code, but without modifying the organizational and institutional networks that make up the current juvenile justice system. States could keep the infrastructure, agencies, and staff that form the juvenile system. They could even encourage local jurisdictions to handle younger offenders with different trial procedures, separate probation agencies, and separate confinement facilities. An offender's age would have no bearing on legal culpability, but courts could establish different procedures for the trial and sentencing of young offenders, and the institutions and programs available for young offenders could be different.

One of the leading advocates of abolishing juvenile delinquency in the United States has advanced policy reforms very similar to reinvention. Feld (1998) proposed a system in which the culpability of young offenders would be determined under criminal law and using criminal procedure, but the severity of punishment would be mitigated with a "youth discount" (17-year-olds would get 75 percent of the typical sentence for 18-year-olds, 16-year-olds would get 50 percent, etc.). While these ideas have generated considerable discussion in academic circles, no jurisdiction in the United States has seriously considered reinvention as an explicit policy.

The Research Roundtable concluded that reinvention was only slightly more likely to happen than abolition. Until U.S. policymakers begin to debate such policies seriously, it would not be beneficial to investigate their implications in detail.

### Incremental Jurisdictional Changes

Finally, state and local governments could pursue a strategy of incremental adjustments. They could retain all legal distinctions between juvenile and criminal law and keep all elements of the separate juvenile system in place, but legislation and policy could be enacted to move youth between the juvenile and criminal systems. Incremental adjustments could reduce the scope of one system and expand use of the other system on a case-by-case or class-by-class basis. This could be accomplished through various measures, including making changes in the upper age of the juvenile court's original jurisdiction, broadening the use of criminal court transfer, and expanding prosecutorial discretion and legislatively mandated age-offense exclusions.

Incrementalism is, in fact, the option lawmakers seem to prefer. Nearly every state has enacted a series of these policies during the past several decades, mostly in an effort to expand the use of the criminal process for young offenders (Griffin 2003). Recently, however, some states have considered policies to remove certain categories of youthful offenders from the criminal justice system and return them to the juvenile justice system. Lawmakers in Illinois (SB.458) and Missouri (HB.572) recently debated legislation to change the definition of criminal jurisdiction and move all 17-year-old offenders back into the juvenile system (Franck 2005). Legislators in Connecticut have taken up a similar debate, and some of their discussions have focused on the administrative costs of making such a change. Critics point to the putatively higher costs of juvenile treatment as a reason to oppose the bill (Carter 2005). In other states, including Vermont and Nevada, legislative efforts are under way to reduce the scope of broad mandatory transfer provisions. In these states too, questions about short-term cost have become part of the debate. An economic analysis of incremental change could estimate the effects of either reducing or expanding the use of the juvenile justice system, including effects on court processing, sentencing, and long-term outcomes.

The Research Roundtable concluded that incremental jurisdictional change was the most practical and applicable model for investigating the costs and benefits of juvenile justice versus criminal justice for young offenders.

### Practical issues

The goal of the Research Roundtable was to begin defining a research agenda that can inform public policy discussions on a basic question: "What are the costs and benefits of handling young offenders in the criminal justice system as opposed to the juvenile justice system?" The Roundtable members believed that such an analysis should inform choices about the level of social resources devoted to prevention, rehabilitation, and punishment. In addition, cost considerations should play a larger role

in debates about the effectiveness of juvenile and criminal court procedures and a wide range of dispositional issues, such as deciding whether individuals should be placed on probation, receive treatment, or be incarcerated. The following discussion summarizes the key issues identified by the Roundtable and those most likely to affect future research.

#### Distinguishing Adult vs. Juvenile Justice

Before researchers can measure the effects of moving juveniles into or out of the criminal justice system, they must specify exactly what that means. What are the observable manifestations of juvenile justice versus criminal justice? Cost-benefit studies cannot simply use the name of the court building in which young offenders are tried and convicted as a means of categorizing a process as either juvenile or criminal. Nor can they rely on the identities of the agencies responsible for treating or incarcerating young offenders. To be accurate and informative, a cost-benefit analysis should not even rely on the legal code under which a youth is charged with an offense. Some youth may technically be tried in criminal court, but with every protection and consideration seen in juvenile court. Other youth may be handled in juvenile court, but still experience a highly criminalized process.

Many important characteristics of the justice process can vary greatly from case to case, independent of whether the process is called juvenile or criminal. Rather than accept administrative labels, researchers should develop theoretically sound and measurable indicators of juvenile and adult justice as “ideal types.”

What are some of the measurable differences between juvenile and criminal justice? How are youth actually treated in the courtrooms of the criminal system as opposed to the juvenile system? Is the juvenile system really more attentive to individual characteristics? Does the criminal process really take more time and result in harsher punishment? Do the differences between juvenile and criminal justice emerge only in the charging and fact-finding process, or do other important differences occur long before a prosecutor files a petition? Are there other significant differences that apply only after the court process has ended? Perhaps the costs and effectiveness of supervision, treatment, and punishment following conviction represent the real differences between juvenile and criminal justice.

The justice process is complex, whether for juveniles or adults. The process is also malleable. Some juveniles headed for criminal court trials may be held in juvenile facilities pending conviction. Does that mean they are in the juvenile system? Does time in a juvenile facility dilute the effect of criminal court handling? Other young offenders may be detained in adult jails where separate wings or units have been established for them. Does this mean they are being detained as juveniles or adults? Some jurisdictions have established separate, free-standing courts to deal with juveniles that are to be tried as adults, but most have not. Can their data be combined in a cost-benefit analysis? How can we say they are the same?

Some policies do not necessarily involve the adult system, but they are still adult-like policies. I know a chief juvenile prosecutor who has a policy that if certain kids make any mistake at all during probation, their probation is instantly revoked and they go to a juvenile facility. Their cases may stay in the juvenile system, but this is an adult-system way of operating.

– Daniel Mears

More complications emerge after a youth completes the court process. The programs and facilities available to juvenile offenders after court disposition can be significantly and substantially different from those available to adults following conviction, but this may vary from state to state and even county to county. Options for postrelease services and supervision are likely to be different as well. There may be significant differences in what happens to a person who has been convicted and incarcerated in the adult system versus the juvenile system, but differences could also depend on the agencies that provide services to released offenders. Non-justice differences could be important as well. A felony conviction may bar a person from voting and from holding certain jobs. A criminal record may prevent one from receiving Pell grants or other educational assistance. A cost-benefit analysis may need to specify the role such differences play in generating outcomes.

The need to specify the true differences between juvenile and criminal justice and to measure the characteristics of actual systems against ideal types will inevitably restrict the scope of cost-benefit analyses and increase the burdens of data collection. It may even be hard to argue that one can place young offenders into just two categories—those tried as adults and those tried as juveniles. Several classifications may be needed. Some juveniles may be legally transferred to the adult system and then be handled in a way that closely approximates classical notions of juvenile justice (individualization, judicial discretion, rehabilitative dispositions), while other youth remaining in the juvenile system could be handled using procedures similar to those seen in criminal courts. Researchers may need to create an entirely new variable to describe degrees of processing characteristics along a continuum from strictly juvenile to traditionally criminal.

Ideally, research would rely on simple models. The members of the Research Roundtable agreed that a cost-benefit analysis would be more productive if it measured the economic implications of simple and stark choices between juvenile and criminal justice case processing. For example, an analysis could focus on the choice of placement settings. Some youth convicted of violent crimes are sent to prisons designed primarily to ensure security and control, while others are sent to residential treatment facilities designed to provide treatment. A cost-benefit analysis that isolated these choices in an ideal type framework and measured the outcomes could inform future policy debates.

The outcomes to be investigated by a cost-benefit analysis need to be measurable and data about those outcomes must be readily available. They also need to be compelling for policymakers. Someone earlier made the point that policymakers don't often really care about a kid's self-esteem. They do care, however, about whether that kid will ever be gainfully employed or not.

Laurence Steinberg

Another analysis could use criminal records. In a classic juvenile justice system, a person's juvenile record does not follow him or her into adulthood. All traces of a youth's juvenile charges and adjudications are expunged. While such policies are being rapidly rescinded across the country, some jurisdictions still embrace the traditional approach, and they could host a project to measure the costs and benefits of maintaining versus expunging juvenile records.

However future studies are designed, cost-benefit analyses should focus on clear, measurable policy differences that make the justice system either more adult-like (which means that dispositions are more proportional to offenses, more certain, more harsh, etc.) or more juvenile-like (which means that the process is more individualized, confidential, etc.). The key is to ensure that the definition of these differences between juvenile and adult justice closely mirror the public's perception. Otherwise, the results of an economic analysis will not be important in policy debate.

#### Outcomes

Clearly, some outcomes of the justice process are more amenable to economic analysis than others, if only due to data limitations. A researcher's ability to attach costs and benefits to particular policy choices varies greatly across the range of possibly relevant issues. One of the first goals of any future project, therefore, should be to establish a limited set of outcomes for which an economic analysis would likely prove fruitful. In addition, researchers should strive to identify outcomes of interest that can be modeled properly, whether using controlled experiments, natural experiments, or nonexperimental methods.

Depending on the particular policy choices to be modeled, there could be a large number of outcomes to consider. The most prominent outcome to use in the justice context, of course, is the number of crimes averted by various policy choices. How much victimization does handling a young offender in one system or the other prevent? Another outcome could be the amount of corrective rehabilitation provided to youth and its impact on rates of recidivism. In addition, researchers could model the length and quality of incarceration (or supervision). How does time spent in the adult system differ from time spent in the juvenile system? Other outcomes could include the educational levels young offenders attain either during the justice process or after their release. Similarly, cost-benefit models could attach monetary value to the labor market experiences of former offenders and compare those handled by the juvenile system with those handled in the adult system. Wages are often a compelling outcome measure for social programs.

There are many factors outside the justice process that flow from a criminal conviction, and frankly, they probably have stronger effects than anything the courts do, because they affect future earnings ability and future educational opportunities.  
– Mark Cohen

The members of the Research Roundtable were adamant that economic studies should differentiate outcomes and costs. Researchers must avoid becoming mired in detailed cost accounting projects that track the administrative costs of processing cases in the juvenile or adult system. Operating costs are often raised in policy debates, but most of these differences turn out to be trivial in an economic outcome framework. The debate over juvenile justice versus adult justice for young offenders should focus on outcomes, and in particular, post-disposition outcomes. The public favors adult justice for some young offenders because it assumes that sending more youth to the criminal (adult) system will result in less crime. This should be the critical outcome in an economic analysis as well. If researchers become distracted by the marginal costs of handling youth in either system, their work will miss the larger issues.

On the other hand, the members of the Research Roundtable recognized that processing costs could become relevant. If a jurisdiction began to move more and more juveniles into the criminal system, eventually the criminal courts would have to respond to the excess demand, and they would likely reduce the use of lengthy trials for young offenders and provide more youth with opportunities to plead guilty to lesser charges and avoid expensive trials. This could lead to huge savings, perhaps rivaling benefits from improved post-conviction outcomes. Whether these savings would be offset by increased crime, however, is an important question. At the very least, researchers have to monitor the secondary effects of growing case-processing costs on outcomes.



Economic studies may need to divide the range of possible outcomes into levels, according to whether they apply to individuals, communities, or society. In addition, an economic analysis may focus on outcomes by domain—crime, health, social welfare, educational, labor, etc. It could be useful for researchers to offer some type of standardized categories that would relate to whatever programmatic differences are being modeled. For example, the various inputs of either the juvenile or adult systems could be examined for their association with what one might call human-capital outcomes (schooling, employment, and wages), health-related outcomes, family outcomes, and crime outcomes. Studies could also include psychological outcomes, such as an offender's loss of freedom and the burden of crime on families and communities. Legitimacy, or how victims and others perceive the system, could also be included as a category of outcomes.

**Recommendation**

While a cost-benefit study should consider both costs and benefits of policy changes, it is more important to focus on benefits. Changes in case processing (inputs) are more likely to alter the distribution of resources within the justice system than to add to the total costs. Changes in outcomes (benefits) are typically of greater magnitude.

Economic analyses should always consider multiple outcomes, including education, employment, wages, health, and family outcomes as well as crime. Research limited to short-term outcomes, however, should focus on crime since those data are highly relevant and readily accessible.

Outcomes should be considered for both individuals and communities, as neither completely captures the impact of changes in justice processing.

**Implementation Issues**

A cost-benefit analysis must be realistic. Studies must measure system characteristics and processes as they are, and not as they are supposed to be. For example, a realistic analysis cannot assume that the full range of delinquent offenders handled in the juvenile justice system today would continue to appear in a greatly expanded criminal system. Many less serious cases currently processed by the juvenile justice system would likely be dropped or dismissed if moved to the criminal system. In fact, one principal arguments for continuing the separate juvenile justice system is that system's ability and inclination to intervene early in the course of individual criminal careers, even when youth have committed nonserious offenses. Juvenile courts are empowered to take meaningful action in cases involving first-time offenders, very young offenders, and youth charged with relatively trivial offenses—the very sort of cases that were ignored by the criminal system prior to the invention of the juvenile court (Butts and Mitchell 2000).

If more young offenders were moved to the criminal system, some of these cases would probably not be prosecuted. Even if they were prosecuted, many youth would either not be convicted or not be punished as severely as they would have been in the juvenile justice system. Often referred to as the “leniency gap,” these differences represent either potential benefits (a smaller system overall) or costs (failure to prevent crime through early intervention). Similarly, if policy changes returned many young offenders to the juvenile justice system, the number of court cases could increase substantially due to the broader use of early intervention and the reduced likelihood of plea agreements in the juvenile system.

Even when youth are convicted and sentenced in the adult system, an economic analysis cannot simply assume that they will all be sent to adult corrections and adult probation upon conviction. Many states already operate separate correctional facilities for young adults (e.g., ages 18 to 24). If larger numbers of young offenders were moved into criminal court, states could respond with more extensive age segregation and facility specialization. The federal government could even require such separation as a condition of financial support for state agencies. An effort to estimate the costs of significant jurisdictional change would have to account for these possibilities.

### **Recommendation**

One way to account for the broad range of implementation issues involved in ongoing incremental change would be to focus on “natural experiments.” Researchers should identify jurisdictions with recent—or expected—policy changes that alter the scope and responsibility of the juvenile justice system and compare the economic effects of those changes with similar jurisdictions not enacting the same policy changes. Natural experiments could produce a body of research relatively quickly that could inform public debate about the economic impact of incremental jurisdictional change.

### **Can there be too many outcomes?**

#### **Mark Cohen:**

We could list a lot of different outcomes, but the question is, “How would they be included in a cost-benefit analysis?” I would argue that most of this stuff can be captured with just a few constructs. If so, we wouldn’t have to go through all this enumeration. You could capture a whole bunch of things with a few numbers. That may or may not be true, depending on the policies being modeled.

#### **Jeff Fagan:**

Some outcomes would not be easily captured unless they were measured directly. One is voting participation, which may be very low in our list of priorities and have very marginal effects, but it’s there. [Adult felony convictions reduce voter eligibility.] The other is mobility, or the fact that people move in response to high crime rates. It’s pretty well documented that people change neighborhoods because of crime or the fear of crime. Mobility, on balance, probably has more negative effects than positive, so relocation rates could be thought of as an outcome measure.

#### **Ed Mulvey:**

Many of these outcomes seem to arise from increased crime. How closely are they tied to the specific policy we’re talking about—putting kids in the adult system versus the juvenile system? They’re interesting, but I have trouble seeing how residential mobility rates are going to be related to whether people know that their neighbor was locked up in the adult system or the juvenile system. How closely do outcomes have to be tied to the policy under investigation?

#### **Peter Reuter:**

Many of these things would likely get thrown into “crimes averted” during a statistical analysis.

---

*Source:* Meeting transcript, Research Roundtable on Estimating the Costs and Benefits of the Separate Juvenile Justice System, Washington, D.C., May 11, 2004.

## Time Horizon

A cost-benefit analysis needs to establish a time horizon during which inputs and outcomes are assumed to occur and should be measured. For example, suppose one were to include cases in which an adult prison term of four years was typical, and the analysis needed at least four additional years to capture long-term outcomes such as educational attainment and labor market success. This would require a time horizon of eight years *after* the completion of the court process. It would be difficult to

There are differential costs in terms of the family burden that depend on which system a kid is in... Parents may have to take time off work to go to therapy sessions when their child is in the juvenile system. On the other hand, there's probably a family burden connected with community response and the stigma associated with having a kid in the adult system.

—Edward Mulvey

use the same time horizon on both sides of the juvenile-adult comparison. In the juvenile system, terms of incarceration are often one year or less. What should researchers do about the length of time that juveniles are not incarcerated? Should the measurement of long-term outcomes start upon release or four years later? Would the length of incarceration or supervision be expected to affect those outcomes?

Moreover, a young offender released from the juvenile system will typically be between the ages of 17 and 19, even accounting for continuing jurisdiction (where juvenile authorities can hold youth past the age of majority). Those released from the adult system are likely to be much older, often in their mid-20s. Being released into the community at age 25 after several years out of the labor market could be starkly different than being released at age 17 or 18 after just one or two years. In addition, outcome measures for youth in the juvenile system would need to include family and school dynamics not often present in cases of offenders released by the adult system.

What happens during the time a juvenile is not incarcerated? Offending rates usually peak between the ages of 17 and 22. Somebody must likely deal with a youth's misbehavior, whether it is observed by law enforcement or not. If researchers only look at the cost of incarceration, they ignore the alternative costs that must be borne by someone when an active offender is not incarcerated. The youth's family, for example, may spend additional money on social programs and supports. This could further complicate the question of time horizon as studies try to standardize their measurements of costs and outcomes.

### Recommendation

Incremental jurisdictional changes may lead to immediate differences in postdisposition outcomes (e.g., 1 to 2 years), but these should be linked to long-term outcomes (e.g., 5 to 10 years). Longer time frames are best able to capture the total impact of changes in justice processing.

## Conceptual framework

Cost-benefit studies are most useful when researchers can model the effects of large-scale policies across a broad population with heterogeneous outcomes that are closely related to policymakers' and the public's concerns. Cost-benefit models are designed to analyze the effects of policy changes at a macro level and to identify how those changes may affect behavior at the micro level. Following the recommendations described above, a cost-benefit study of incrementalism, where increasing numbers of young offenders are moved into or out of the adult justice system, would include three components, measured in both the short- and long-term:

- The costs of processing different populations in either justice system;
- The economic value of changes in future offending, at the individual and community levels; and,
- The economic value of the other changes in human and social capital at the individual and community levels.

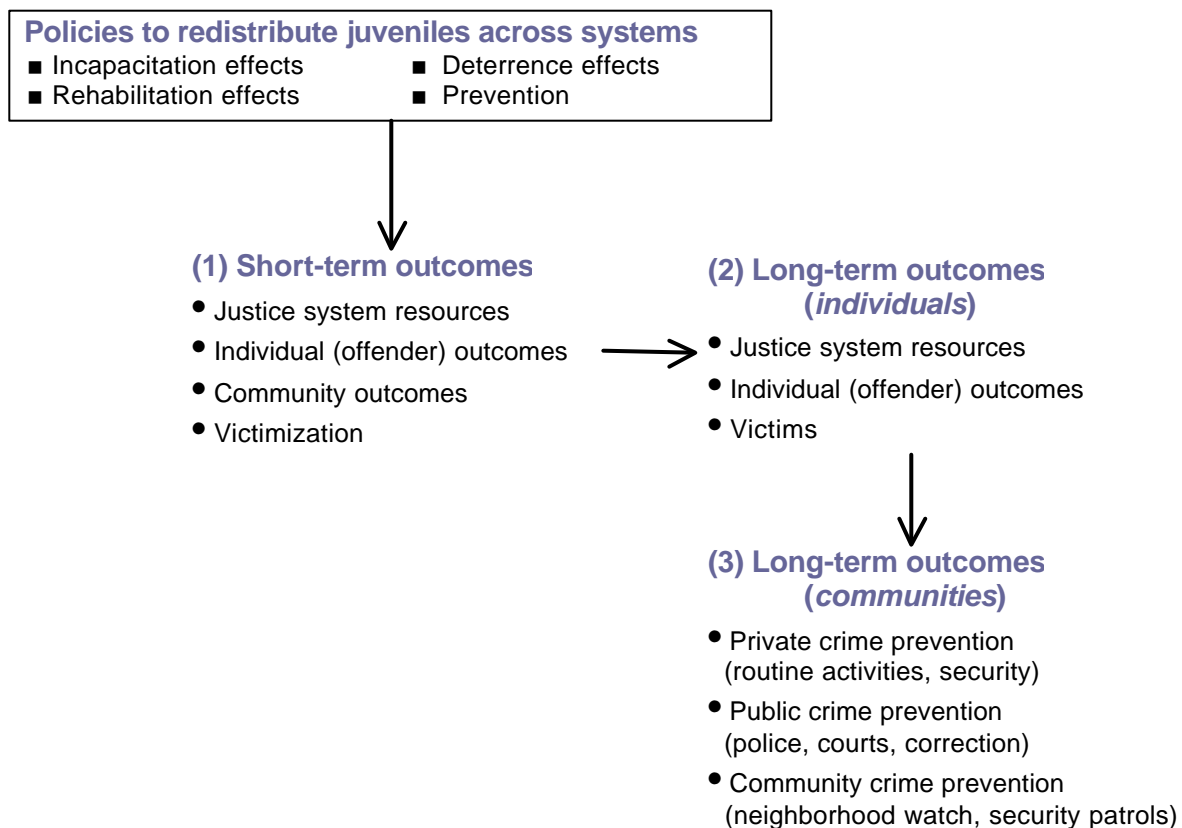
As described above, the most practical research strategy would be to focus on the second item—measuring the economic impacts of changes in individual offending that result from incremental jurisdictional changes. While such a strategy may limit the range of enumerated benefits, justice data are more readily available than the data needed to describe changes in human and social capital.

Figure 1 portrays the economic consequences of incremental jurisdictional change. Juvenile offenders are redistributed across the juvenile and criminal justice systems. Some formerly eligible for adjudication in the juvenile system are assigned to the adult system. Others once tried as adults may return to the juvenile system. Of these, some with less serious offenses may not have been adjudicated at all in the adult system. These changes could lead to changes in deterrence (as penalties are altered), incapacitation (as some juveniles receive longer sentences, some shorter), rehabilitation (there would likely be less rehabilitation programming for those entering the adult system and those not entering the system at all), and prevention (additional costs, if any, might require a reduction in prevention spending).

All these changes would have short-term economic outcomes. At some point, resources would have to be reallocated to respond to the change in assignments. Individual offenders would experience different outcomes—some as a result of more severe intervention and some as a result of lesser or no intervention. The change in the composition of the justice system (who is adjudicated and detained or incarcerated and for how long) would change the distribution of crime victims in

the community. Some juveniles who would have been in the community would now be incarcerated, likely reducing some crime. Others who would have been prosecuted would now not be, likely increasing other crimes. This in turn would cause members of the community to experience different outcomes and would change resident perceptions of their own risk of victimization.

Figure 1. A Model of Economic Impact Due to Jurisdictional Change



Similar outcomes could be tracked over the long term. There may be important differences between how individuals and communities respond. Juveniles moved into the adult system would likely experience a change in future offending from what would have been expected had they been processed in the juvenile system. Since they would be prosecuted in a more punitive setting, they would lose the advantages of whatever rehabilitation they would have received in the juvenile system. This is compounded by their increased exposure to adult offenders and the likely transfer of antisocial knowledge. Part of their increased risk for future offending, however, may be offset by the increased deterrent effect of criminal sentencing. Regardless of the particular result for any one

juvenile, their future offending patterns will likely change—both for youth who are newly prosecuted in the adult system and for those returned to the juvenile system.

The implications of these changing offending patterns may have economic consequences. If, for example, juveniles newly subject to the adult system commit more crimes than they would have after being processed in the juvenile system, the costs associated with their offending will increase, and their accumulated human capital will be reduced. This translates into more costs for victims of crime and greater fear of victimization in the community. In the long term, the community may choose to purchase more public safety, as expressed by their willingness to pay more in taxes to hire more police. They may purchase more personal safety through alarms, guard dogs, and a change in their daily routines as they seek to avoid dangerous situations. As a collective, they may choose to begin neighborhood watch programs or to pay for a neighborhood security patrol.

We'd like to inform the broader policy discussion by adding cost questions to the mix. How should costs contribute to our understanding of policy choices, in addition to developmental issues and the sort of normative questions typically asked about behavior and recidivism? Our goal is to add a dimension to the policy conversation that doesn't exist now, so that in the future, policy choices may be better informed by cost considerations.

—Jeremy Travis

## Research Designs

This report begins to imagine an approach to cost-benefit studies, or even a portfolio of studies, that could have high yield for policy formulation and public discussion. The simple framework portrayed in figure 1 described the causal relationship between changes in processing young offenders, corresponding changes in resource allocation between the two justice systems, and the resulting effects on crime levels. The members of the Research Roundtable agreed that no single analytical approach would ever address all the consequences of incremental jurisdictional change. Different methods could estimate particular components of the framework, which collectively could be used to estimate the impact of jurisdictional change. Four such approaches are described below:

- Short-term consequences for individuals;
- Short-term consequences across jurisdictions;
- Long-term consequences for communities—fear of crime;
- Long-term consequences for communities—property values.

### Short-term Consequences for Individuals

Imagine two scenarios where legal jurisdiction over juvenile offenders is shifted. In the first, the age at which offenders are tried as adults is lowered—from 18 to 17, or from 17 to 16 (jurisdictional attrition). In the second, the age at which offenders are tried as adults is increased—from 16 to 17, or from 17 to 18 (jurisdictional expansion). Both analyses could rely on standard CBA methods to evaluate crime programs and policies. The outcomes for a cohort of offenders entering the justice system before the change in policy could be compared with outcomes for those entering after the policy change. Change in these outcomes would then be “monetized,” or translated into dollars.

Short-term economic consequences of a shift in jurisdiction could be studied using either a retrospective or a prospective design, but a prospective design is the preferred approach. This design identifies a cohort entering the justice system, collects data on a range of antecedent variables, and allows for follow-up across a broad range of outcomes—potentially including health, employment, education and other welfare measures—in addition to criminal justice indicators. A prospective design, however, would require either that juveniles entering the system were randomly assigned to the adult or juvenile system, which is not practical, or that the study track juveniles long before an expected change in jurisdiction, which is not feasible.

A retrospective analysis would gather secondary data from official records to measure changes in outcomes. If data could be collected across a wide range of indicators, such a study would be highly informative. However, these types of studies have two common limitations. First, the data are often only available on criminal justice indicators, severely limiting the outcomes that can be studied. Second, tracking individuals across the juvenile and adult systems is often difficult because juvenile and adult records are segregated, with different identifiers used to track individuals. This may create bias in the analysis since it is much easier to track data for offenders who start and remain in the adult system than it is for those who begin in the juvenile system and age into the adult system.

Once all data are identified, the analysis would be straightforward. All available records—both baseline and follow-up—would be assembled. An analysis of the baseline data could determine how comparable the two groups were at the time they entered the justice system. This is done to ensure that no factors related to outcomes—such as the severity of the crime—caused individuals to be assigned to one system instead of the other. If such factors were identified, the two groups would not be comparable, and some statistical controls would have to be included in the analysis.



Data analysis could be conducted using multiple regression or time-series models, depending on the number of periods for which data are available. One advantage of retrospective designs is that data on longer time periods can be collected and individuals in more time periods can be observed (e.g., monthly instead of annually). This allows for much more precise estimates of changes in outcomes over longer periods of time. Outcomes would be compared at each time point, and if differences were observed, a subsequent analysis would convert those differences in outcomes into monetary measures. “Monetizing” estimates can be very simple or very difficult, depending on what types of outcomes are being studied. For example, monetizing health care utilization is simple, given that a price is paid for each service unit (such as a hospital visit) and those prices are used to determine the value of the outcomes. Other outcomes, such as emotional trauma after being victimized, are very difficult to value. Since it is likely that only criminal justice outcomes will be studied, the analysis could use previously published estimates of the costs associated with crime to determine the size of the difference in outcomes as measured in dollars (Milleret al. 1996).

Controlled experiments are obviously important as a research strategy, but I would be more interested in measuring the effects of natural variation. What happens when the rules of the system change? We're not asking about the ideal way to change systems; we're asking about what happens when they do change. This won't be very refined, and it may not be good for theory testing because many things happen at the same time, but it could be highly policy relevant. Controlled experiments may have high scientific value, but they may be less policy relevant.

—Anne Piehl

#### **Recommendation**

Researchers should use prospective designs if possible to model the effects of jurisdictional changes on individual offenders. Retrospective CBA using administrative data is the best possible alternative.

#### Short-term Consequences across Jurisdictions

Another approach to evaluating the short- and long-term economic consequences of where juvenile cases are assigned is to look at data across states where changes have already occurred. Panel data could be used to isolate the effects of incremental changes in jurisdiction. Such studies could rely on “natural experiments,” where a change in processing was not created by researchers, but rather occurred through the normal policy process. Of course, it would be difficult to disentangle the effect of one economic or policy change from another. For instance, crime decreased throughout the 1990s, but determining whether higher incarceration rates, better economic conditions, innovative alternatives to incarceration, or some other factor caused the decline is difficult. To disentangle these

effects, econometric studies would seek to identify policy changes that are related to outcomes—but not to other possible explanations—to isolate the effects of new policies.

Economists often study the impact of changes in crime control and prevention on potential offenders' decision to commit new crimes. In these models, retrospective data on offending patterns, arrest rates, and incarceration rates are used to predict the returns on offending to offenders. A particular strength of this approach is that such models can be used to examine the effects of large-scale policy changes and can use sophisticated statistical techniques to improve the signal-to-noise ratio. As noted, this approach works well in isolating the effects of natural experiments.

In a prototypical example of this approach, University of Chicago economist Steve Levitt conducted a study to examine whether changes in the relative punitiveness of adult and juvenile justice led to more juvenile offenders (1998). Levitt observed that adult sentences had increased throughout the 1980s, but juvenile sentences had remained the same. As a result, the “cost” of juvenile offending may have decreased compared with the “cost” of adult offending.

The weakness of these econometric models is that they require accurate data across a range of indicators. Since natural experiments are not under researchers' control at the time policy changes are made, data are often quite limited. In addition, data on competing explanations are hard to find. Critiques of econometric studies often focus on the evaluators' need to make assumptions and impute data in the absence of reliable indicators. Critics often see econometric studies as a blunt instrument applied to complicated and highly nuanced situations. As a result, the use of econometric studies remains controversial in justice settings.

Studies of jurisdictional change, however, could use an econometric framework similar to Levitt's. For example, researchers could use state panel data for a group of states that had 18 as the minimum age for entry into the adult system in 1978. Data from these states would then be tracked between 1978 and 1993, when many states changed rules about juvenile jurisdiction. During this period, some states would have changed the age of assignment, while others would have kept the age at 18. A difference-in-differences model could be used to isolate the effects of the policy change, where outcomes are measured as a change within and across states. This approach takes advantage of variations in policy that occurred naturally throughout this period.

Aggregate rather than individual data would be used, and outcomes would be limited to criminal justice system measures. Such a study would not attempt to measure whether individuals did better or worse depending upon which system they were assigned. Instead, the study would look

at the overall volume and type of cases entering each system before and after a policy change. These changes would then be monetized, again using the Miller, Cohen, and Wiersma estimates of the costs of crime. The key limitation of this type of study is that controlling for competing explanations of differences in outcomes is difficult. A host of other factors—migration, economic conditions, policy preferences—could explain changes in outcomes that may be unrelated to changes in jurisdiction over young offenders. Fixed-effects models could be used to control for these differences, but they depend on many important assumptions.

#### Long-term Consequences for Communities—Fear of Crime

One of the important advantages of economic studies, as compared with other types of evaluations, is that outcomes can be measured for people other than the offender and the victim. In particular, crime has important effects on communities, regardless of how many people in that community have been victimized or committed an offense. Contingent valuation is a class of empirical techniques used to estimate the value of a resource using data from secondary or theoretical markets when there is no marketplace for the exchange of that good. Recent work by Cook and Ludwig, for example, examined the costs associated with gun crime (Ludwig and Cook 1999; Cook and Ludwig 2000). Since there is no true market for gun crime, researchers determined the public's willingness to pay for reductions in gun crime, and these preferences were used to measure the relative costs and benefits of reducing gun crime. Similarly, Cohen and his colleagues (2004) used willingness-to-pay surveys to evaluate the costs of (and benefits from) programs to reduce crime. Unlike models that rely on secondary measures of economic impact, this model derives economic impact directly.

One of the most common contingent valuation models—the willingness-to-pay (WTP) model—surveys individuals about their preferences. In crime research, this generally involves asking people what they would be willing to pay to avoid being the victim of crime. For example, researchers could ask about preferences for treating juveniles as adults. There are two questions of interest that the WTP model could potentially ask. First, what is the overall value to the community of a reduction in crime? In this case, a WTP question would be

*How much would you be willing to pay in additional taxes to achieve a 25 percent reduction in juvenile crime in your community?*

While this question is generally of interest, it does not address the particular issue of how juveniles are processed. Another way to frame the question would be to ask how much more community members would be willing to pay in taxes to keep juveniles from being processed as

adults, regardless of the impact on crime. In a state considering lowering the age for adult processing, the question might be

*Legislative changes are being considered that would reduce the age at which juveniles are processed as adults from 18 to 17. How much would you be willing to pay in additional taxes to keep 17-year-olds in the juvenile justice system?*

The WTP model has two potential limitations in this context. First, research suggests that the dollar value developed in these models generally represents an upper bound of people's willingness to pay. As a general rule, it overstates revealed preferences since people often express a willingness to pay for goods or services that exceeds what they would actually be willing to pay if payment comes due. Second, and more important, it is difficult to formulate a question that accurately captures the policy choice to be made without first having a definitive study showing better outcomes for those processed in the juvenile versus adult justice systems. The first limitation can be overcome with careful construction of the willingness-to-pay survey questions. The second limitations can be overcome by administering the willingness-to-pay study in conjunction with a structured evaluation of program impacts.

#### Long-term Consequences for Communities—Property Values

A fourth empirical analysis could use an economic method—hedonic pricing—as an alternative to WTP in order to observe directly the economic impact of changes in judicial processing. Economic theory posits that any good or service exchanged in the market has a price set by the marketplace, and the characteristics of the good or service determine that price. These characteristics can take various forms. A consumer in the market to purchase a television will likely choose a product based on factors related to price. Some are easily observed: What is the size of the monitor? Is it analog or digital, LCD or plasma? What is the depth of the screen? What is the wattage of the speakers? Others are harder to quantify: What color of casing does the consumer prefer? Is the supplier perceived as having a high-quality brand name? The consumers' willingness to pay the market price will be based on both sets of preferences, and many others.

In the study of crime, it has been observed that perceived risk of crime is included in this calculation—the hedonic price function—for many goods and services (Thaler and Rosen 1975; Thaler 1978; Clark and Cosgrove 1990). Two in particular have received significant research attention in the study of the economic impact of crime: differences in property values and compensating differentials in employment. Both are used to estimate the costs of living and working in communities that have higher or lower levels of crime.

The most common application of hedonic pricing is the study of differences in property values. Researchers will compare the property values of two comparable neighborhoods and control for all observable differences: the size of houses, number of bathrooms, type of structure, proximity to urban areas, etc. The remaining differences in property values can then be at least partially attributed to differences in other factors, including crime rates, as higher crime rates are associated with lower property values. Studies using compensation differentials would apply the same concept, but instead of comparing differences in housing values, they would compare differences in wages where the same job is performed in high and low crime areas.

The Foundation would like to take a long-term view of these issues and genuinely advance the field, but we would also like some quick, practical analyses that would be useful. Inevitably, states are soon going to face increasing crime. It's already starting to happen. When new policies are proposed to make the juvenile system even harsher or more retributive by transferring more kids to the adult system, what are we going to have to offer by way of evidence? We need to have something ready to guide these decisions when they are being made. Three to five years out, we'll probably be revisiting these policies. What evidence can we put in front of people about the costs and benefits of one policy versus another?  
—Laurie Garduque

These methods allow researchers to estimate the effect of policy changes on crime across whole communities. When considering policy changes with such potentially diverse impacts—for example, changing the basic composition of the justice system—these methods can be powerful tools. Their weakness is that they may have a small signal-to-noise ratio. Unless other competing explanations can be controlled for, researchers may not have great confidence that the changes in crime caused the differences in prices. When a host of other factors may affect property values—such as poor air and water quality—eliminating competing explanations is difficult. This method also has the same limitation as the contingent valuation method: it is only valuable if the overall impact of a change in jurisdiction on crime has already been established. The method works best when linked to an econometric or highly rigorous method of isolating the effects of moving juveniles into or out of the criminal justice system.

### **Recommendation**

To observe all potential impacts of changing the justice system's approach to processing young offenders, a combination of methods must be used as part of a long-term research strategy. In the near future, retrospective evaluations could identify the economic impacts of specific changes in the balance between juvenile and criminal justice. In the long term, a combination of econometric studies and contingent valuation or hedonic pricing models would be needed to explore more fully the costs and benefits of policy changes.

## Conclusion

It may be possible to predict the results of incremental changes in jurisdiction, at least at the margin. If jurisdictional attrition (i.e., moving more youth into the adult justice system) led to more certain and longer incapacitation of the juveniles most likely to commit dangerous and expensive crimes, the net economic effect of jurisdictional change would likely be positive for the community. Positive effects would be mitigated, however, if other costs of implementing such a policy outweighed the benefit of expanded incapacitation.

For example, if greater jurisdictional attrition led to net widening, and a new population of relatively low-level juvenile offenders replaced the more serious juvenile offenders transferred into the adult system, the costs of the now expanded justice system could exceed any community benefit achieved from the transfers themselves. Moreover, if some adult offenders were crowded out of the adult justice system due to resource constraints and an ever-growing number of transferred juveniles, there could be other costs to the community. These costs would be greatest if the transferred juveniles posed less risk to the community than the adults crowded out.

The net impact of any jurisdictional alteration rests in large part on how well the justice system predicts the future offending patterns of individuals affected by policy changes. The costs of crime to the community are greatest when offenders commit violent crimes, expensive property crimes, or great numbers of crimes. Policy changes yield a net benefit only if they lead to more incapacitation or effective rehabilitation among offenders most likely to commit such crimes, and only if the extra costs of arresting, trying, and treating or sentencing such offenders are less than the savings achieved from reducing their criminal trajectories.

Since there are no private markets for the exchange of goods and services in relation to crime or the prevention of crime, researchers cannot easily attach monetary values to most of the costs of crime or the benefits of crime prevention. Thus, the application of cost-benefit analysis to criminal justice research often requires methodological innovation. The question posed here is: what are the costs and benefits of using the juvenile justice system or the criminal justice system for young offenders? To measure the comparative costs and benefits of both systems, the overall goals of justice must be articulated. Is it to prevent crimes and future victimization or simply to deliver appropriate or proportionate punishment? Are these only proxy measures for the real goal, which is to promote the general social welfare? Should an analysis consider all three goals? Does the importance of each goal vary with offender age? Are all three goals shared by the juvenile and

criminal justice systems? Different answers to these questions will require different approaches to measuring costs and benefits.

The most expeditious approach to studying the economic consequences of jurisdictional change would probably combine a natural experiment with econometric estimation of aggregate impact. First, researchers would identify a state (or states) that had undertaken significant policy reforms to move juveniles into or out of criminal jurisdiction. Next, researchers would use econometric techniques to isolate the impact of these policy changes on key outcomes—most likely limited to major crime indicators. Differences in outcomes—the benefits of the policy change—would then be monetized using current literature (drawing on the Cohen and Miller studies) to estimate the economic impact of changes in offending patterns. Finally, the study would calculate cost differences by estimating the difference between the use of justice system resources before and after the policy change. In the long term, these changes in outcomes could be combined with economic studies (contingent valuation or hedonic pricing) to develop broad measures of economic impact. These costs and benefits could be compared to allow policymakers to draw conclusions about the economic impact of a given policy change.



## References

- Aos, Steve, Robert Barnoski, Roxanne Lieb, and Polly Phipps. 2001. *The Comparative Costs and Benefits of Programs to Reduce Crime, v 4.0*. Olympia, WA: Washington State Institute for Public Policy.
- Becker, Gary S. 1968. "Crime and Punishment: An Economic Approach." *Journal of Political Economy* 76(2): 169–217.
- Butts, Jeffrey A., and Ojmarrh Mitchell. 2000. "Brick by Brick: Dismantling the Border between Juvenile and Adult Justice." In *Boundary Changes in Criminal Justice Organizations*, (167–213). NCJ 182409. Washington, DC: U.S. Department of Justice.
- Campbell, Donald. and Julian C. Stanley., 1963. *Experimental and Quasi-Experimental Designs for Research*. Chicago, IL: Rand-McNally.
- Carter, Angela. 2005. "Report: Don't Jail Teens with Adults." *New Haven Register*. March 15, 2005.
- Cartwright, William S. 2000. "Cost-benefit Analysis of Drug Treatment Services: Review of the Literature." *The Journal of Mental Health Policy and Economics* 3:11–26.
- Caulkins, Jonathan P., C. Peter Rydell, Susan M. Sohler Everingham, James R. Chiesa, and Shawn Bushway. 1999. *An Ounce of Prevention, A Pound of Uncertainty: The Cost-Effectiveness of School-Based Drug Prevention Programs*. Santa Monica, CA: RAND.
- Clark, David. E., and James, C. Cosgrove. 1990. "Hedonic Prices, Identification, and the Demand for Public Safety." *Journal of Regional Science* 30(1): 105–21.
- Cohen, Mark. 2000. "Measuring the Costs and Benefits of Crime and Justice." In *Measurement and Analysis of Crime and Justice*, (263–316). NCJ 182411. Washington, DC: U.S. Department of Justice.
- Cohen, Mark A. 1988. "Pain, Suffering, and Jury Awards: A Study of the Cost of Crime to Victims." *Law & Society Review* 22(3): 53–56.
- Cohen, Mark A., Ted R. Miller, and Shelli B. Rossman. 1994. "The Cost and Consequences of Violent Behavior in the United States." In *Understanding and Preventing Violence*, vols. 3 and 4, edited by Albert J. Reiss and Jeffrey A. Roth. Washington, DC: National Academy Press, National Research Council.
- Cohen, Mark A., Roland Rust, Sara Steen, and Simon T. Tidd. 2004. "Willingness-to-Pay for Crime Control Programs." *Criminology* 42(1): 89–109.
- Cook, Thomas. D., and Donald T. Campbell. 1979. *Quasi-experimentation: Design and Analysis Issues for Field Settings*. Boston, MA: Houghton Mifflin Company.
- Cook, Philip, and Jens Ludwig. 2000. *Gun Violence: The Real Costs*. New York: Oxford University Press.
- Ehrlich, Isaac. 1973. "Participation in Illegitimate Activities: A Theoretical and Empirical Investigation." *Journal of Political Economy* 81(3): 521–65.
- . 1981. "On the Usefulness of Controlling Individuals: An Economic Analysis of Rehabilitation, Incapacitation, and Deterrence." *American Economic Review* 71(3): 307–22.
- . 1996. "Crime, Punishment, and the Market for Offenses." *Journal of Economic Perspectives* 10(1): 43–67.

- Feld, Barry C. 1998. "Abolish the Juvenile Court: Youthfulness, Criminal Responsibility, and Sentencing Policy." *Journal of Criminal Law & Criminology* 88: 68–136.
- Franck, Matt. 2005. "Bills Would Allow 17-Year-Olds in Juvenile System." *St. Louis Post-Dispatch*. May 3, 2005.
- Gramlich, Edward M. 1981. *Benefit-Cost Analysis of Government Programs*. Englewood Cliffs, NJ: Prentice-Hall.
- Gramlich, Edward M. 1986. "Evaluation of Education Projects: The case of the Perry Preschool Program." *Economics of Education Review*. 5: 17-24.
- Greenwood, Peter W., Karyn E. Model, C. Peter Rydell, and James R. Chiesa. 1998. *Diverting Children from a Life of Crime: Measuring Costs and Benefits*. Santa Monica, CA: RAND.
- Griffin, Patrick. 2003. *Trying and Sentencing Juveniles as Adults: An Analysis of State Transfer and Blended Sentencing Laws*. Pittsburgh, PA: National Center for Juvenile Justice.
- Lally, Ronald J., Peter L. Mangione, and Alice S. Honig. 1987. *The Syracuse University Family Development Research Program, Long-Range Impact of an Early Intervention with Low-Income Children & Their Families*. San Francisco: Far West Laboratory for Educational Research and Development.
- Levitt, Steven D. 1996. "The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation." *Quarterly Journal of Economics* 111(2): 319–51.
- . 1998. "Juvenile Crime and Punishment." *Journal of Political Economy* 106(6): 1156–85.
- Ludwig, Jens, and Philip Cook. 1999. *The Benefits of Reducing Gun Violence: Evidence from Contingent-Valuation Survey Data*. NBER Working Paper no. 7166. Washington, DC: National Bureau of Economic Research.
- Miller, Ted R., and Delia Hendrie. "Formulating Strategies to Reduce Alcohol and Drug Abuse and Related Injury and Crime." Unpublished manuscript. Monterey, CA: Pacific Institute for Research and Evaluation.
- Miller, Ted R., Nancy M. Pindus, John B. Douglass, and Shelli B. Rossman. 1995. *The Databook on Nonfatal Injury: Incidence, Costs and Consequences*. Washington, DC: Urban Institute Press.
- Miller, Ted. R., Mark A. Cohen, and Shelli B. Rossman. 1993. "Victim Costs of Violent Crime and Resulting Injuries." *Health Affairs* 12(4): 186–97.
- Miller, Ted R., Mark A. Cohen, and Brian Wiersma. 1996. "Victim Costs and Consequences: A New Look." National Institute of Justice research report. Washington, DC: Department of Justice.
- Mohr, Lawrence. 1995. *Impact Analysis for Program Evaluation*, 2nd ed. Thousand Oaks, CA: Sage.
- Moore, Elizabeth G., Gay Armsden, and Patrick L. Gogerty. 1998. "A Twelve-Year Follow-up Study of Maltreated and At-Risk Children Who Received Early Therapeutic Child Care." *Child Maltreatment* 3(1): 3–16.
- Olds, David L., John Eckenrode, et al. 1997. "Long-Term Effects of Home Visitation on Maternal Life Course and Child Abuse and Neglect." *Journal of the American Medical Association* 278(8): 637.
- Olds, David L., Charles R. Henderson Jr., Robert Cole, and John Eckenrode. 1998. Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. *JAMA: Journal of the American Medical Association* 280(14).

- Olds, David L., Peggy Hill, Sharon F. Mihalic, and Ruth A. O'Brien. 1998. *Blueprints for Violence Prevention, Book Seven: Prenatal and Infancy Home Visitation by Nurses*. Boulder, CO: Center for the Study and Prevention of Violence.
- Pagani, Linda, Richard E. Tremblay, Frank Vitaro, and Sophie Parent. 1998. "Does Preschool Help Prevent Delinquency in Boys with a History of Perinatal Complications?" *Criminology* 36(2): 245-67.
- Piehl, Anne Morrison, and John J. DiIulio Jr. 1995. "Does Prison Pay? Revisited." *Brookings Review* 13:20.
- Reynolds, Arthur J., Judy A. Temple, Dylan L. Robertson, and Emily A. Mann. 2000. "Long Term Benefits of Participation in the Title 1 Chicago Child-Parent Centers." Paper presented at the Biennial Meeting of the Society for Research on Adolescence, March 30.
- Robertson, Angela A., Paul W. Grimes, and Kevin E. Rogers. 2001. "A Short-Run Cost-Benefit Analysis of Community-Based Interventions for Juvenile Offenders." *Crime & Delinquency* 47(2): 265-85.
- Roman, John. 2004. "Can Cost-Benefit Analysis Answer Criminal Justice Policy Questions, and If So, How?" *Journal of Contemporary Criminal Justice* 20(3): 1-20.
- Schweinhart, Lawrence J., Helen V. Barnes, and David P. Weikart. 1993. *Significant Benefits: The High-Scope Perry Preschool Study through Age 27*. Monograph of the High/Scope Educational Research Foundation no. 10. Ypsilanti, MI: High/Scope Press.
- Snyder, Howard, and Melissa Sickmund. 1999. *Juvenile Offenders and Victims: 1999 National Report*. Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- Thaler, Richard H. 1978. "A Note on the Value of Crime Control: Evidence from the Property Market." *Journal of Urban Economics* 5:137-45.
- Thaler, Richard H., and Sherwin Rosen. 1975. "The Value of Saving a Life: Evidence from the Labor Market." In *Household Production and Consumption*, edited by Nester Terleckyj. Washington, DC: National Bureau of Economic Research.

## About the Authors

**John Roman** is a senior research associate in the Urban Institute's Justice Policy Center, where his work focuses on evaluating innovative criminal justice policies and developing methodologies for measuring economic impacts of crime control policies and programs. He has worked on numerous cost-benefit analyses of justice programs, including problem-solving courts and prisoner reentry initiatives. He is a graduate of Kenyon College, holds a Masters of Public Policy from the University of Michigan, and is a PhD candidate in public policy at the University of Maryland.

**Jeffrey A. Butts** is a research fellow in the Chapin Hall Center for Children at the University of Chicago. At the time of the Research Roundtable meeting, he was director of Urban Institute's Program on Youth Justice, where he led the national evaluation of the Robert Wood Johnson Foundation's "Reclaiming Futures" program. Before joining the Urban Institute, he was a senior research associate at the National Center for Juvenile Justice in Pittsburgh. He is a graduate of the University of Oregon and earned the PhD from the University of Michigan.

## For Further Information

For information about the Urban Institute, see <http://www.urban.org>. For information about the Justice Policy Center, see <http://justice.urban.org>. For information about the MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice, see <http://www.mac-adoldev-juvjustice.org/>.