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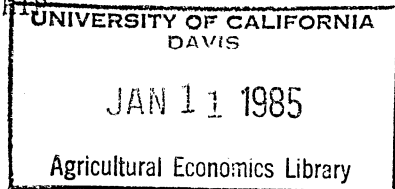
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BENEFIT COST ANALYSIS AND THE RELATIONSHIPS
BETWEEN CITIZENS AND GOVERNMENT*

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There is some tendency in the literature to treat benefit cost analysis (BCA) as an extension to the public sector of the economic feasibility studies long used in the private sector. In the folk language, this idea has its counterpart in the notion that it would be desirable to run government like a business.

I believe these ideas are not merely economically and philosophically fallacious. They do BCA a disservice by inadvertently setting up a strawman that readily can be demolished. It really doesn't make much sense to run government like a business. On the contrary, it is cogently argued that government exists because the people in their collective wisdom understand that there are some important things that business just cannot do and some socio-cultural goals that business serves poorly. Government exists, among other reasons, to give citizens some respite from business. Surely, then, techniques to help run government like a business deserve suspicion.

The rationale for BCA must surely be sought elsewhere. Rather than as a vehicle for imposing on government the values appropriate to private firms, we must understand BCA in the context of a theory of government itself.

Normative Theories of Government

While social contract theory is now generally considered obsolete, modern American discussions of the relationship between citizens and

AAEA paper 104

government are often framed in terms familiar to those conversant with social contract theory. To social contract theorists, the fundamental question was this: Where preferences differ among individuals but circumstances require collective action, such action necessarily involves a degree of coercion. Given this, under what circumstances is governmental coercion justified? What are the limits to the legitimacy of authority? The roots of modern political and economic approaches to collective choice can be found in three variants of social contract theory.

(i) Individualism, Voluntary Exchange, and Unanimity

Locke's version of the social contract assigned authority to the individual. Government, deriving its authority from the people, must act only in the public good. Some commentators have seen in Locke's social contract not merely a rationale for the overthrow of governments which have violated the public trust, but strict limits to the authority of any government. That is, individuals are guaranteed certain rights and a government invading or denying these rights would exceed its rightful authority. Thus, Locke is seen as a founder of philosophical individualism.

Modern individualism, as expressed by, for example, the political economist Buchanan, emphasizes Pareto-safety in economics and in politics. Pareto-safety is the criterion that no change which harms any individual can be considered an improvement. In economic activity, this criterion is satisfied by voluntary exchange among individuals whose expectations are secured by completely specified, enforced, and transferable property rights. Assuming the individual is the best (the only) judge of his own well-being, we can be assured that no one would voluntarily enter a trade which would make him worse-off.

The fundamental economic measures of value, WTP and WTA, which under ideal conditions converge to market price at the trading margin, are those that emerge from voluntary exchange.

In the political sphere, Pareto-safety means that a proposed change must enjoy unanimous consent if it is to be implemented. The idea of the "general will" is explicitly denied. All that matters is the individual, and no individual should be coerced into accepting political change which is not in his interest. Recent developments include incentive-compatible mechanisms, which in concept permit simultaneous determination of the optimal quantities of public (i.e., nonrival and nonexclusive) goods and optimal individual taxes. In principle, these devices solve the conflict between diverse individual preferences and the necessity of collective action: since each person pays his/her individual WTP (but no more) for goods, each would voluntarily consent to the optimal level of collective provision.

(ii) The General Will, The Public Interest, and the Social Welfare Function

Rousseau's version of social contract theory starts with the premise that all men are bound to the realization of equality, without which politics and justice are contradictions in terms. Governments expressing the "general will" must legislate only laws which are addressed to the common good of the society's members and which extend the same rights to and impose the same duties on each citizen.

Rousseau's philosophy foreshadows the modern emphasis on political equality and constitutional government. While Locke emphasizes sovereignty of the individual, Rousseau stresses the active participation of citizens in the political process as an indispensable condition for government by consent.

Modern public interest theories of government express faith that deliberative bodies are capable of identifying and interpreting the general will and of establishing policies and programs to implement it. To promote the general will over the interests of a powerful but selfish few, some considerable regulation of individual activities for the "public health, welfare, safety, and morals" may be justified. There is no need to minimize the scope of government, so long as government serves the interests of the general public. Thus, programs to promote economic activity, to rectify "market failure" (i.e., to internalize externalities and to provide public goods and "merit" goods), and to promote equality of economic opportunity may all be seen as enhancing the general welfare and thus within the purview of government. Some conflict between individual aspirations and the general will is inevitable, but public interest theorists hope that individuals will be adequately protected by constitutional procedures and majority institutions.

In mainstream economics, public interest and general will notions are expressed in the concept of the social welfare function, which provides a unique and unambiguous ranking of social states. Thus, assuming individual aspirations sometimes come into conflict, a social welfare function must specify the social consensus as to which kinds of individuals count how much. In practice the social welfare function is empirically elusive while there is much controversy, at the theoretical level, about the possibility of its existence.

The public interest/social welfare function approach permits a wide range of regulatory initiatives, public investments, etc. A case can be made that these things are legitimate uses of authority in the public interest. While it is seldom possible to prove or disprove such a case objectively, public interest doctrine does not require this kind of proof.

Rather, its premise is that, given a satisfactory political environment, those things that are approved through the public decision process will, ipso facto, be in the public interest.

(iii) Utilitarianism, the Potential Pareto-Improvement, and the Benefit Cost Criterion

Bentham, who was influenced by the social contract theorists and the early classical economists, popularized the notion that man's motivations were the pursuit of pleasure and the avoidance of pain. It is due to his influence that the word "utility" acquired two meanings: its customary meaning of usefulness and, in technical economics, its association with individual satisfactions and thus preferences. Initially, utility was thought to be, at least in principle, measurable on some cardinal scale.

While the difficulties of the cardinal concept of utility were mostly theoretical in the case of individual choice, they became crucial for political philosophy when the analysis was expanded to collective choice. Bentham thought that the proper criterion for collective choices was "The greatest good for the greatest number". That sounded fair enough, but entailed obvious difficulties in the quite plausible case where very great good to a few might be directly opposed to rather trivial good for many. If cardinal utilities could be summed across individuals, however, that could provide one solution to the problem: choose the alternative which maximizes the algebraic sum of utilities.

As it turned out, that avenue proved to be dead end. Much later, around 1940, the concept of the potential Pareto-improvement (PPI) emerged. If the gainers from some proposed change could compensate those who would otherwise lose, the PPI criterion would find that change acceptable, even if compensation did not actually occur. Thus, the value indicators (WTP

and WTA) were consistent with those that would emerge from exchange, but the Pareto-safety protection of voluntary exchange was held to be unnecessary. Here, at last, was an empirically applicable criterion by which the utilitarian concept of "the greatest good for the greatest number" could be implemented.¹

The benefit cost criterion (that the benefits of change should exceed the costs, to whosoever they accrue) is widely argued to be identical with the potential Pareto-improvement. Benefit cost analysis (BCA) is an empirical test for PPIs. This has an important implication. Values are determined with the status quo as the reference point; that is, as though each affected party had a right to retain his current level of welfare. Thus, gains (benefits) are valued at the beneficiary's willingness to pay for the benefit (i.e., WTP). Losses (costs) are valued at the amount of compensation which would induce losers to accept the loss voluntarily (i.e., WTA). The burden of proof is placed on the proposed change. Thus, the actual and potential Pareto-improvement criteria should ideally agree when evaluating any set of alternative bundles of goods, services and amenities.

Nevertheless, the benefit cost criterion provides no security for the individual. If this were to become the universal criterion for collective decisions, individual rights would be completely subordinated to the overall good of the collective. Resource reallocation could then legitimately proceed with government taking from the inefficient and giving to the efficient (as opposed to the exchange process in which the efficient purchase those resources from the less efficient). Thus, philosophical individualists would be implacably opposed to such a collective rule. They favor efficiency, of course, but prefer that it emerge spontaneously from

individual transactions rather than be deliberately imposed by governments armed with benefit cost analyses.

Public interest theorists would be little happier with such a decision rule, since it would enshrine a narrow, unidimensional concept of the general will. Economists of the social welfare function school also find the benefit cost criterion unduly restrictive. That criterion can be interpreted as one very specific social welfare function: one in which money endowments are substituted for utility and all dollars are weighted equally regardless of the circumstances of their owners. Few who defend the social welfare function concept would consider this the only acceptable form for the social welfare function. It explicitly denies the relevance of any public interest beyond the algebraic sum of private interests weighted by private endowments.

Thus the benefit cost criterion is an unacceptable social choice rule to philosophical individualists, adherents of the public interest and social welfare function schools, and (for that matter) a good many utilitarians. Perhaps that is why we never find the benefit cost criterion in use as the basic public decision rule. When it is used at all, it is invariably superimposed on the body of existing law which in the United States bows in the direction of individualism (e.g., by codifying private property rights) and the public interest (e.g., by regulating private activities so as to protect the public health, welfare, safety, and morals). Benefits and costs become desiderata in the choice from a set of alternatives which satisfy the basic law of the land.

Summary

The message of this section can be summarized in two main points.

1. For all its faults, BCA is not an interloper from the private

domain but a procedure for implementing a particular philosophy of government.²

2. That philosophy is questionable in terms of the values implicit in other important philosophies of government influential in America. Thus, we cannot expect BCA to be decisive in the policy arena.

An interesting question -- should we expect BCA to have any influence in public policy? -- remains. To address this question, we turn to a more positivistic theory of government.

A More Positivistic Theory of Government and the Role of BCA

Social contract theory is an endogenous theory of government, one that seeks to derive normative principles. Consider, now, a modern endogenous model of government that is more positivistic in intent.

It is useful to view society as a collection of individuals seeking their own ends through all available avenues, private and public. Assume each attempts to maximize his wealth position. One's wealth position can be improved by receiving the economic surplus from productive activities and/or transfers. The rent-seeking individual is indifferent among these sources of personal benefit. Thus, in the rent-seeking model, potential Pareto-improvements are pure public goods. But, all is not lost. Observation suggests that societies, modern and traditional, develop institutions to provide public goods. Recent developments in the theory of repeated games have established the rationality of cooperative behavior in certain circumstances. The upshot is that public goods do get produced and distributed, although not always in optimal quantities.

So it is with PPIs. We are aware that dead-weight losses due to the success of others in using public institutions to gain transfers for

themselves limit our own economic aspirations. Rational rent-seekers seek also to limit the transfers that others obtain, and they do this for both efficiency and distributional reasons. It is impossible for each rent-seeker to police all the activities of other rent-seekers that might diminish the size of the economic pie. However, it is rational to seek establishment of a layer of standing institutions (watchdogs, if you will) to ensure that the rent-seeking activities of others do not get out of hand. It is rational to prefer that such institutions exist in general, even if there are particular instances when they make it difficult for one's own rent-seeking activities. It is also, of course, rational to seek to undermine particular watchdog institutions focused on one's own special domain of rent-seeking, and to undermine particular watchdog activities addressed to exposing the costs of one's own rent-seeking.

BC analysts are paradigm cases of watchdogs. The observation that others in the policy process are seldom speaking the language of PPIs, or are addressing these concerns with undisguised hostility, should not lead us to doubt the relevance of our own activities. It is our duty to draw attention to these things, the more so because most other participants are not. The watchdog institutions in which we work emerged endogenously in response to a demand for someone to address these concerns.

The observation that policy decisions do not always align with the benefit cost numbers does not constitute a test and a refutation of relevance and effectiveness of BCA. The issue is not: does BCA always carry the decision? Of course, it doesn't; and a good normative case can be made that it should not. Rather, the issue is does it make a difference? I have no doubt that, in its public role, BCA makes a difference.

In addition to its public role, BCA also exerts influence in a more immediately private role. While BCA identifies PPIs and is thus directed toward social product (a public good), its informational content includes much that is of interest to citizen rent-seekers as they pursue their interests through market and government institutions. Readers of BCA documents often can discern how policy proposals are expected to affect their own interests. This knowledge is useful as they decide what position to take vis-a-vis each proposal. Further BCA may well unearth a variety of information helpful in promoting their chosen positions.

If one accepts the argument that open exchange of information is salubrious for public decision-making, BCA plays positive public and private roles therein: the public role in reporting about PPIs, and the private role in providing information that individuals may use in identifying and pursuing their own advantage.

The Scientific Status of Benefit Cost Data

BCA requires assessment of the physical and biological consequences of change and the evaluation of the consequences in terms of the PPI criterion. In general, as one moves through the array of pertinent values -- from raw materials values, to current amenity use values, future use values, option and existence values -- assessments of consequences and their economic values becomes less reliable. The difficulties are compounded (on both the supply and demand sides) when one considers that change affects whole systems, not merely isolated components thereof.

These problems have lead some to be skeptical of the quality of BC data. An extreme reaction (Sagoff) has been to argue that BC analysts are essentially free to use at will those value categories that are not so

readily verifiable, so as to arrive at the bottom line BC result congenial to the researcher. Thus, BCA reduces to storytelling. More level-headed critics have worried that certain kinds of BCA data do not seem susceptible to treatment as refutable hypotheses. How then is quality control exerted over BCA results?

Popperian scientific objectivity is unattainable with respect to BC outcomes. I suspect that it is not merely technically difficult but logically impossible to pose and test meaningful and refutable hypotheses about many kinds of benefit and cost data. However, the element of criticism -- crucial to Popper's notions of both scientific objectivity and political interaction in the open society -- is pertinent to BCA. The theory and methods of BCA are sufficiently well-developed and, in many cases, the bodies of reasonably well substantiated or replicated data are sufficiently large, to provide a basis for criticism to enforce quality control in BCA. Where data are sparse and conjectures overreach the theory, there is no shortage of critics to point out these shortcomings.

None of this means that anything posing as a BCA should ipso facto be trusted. Rather, the process of criticism serves both to improve the quality of BCA and undermine the capacity of incorrect or imprecise BCA to mislead.

BCA: Strict Decision Rule or Information System?

These various considerations -- the normative objections to BCA; the ambivalent political status of BCA; and the reliance on criticism (which falls short of proof) for quality control -- all militate against the use of BCA as a strict decision rule for collective choice. On the other hand, we have identified good reasons why people would want to know the PPI

status of various proposals and why they enjoy considerable protection from being misled by shoddy or dishonest BCA work. Thus, BCA is a useful information system for public policy.

Finally, note that an obsession with utilitarian models of optimal collective choice leads to an excess of emphasis on the bottom line result of BCA: does the proposal offer a PPI? However, an enormous amount of information has been gathered and manipulated, in the process of getting to that bottom line. Much of this data is of direct interest to private and group participants in the policy decision process, since it speaks directly to the influence of proposed policies on their own opportunities to gather rents. This information helps these participants to decide their own positions relative to the proposal, and to construct a more persuasive case in favor of their preferred outcome.

Thus, the policy role of BCA as an information system would be enhanced by efforts to repackage the output of BCA. The bottom line remains important, but much more play could be given to information that is merely an intermediate product from the bottom line perspective but is vitally important to people who have personal interests and involvements in addition to some concern for PPIs.

Footnotes

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¹ Note that, while the PPI is clearly a welfare criterion of the utilitarian kind, several other utilitarian concepts of the good have been proposed and examined in the literature. The PPI is a (not the) utilitarian welfare criterion, and there are many utilitarians who have strong objections to the PPI.

² I have outlined the argument that BCA is an empirical test for PPI, that is, a formal structure for implementing a particular normative philosophy of government. That argument imposes some rather rigid rules on performance of BCA, one of them being that valuation should be done in a Hicksian compensating framework.

A quite different argument that gets some play is that BCA is a tool from the kits of the rational planners. This argument, were it valid, would serve to (i) discredit BCA in the policy arena, at least among those who consider the rational planning model of public administration discredited, and (ii) change the conceptual structure of BCA from that of a rigorous test for PPI to pretty much any kind of structured evaluative system the planners want. If BCA is merely a planning tool, what is to distinguish it from other planning tools? What is to defend its conceptual basis and empirical methods from renegotiation each time the planners perceive their objectives and/or information needs to have changed? How is the citizenry, with resources too limited to allow indepth examination of

each case, to interpret brief summary results of BCA if BCA itself is conceptually and empirically malleable at the whim of particular planners.

I believe it is a mistake to treat BCA as merely a tool of rational planners. True, some rational planners might choose to use BCA that way. It is possible to argue that the architects of the Flood Control Act of the mid-1930s had rational planning in mind when they called for evidence that proposed projects would produce benefits in excess of their costs. However, neither the drafters of the Flood Control Act nor the rational planners invented BCA. The philosophical and economic lineage of BCA traces from social contract theory through utilitarianism, classical and neoclassical economics, to the so-called new welfare economics of the PPI.

The rational planners may well find uses for BCA, but they have no claim to paternity of PPI concepts or the empirical methods developed for their implementation.

Reference

Sagoff, Mark (1981), "Economic Theory and Environmental Law," Michigan Law Review, 79:1393-1419.