

Conference Summary

Advancing Social Policy Through Benefit-Cost Analysis: Challenges and Opportunities

June 24–25, 2008

Washington, D.C.

Introduction

The MacArthur Foundation's ambitious domestic grant-making agenda, *The Power of Measuring Social Benefits*, includes affordable housing, community economic development, mental health, juvenile justice, and other social program areas. Over the course of these projects, it hopes to test the hypothesis that effective social policies that invest in individuals in need or at risk not only improve their life chances, but also continue to benefit society and generate public returns long after assistance has ended. The *Advancing Social Policy Through Benefit-Cost Analysis: Challenges and Opportunities* conference, held in Washington, D.C. June 24–25, 2008, was a part of this agenda and represents the first invitational gathering for MacArthur grantees to discuss their work with leaders in the benefit-cost field, policymakers, other government officials, and practitioners.

The conference produced information that is useful both in terms of highlighting program evaluations and results, and of exploring what needs to be done to create more effective social policies.

Programs Successfully Utilizing BCA

Welfare-to-Work & Child Achievement

A set of random assignment experiments in the 1990s evaluated the impact of various kinds of welfare to work policies on child achievement. The primary goal of these policies was getting mothers into the workforce, but programs also tried to increase income and/or the mother's basic skills. Programs that focused on investing in the mother's basic skills had small impacts on children's achievement; and policies that stressed getting mothers into the labor force as soon as possible also had a positive impact, though all but one of these impacts was statistically insignificant. In all of these programs, total family income stayed constant and employment replaced welfare income. In contrast, programs that included earnings supplements in addition to focusing on getting women into the labor force *all* had statistically significant positive impacts.

A specific example of these programs is New Hope in Milwaukee. MDRC carried out an evaluation of New Hope that included rigorous random assignment with a comparison between the New Hope program and a fairly ambitious welfare reform program in place at the time statewide. The results are comparable with Head Start impacts.

Justice and Corrections System Reform

The Washington State Institute for Public Policy (WSIPP), at the request of the Washington State Legislature, looked at which programs in the justice system were most effective. WSIPP looked at 57 drug outcome evaluations conducted in the U.S. that had rigorous research designs. On average, using some guesswork to account for selection bias, drug courts dropped recidivism rates by 8 percent. Without a drug court, an offender had a 58 percent chance of being reconvicted—with drug court, the chance drops to 54 percent, and even that relatively small reduction generates \$9,100 in taxpayer and crime victim benefits.

There are other interventions that are effective, including cognitive-behavioral treatment, prison education programs, and functional family therapy for juvenile offenders. For prevention, preschool programs and the nurse-family partnerships each had an impact; whereas, increasing the number of contacts with parole officers was not effective. Based on that evidence, the legislature was able to move funding away from these types of programs and shift them into more impactful programs.

WSIPP focused next on the portfolio level, looking at costs of criminal justice options as a class. They developed three alternative spending models for the state—level, moderate, and aggressive—and made suggestions about the most economical ways to address crime under each funding scenario. For crime, this meant looking at prison supply and demand in Washington state. Under the 2006 forecast, the state was looking at a two-prison shortfall by 2020 and a three-prison shortfall by 2030. The moderate funding approach leads to a need for fewer prisons, while the aggressive approach would lead to no new prisons required. Based on this analysis, the legislature funded a moderate approach that generated \$1.7 billion in long-term benefits to taxpayers, with a benefit-cost ratio of \$2.55 dollars.

Housing the Homeless in New York

The average homeless person in New York City living with mental illness in 1999 cost the city \$40,000 in services, and despite the expense they were still living in a cardboard box, a poor return on taxpayer's investments. Individuals who were housed through a program providing no-cost housing used \$16,200 less each year in services, roughly equal to the cost of the housing intervention. From a purely economic point of view, about 95 percent of the costs of the intervention were recouped in decreased use of services.

Partnership for America's Economic Success

The Partnership for America's Economic Success (PAES) is a collaboration of 13 funders, business leaders, economists, and early childhood experts. PAES believes investments during early childhood can have significant economic returns, and that these returns can encourage policy-makers to make investments in early childhood. In 2007, policy successes included:

- The State of Illinois committed to Pre-K for all three and four year-olds, health care for all, and increased fiscal resources for infant programs.
- The State of Ohio approved over \$200 million for Pre-K, child care, mental health, and other interventions for young children.
- As part of its prison reform effort, the State of Texas raised home visiting funds by \$7.9 million; of this, \$4.3 million (which will reach 2,000 new families) was "re-invested" from the prison budget.

Robert H. Dugger of PAES noted solid benefit-cost analyses will help move the discourse around childhood education towards the importance of investments, and will help focus attention on programs that create a significant return. Benefit-cost analysis can show that expenditures on human capital very early in life are investments that create long-term returns that greatly outweigh the costs.

The PAES experience is that benefit-cost analysis studies are essential to persuading public officials, but they can only be selectively used, so that there are not a confusing number of different statistics flying around. Another challenge is that officials often want more specific results, rather than broad ranges, or need to understand why the broad range exists. At a minimum, decision makers need to understand why a broad range exists. Another significant impediment to using benefit-cost data to inform policy decisions is a lack of local data, which can be used to show the return in local communities.

Nurse-Family Partnership

The Nurse-Family Partnership is still early in the process of impacting policy, but it is a leading example of a research-driven program. The program provides nurse visitation for women who are low-income and pregnant. The visiting nurse comes during the pregnancy and the first two years of the child's life and provides information on parenting, nutrition, smoking and drinking cessation, and birth control. The program has been evaluated by three gold-standard randomized trials with long-term follow-up, and has been found to be highly effective. For example, children whose mothers were in the program experienced 48 percent fewer officially-verified incidents of child abuse and neglect, and 59 percent fewer arrests. There was also a significant positive impact on the children's cognitive and educational outcomes.

These studies led directly to the creation of the new Evidence-Based Home Visitation Program at the Department of Health and Human Services. The appropriations language for this program also mandated evidence-based programs throughout the states, and prohibited states from adding additional elements that have not been subjected to rigorous testing. This type of research tends to be persuasive to policymakers because non-academics can understand it, and more complicated research designs, such as those using econometrics to control for differences, tend to be less accessible—and therefore less persuasive—to policymakers.

Lessons Learned

Lessons Learned from Programs that Work

1. It's clear that not all programs are exceeding costs. In some cases, this is because there were no effects. But in other cases it is because the effects were all in areas that on which are hard to put a monetary value. The amount of time the follow-up continues has a big impact on this.
2. Favorable effects are found both in smaller demonstration programs and in large, publicly funded programs.
3. It is possible to have a positive benefit-cost ratio from higher cost, more intensive programs, but also from lower cost, less expensive programs.
4. Returns can be higher with targeting. Targeting needier populations can result in bigger benefits.

Lessons Learned from Abroad

Different societies worry more about some risks and less about others. This creates an opportunity for BCA practitioners and policy-makers to learn from one another. For example, use of BCA in the United States and the European Union provide these lessons, among others:

- Prioritized a full portfolio of important consequences above seeking a precise quantification of a narrow set of benefits and costs and ignoring others.
- Do not focus narrowly on administrative costs.
- Pursue analysis proportionate to the impact of the potential consequences, i.e., include an evaluation of information costs and information impacts.
- Assess international as well as domestic impacts.
- Apply impact assessment of BCA more widely, rather than limiting it to risk regulation. This will help counter the perception that BCA is an anti-regulatory tool.
- Study differences in BCA methods between the European Union and the United States.
- Apply impact assessment (BCA) to legislation as well as rulemaking.

- Apply the proportionality principle to all lawmaking.
- Use BCA to prompt the good as well as to reject the bad.
- Establish a central expert oversight body.
- Learn over time, across agencies and countries.

Areas of Continued Research Moving toward Increased Use of Benefit-Cost Analysis

Use of Shadow Prices

Nearly all BCA studies of important social policies require using a number of shadow values. Dollar values (shadow values) are attached to all the non-market items, and this has to be added to the dollar impact of the program so that any analysis includes *both* the marketed and the non-marketed benefits. Experience working with shadow values indicates that the non-market value of these effects is *at least* as big as the marketed effect. For example, the rate of return on an additional year of schooling may be as much as double what is commonly reported in the literature, including increases in cognitive achievement, gains in health, and the value of consumer decision-making.

Despite the daunting nature of identifying and valuing shadow prices, there are methods available for securing shadow values, in particular private non-market values. In this scenario, one method is to exploit the relationship between schooling and marketed inputs to produce non-market outcomes. In using this method, researchers would start with studies that establish a correlation between education and some non-marketed outcome, for example, improved health of an individual. In the studies there must be a reliable coefficient estimate relating schooling to the variable of interest (here improved health) as well as variables with market values that are likely to be associated with that outcome (for example, physician's bills).

Discount Rate

With respect to the discount rate, one can get a discount rate that reflects using the capital market sources. But people have used, and to some degree continue to use, a variety of other discount rates. If one uses another discount rate, one is logically forced to use a shadow price of borrowed funds. This recognizes the fact that by borrowing, the borrower is displacing a lot of investment that might have occurred.

Research needs to avoid incorporating multiple discount rates. For example, a park, which is going to give its benefits in kind, cannot be valued through users' present value willingness to pay because discount rates will vary among the users. In light of this, research should value all benefits and costs in the moment in which they are occurring on the cash flow basis. This is a problem that is not widely recognized.

Recent Critique

Richard Revesz and Michael Livermore's recent book *Retaking Rationality* reluctantly supports BCA as a means to support better environmental and health policy. Orrin Pilkey, in his June 2008 *Science* magazine review reiterates five of the "fallacies" Revesz and Livermore identify and address regarding the way BCA is done in practice:

1. All unintended consequences are bad.
2. Older people are less valuable.
3. People cannot adapt.

4. Industry cannot adapt.
5. People value only what they use.

Each of these issues is properly dealt with by Office of Management and Budget (OMB) Circular A-4 and federal agencies are well aware of them. A-4 was peer reviewed and went through notice, comment, and interagency review. John Graham and his staff, with the help of the President's Council of Economic Advisers (CEA), specifically Randall Kroszner and John List, reviewed the comments and revised the document. The document itself was an update of the 1996 OMB/CEA "Best Practices" document directed by Joe Stiglitz., former chair of the CEA. A-4 is a state-of-the-art set of guidelines that has been underutilized in the U.S. It has, however, been used by Canada and the European Commission in their recently issued BCA guidance. A-4 contains, for example the following responses to the above-quoted fallacies:

1. All unintended consequences are bad.
→ A-4 has a section on "Ancillary Benefits."
2. Older people are less valuable.
→ A-4 explicitly recommends using a higher yearly life value for seniors (VSLY) because they face higher overall risks and enjoy higher savings.
3. People cannot adapt.
→ A-4 recommends that for fairness and simplicity the population mean should be used so as not to undervalue the disabled when using QALYs for a disabled population.
4. Industry cannot adapt.
→ A-4 has a section on taking into account technical change and the learning curve.
5. People value only what they use.
→ A-4 states that not taking into account non-use value significantly understates benefits (p. 22). In addition, an entire section deals with Stated Preference Methods.

Economists should not let the legal profession dictate how BCA should be performed, and need do a better job showing how BCA, or perhaps Cost-Effectiveness Analysis, has improved social decision making by providing systematic and objective information. Critiques of BCA appear to have a simplistic view of how BCA is actually performed by the agencies and what the results of those BCAs indicate.

Office of Management and Budget

Since 1997, OMB has produced an annual *Report to Congress on the Costs and Benefits of Federal Regulations*. The Regulatory Right-to-Know Act requires OMB to report on costs and benefits in the aggregate, by agency, and by program or major rule. The record shows that from 1992 to 2007, according to over 100 BCAs that have been done for major rules and reviewed by the Office of Information Regulatory Affairs under Executive Order 12866 issued in 1993 (Executive Order 12291 before 1993), the federal government has produced approximately \$350 billion (conservatively) in annualized net benefits. In 2007 dollars, using the midpoints of ranges, costs were approximately \$120 billion and benefits four times larger at about \$480 billion.

Over the last six years, OMB has assessed more than 1,000 programs representing the vast majority of mandatory and discretionary spending in the federal budget. When OMB started assessing federal programs, over half of all programs were rated as ineffective or failing to demonstrate results. Today

the number of programs rated as ineffective or failing is down to 20 percent, representing a vast improvement in quality.

Despite this progress, the standards used to assess whether or not an agency has performed a rigorous, independent evaluation of its outcomes are fairly soft. OMB asks them to use the most rigorous evaluation practical, but very few programs have evaluations that are rigorous enough to show that the program itself, independent of other factors, is what is achieving the program's goals. For example, after the Secretary of Education inventoried several hundred math and science programs, OMB evaluated them and found that only one-third (115) had carried out evaluations they felt were rigorous enough. Of those, just 15 had conducted impact evaluations that were rigorous enough to isolate the effects of the program, and only three showed that the program was having a positive impact.

Though three seems like a small number of programs, Robert Shea (Associate Director of OMB) is optimistic about them—they are three pieces of evidence that decision makers did not have access to previously and can now be used to inform decisions.

Conclusions & Future Directions

Benefit-cost analysis has strong potential to inform and improve social policy and social policy decision making. BCA also has potential to play an analytic role around original legislation—perhaps managed through the Congressional Budget Office.

However, it's still difficult to compare among different interventions, which points to the potential role that BCA standards and principles will play. The set of issues within principles and standards that will be easier to deal with include: discount rates, age discounts, making decisions about which stakeholders to include or whether to frame it as total benefits for society, and accounting for uncertainty.