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Cost-Benefit Analysis

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Cost-benefit analysis (CBA) is a decisional technique that is now widely used by United States governmental bodies. CBA is "welfarist" and "commensurabilist": it describes the various effects of governmental choices on human well-being and measures their impact on a single, monetary scale. CBA has its intellectual roots in welfare economics, specifically in the construct of Kaldor-Hicks efficiency, and much of the technical literature on CBA continues to see it as a device for implementing Kaldor-Hicks efficiency.

However, some recent scholarship argues that CBA is defensible quite apart from Kaldor-Hicks efficiency. Whatever the defense, CBA is controversial. Some have criticized it for equating welfare with preference satisfaction; for ignoring the distribution of welfare; for ignoring nonwelfarist considerations; for commensurating goods that are "incommensurable"; and for having perverse effects in practice. The force of these criticisms is debatable and, in any event, CBA is now entrenched as one of the main policy-analytic tools employed by American governmental agencies.

Theory and Practice

Efficiency is a key notion for welfare economics. Efficiency can mean either Pareto efficiency or Kaldor-Hicks efficiency. A governmental project (meaning any kind of governmental choice, such as a regulation, a public works project, or a spending program) is Pareto efficient, relative to the status quo, if at least one person is made better off by the choice and no person is made worse off. Virtually no one disputes that a Pareto-efficient project is normatively attractive. Nevertheless, in practice, very few governmental projects are Pareto efficient.

The construct of Kaldor-Hicks efficiency, developed by welfare economists during the 1930s and 1940s, purports to guide choice when the criterion of Pareto efficiency is inapplicable. A project is Kaldor-Hicks efficient, relative to the status quo, if the "winners" (those whose well-being is improved) could hypothetically compensate the "losers," leaving at least some better off and no one worse off. Here, by contrast with Pareto efficiency, there has been much controversy. This focuses on the hypothetical nature of the Kaldor-Hicks criterion: it is not obvious why a choice that makes some persons worse off is normatively attractive merely because these individuals, hypothetically, could be compensated for their losses.

Welfare economists originally developed CBA as a tool for implementing Kaldor-Hicks efficiency. CBA measures welfare effects on a money scale, using the device of "willingness to pay" (WTP) or "willingness to accept" (WTA). Imagine that person P1 would benefit from a governmental project, relative to the status quo, and that P2 would be made worse off. The effect on P1 can be monetized by determining her WTP: with the amount of money deducted from P1's resources along with the implementation of the project, she would be neither better off nor worse off than in the status quo. The effect on P2 can be monetized by determining his WTA: with the amount of money added to P2's resources along with the implementation of the project, he would be neither better off nor worse off than in the status quo. A project is evaluated by aggregating its benefits (the total WTP of those who benefit) and subtracting its costs (the total WTA of those who are harmed). Projects are ranked in the order of their net benefits: a project with net benefits, relative to the status quo, is better than the status quo; and between two projects, the one with greater net benefits is better.

In practice, of course, various approximating techniques are employed to estimate the sum of WTP/ WTA. Nevertheless, the notion of aggregate WTP/ WTA lies at the core of CBA. In

addition, at least traditionally, the literature justifies the aggregate WTP/WTA criterion with reference to Kaldor-Hicks efficiency. With some technical caveats, it is typically true that a Kaldor-Hicks-efficient project has positive aggregate WTP/WTA, and vice versa.

CBA has been widely used by U.S. governmental agencies since 1981, when President Ronald Reagan (1981–1989) by executive order required agencies to prepare formal cost-benefit analyses for major rule making and to comply with a cost-benefit standard in issuing rules where statutorily permissible. Subsequent presidents have retained this requirement. Although some federal statutes preclude a cost-benefit standard, many do not. Federal agencies now routinely measure a wide range of welfare impacts on a monetary scale: not merely pecuniary effects or the loss of marketed goods but also the risk of death, physical injuries or disease, and environmental damage.

Two main techniques are employed to estimate WTP/WTA. *Revealed-preference* studies look to behavioral evidence of individual valuations. For example, wage differentials between riskier and less risky jobs are evidence of WTP/WTA for the risk of death. *Stated-preference* studies (also called *contingent-valuation* studies) rely on interviews in which respondents are asked to state WTP/WTA for various effects. State governments and the U.S. Congress also use CBA to some extent.

Criticism

Criticisms of CBA are multifold. One involves the practical impact of CBA. It is clear that CBA influences federal agency practice in a procedural sense: bureaucratic routines have developed for producing formal cost-benefit documents to justify agency decisions. What its substantive impact has been is less clear. Some suggest that the technique is sufficiently elastic that agencies can easily choose projects for political or ideological reasons and then rationalize the choices post hoc using CBA. The force of this criticism is unclear. There is a small political-science literature that examines the effects of CBA, but scholars need to carry out much more research.

A different line of criticism attacks the criterion of Kaldor-Hicks efficiency to which CBA is traditionally linked; and some recent scholarship has attempted to respond to this criticism by delinking the two. For example, CBA might be a rough-and-ready proxy for overall welfare, a device that enables elected officials to monitor agencies, or a cognitive tool that by insisting on comprehensively describing and quantifying the effects of governmental choice helps citizens, political overseers, or decision makers overcome their biases and “blind spots.” How persuasive these novel defenses of CBA are will depend, in part, on the political and institutional issues just noted.

Other criticisms focus on the preferentialist, aggregative, welfarist, and commensurabilist qualities of CBA. CBA traditionally equates well-being with preference satisfaction. Surely, poor information or irrationality can distort an individual's preferences. CBA is responsive, in principle, to this criticism. One can define WTP/WTA in terms of well-informed and well-considered preferences, rather than actual preferences, and in practice agencies often do (at least implicitly) attempt to limit the effect of poor information or irrationality on WTP/WTA.

CBA is indeed aggregative, focusing on total costs and benefits rather than the distribution of welfare. Some scholars have suggested the use of distributive weights, which would multiply WTP/WTA amounts to give greater weight to welfare impacts on the poor or others whose level of welfare is low; but the technical literature here is relatively slim, and in practice,

agencies almost never use distributive weights. One must concede that CBA does not take account of moral rights or other nonwelfarist considerations. The whole thrust of the technique is welfarist, and so a response to the nonwelfarist criticism either must argue that plausible nonwelfarist considerations such as rights actually lack normative relevance (a controversial, although thinkable position), or it must acknowledge that governmental decision makers cannot rely on CBA as their sole decisional technique.

The "incommensurability" critique objects to the use of a monetary "price tag" for certain goods, such as life or environmental preservation. The critique here could be that these goods are qualitatively more important for human welfare than wealth, that measurement is too difficult, or that the very process of measurement corrupts the goods. The first part of this criticism is arguably the most powerful. If well-informed individuals truly have an infinite WTA for some good, then CBA breaks down. However, talk of "incommensurability" may signal discomfort with thinking about the trade-off rather than a qualitative ordering. For example, it is hard to believe that no amount of money could compensate an individual for incurring a small risk of death; rather, identifying that amount would be difficult and potentially upsetting for the subject.

- Pareto efficiency
- efficiency
- incommensurability
- welfare
- cost benefit analysis
- welfare economics
- irrationality

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See also

- Coase Theorem
- Economics, Law and
- Efficiency
- Externalities and Social Costs
- Information
- Normative Economics
- Regulatory Unreasonableness
- Risk
- Utility Maximization

Further Readings

Adler, Matthew D., and Eric A.Posner, eds. (2001). Cost-Benefit Analysis: Legal, Economic, and Philosophical Perspectives. Chicago: University of Chicago Press.
Adler, Matthew D., and Eric A.Posner, eds. (2006). New Foundations of Cost-Benefit Analysis. Cambridge, MA: Harvard University Press.
Freeman, A. Myrick, III. (2003). The Measurement of Environmental and Resource Values: Theory and Methods,
2d ed.
Washington, DC: Resources for the Future.
Mishan, E. J. (1988). Cost-Benefit Analysis: An Informal Introduction,

4th ed.
London: Unwin Hyman.
Sunstein, Cass R. (2002). The Cost-Benefit State: The Future of Regulatory Protection. Chicago: American Bar Association.