

Cost-Benefit Analysis Meets Participatory Democracy

Cost-benefit analysis provides an important but contested approach to the evaluation of environmental policies. In the United States, cost-benefit analysis was introduced in the 1930s to ensure that public investments in dams and water projects yielded returns comparable with private-sector investments (Porter, 1995, ch. 7). Since 1981, all new and revised U.S. federal regulations must be evaluated using cost-benefit analysis under a set of administrative procedures first implemented by Ronald Reagan (Smith, 1984). Critics, however, charge that cost-benefit analysis is inconsistent with the principles of democratic governance. The purpose of this essay is to consider this claim and its potential resolution.



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Most people accept the view that observed market prices provide a measure of the benefits that people derive from market goods and services. Cost-benefit analysis extends this reasoning to gauge the value people attach to collective goods. It is well-known, for example, that homes located in neighborhoods with good

air quality and access to high-quality natural areas command higher prices than otherwise identical homes lacking these amenities. Based on such observations, economists have developed an ingenious set of methods for inferring the value of non-market goods using data from markets for housing, employment, and so forth (See Pearce, 1993). The idea is that people's preferences are revealed by the presumably rational choices they make in contexts where their well-being is directly at stake.

More controversial is the contingent valuation method, in which people's willingness to pay for non-market goods is measured using surveys and interviews. This approach is the only tool available to determine the monetary magnitude of so-called 'non-use values', i.e. people's willingness to pay for public goods from which they personally derive no tangible benefit. To give one example, Hagen et al. (1992) found that U.S. households were willing to pay an average of \$144 per year to conserve the old-growth forest habitat of northern spotted owls in the Pacific Northwest. This holds true despite the fact that most Americans have no plans to ever visit this part of the country or the unique ecosystems that would be conserved. With a total of 94 million households, Hagen et al.'s study suggests that spotted owl conservation would yield total benefits of some \$14 billion per year – a figure that is substantially higher than the costs that conservation would impose through reductions in commercial timber supplies.

On what grounds might cost-benefit analysis be characterized as undemocratic? Authors such as Dryzek (2000) interpret democracy

as a system of governance through which decisions are taken through a process that strongly emphasizes public debate and deliberation. Advocates of this view claim that active engagement within civil society is essential if citizens are to refine their personal value judgments and reach “workable agreements” (Dryzek, 2000, p. 170) that represent an effective synthesis or accommodation between different points of view. In this perspective, democracy is a mechanism through which members of society reach consensus on the norms and values that should guide public decisions and the relationships between private-sector actors. Such social values are conceptually distinct from the mere aggregation of the consumer preferences held by individual persons.

In his seminal book *The Economy of the Earth*, Mark Sagoff (1988, ch. 4) compares the contingent valuation method to a jury trial in which the presiding judge asks each juror to provide his or her private opinion regarding the defendant’s innocence or guilt after hearing only a brief synopsis of the case. After interviewing each juror, the judge decides the case by comparing the number of votes cast for the verdicts of ‘guilty’ and ‘innocent.’ According to Sagoff, this approach is problematic for two key reasons:

1. Forming meaningful judgments regarding complex and unfamiliar issues – the facts of a criminal indictment or the merits of conserving spotted owls – requires immersion and participation in an information-rich environment.
2. In a U.S. criminal trial, the case is decided through a deliberative process in which jurors quite literally must reach consensus on the core facts of the case and their moral and legal significance.

A substantial empirical literature supports the hypothesis that people often do not hold the kind of settled value judgments that would be required to provide robust estimates of willingness to pay for goods with non-use values using contingent valuation (see Vatn, 1994). Subtle changes in the wording of a survey or in the information provided to respondents can have marked impacts on the substantive results of a valuation exercise. Bateman and Mawby (2004), for example, showed that even the interviewer’s attire can make a difference – willingness to pay increases when the respondent is approached by a better-dressed interviewer.

To address this set of difficulties, authors such as Brown *et al.* (1995) have called for the use of deliberative valuation, an approach in which small groups of individuals are charged with the tasks of: (a) reviewing and discussing the facts and values that pertain to the provisioning of a particular public good; and (b) reaching agreement on the maximum amount of money that society should spend to procure this good through the expenditure of public funds. This approach is illustrated by the work of Gregory and Wellman (2001), who employed deliberative groups to explore social willingness to pay for the restoration and enhancement of ecosystem functioning in the Tillamook Bay estuary in coastal Oregon. In a similar vein, James and Blamey (2004) used deliberative valuation to gauge social willingness to pay for the conservation of ecological resources in the Australian national park system.

Deliberative valuation differs from conventional cost-benefit analysis in two key respects. First, while cost-benefit analysis assumes that people have pre-existing preferences that can be measured using non-market valuation methods, deliberative valuation assumes that value judgments

are socially constructed through civic engagement. Second, while cost-benefit analysis calculates total benefits to society by simply adding up the benefits accruing to each individual, deliberative valuation emphasizes the importance of reaching a consensus that balances the distinct values and preferences of each participant. As Howarth and Wilson (2006) demonstrate in an analysis that combines elements of democratic theory and cooperative game theory, the deliberative approach flows logically from the premise that individuals should have a right to participate in the development of public policies and to consent to the solutions that are arrived at through collective engagement. Moreover, Howarth and Wilson show that deliberative valuation and conventional cost-benefit analysis can yield different policy recommendations under plausible and well-defined circumstances. While this area of research is currently in its initial stages, such findings point to the fruitfulness of linking the methods of non-market valuation with the principles of participatory democracy.

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