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Promise and Performance

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14. Cost-Benefit Analysis

Much of this book has been concerned with the process through which policies are adopted and with the characteristics of policies adopted in the United States. This chapter extends those interests by discussing one principal method of policy analysis used when making policy choices: cost-benefit analysis. Because governments operate with limited resources and limited ability to predict the future, they must employ some techniques to help them decide how to employ those scarce resources. Cost-benefit analysis is the most commonly employed technique—other than the informal techniques arising from intuition and experience. The fundamental principle of cost-benefit analysis is that the project should produce a benefit for society greater than the cost of the project.[1] Second, when several projects promise to yield positive net benefits and all cannot be undertaken because of limited resources, then the project that creates the greatest net benefit to the society should be undertaken. This technique is perhaps most applicable to capital projects, but it can also be applied to other kinds of public programs.

There is obviously a decided utilitarian bias underlying cost-benefit analysis.[2] The costs and benefits of a project are all collapsed onto the single measuring rod of money, and those that create the greatest net benefit are deemed superior. This implies that the dominant value in society is economic wealth and, further, that more is always better. This is presumed to be true even if rather perverse distributional consequences arise from the program. I discuss the philosophical and practical issues that arise with cost-benefit analysis later in the chapter. These implications may be sufficiently troubling, especially in a democratic political system, to argue for alternative means of evaluating policies. But cost-benefit analysis does have the advantage of reducing all the costs and benefits of public programs to that single dimension, whereas other forms of analysis may produce apparent confusion by lacking such a dimension.

Principles of Cost-Benefit Analysis

In the world of cost-benefit analysis more is always better. Although it does

have serious intellectual foundations, which we explore in a moment, the method is in many ways no more than a systematic framework within which to collect data concerning the merits and demerits of a public program. And it is not a new idea: The Army Corps of Engineers used the technique as early as 1900 to evaluate the merits of proposed improvements to rivers and harbors. The basic idea is to enumerate the positive features of a program and attach a monetary value to them, and at the same time to enumerate the negative features and attach a monetary value to them. The net balance of costs and benefits will then determine if a program is economically feasible, although many other questions may still remain.

One principal idea underlying cost-benefit analysis comes from the tradition in welfare economics that has sought to develop an acceptable social welfare function, or a socially desirable means of making decisions.[1] One of the first criteria of this sort was the Pareto principle, which argued that a policy move was optimal if no move away from it could be made to benefit someone without hurting someone else.[4] Stated another way, a Pareto optimal move is one that benefits someone without hurting anyone. Clearly, in the real world of political decision making, moves of this kind are rare indeed, and politics is frequently about who gets what at the expense of whom. A substitute criterion was advanced by Kaldor and Hicks. They argued that a policy change was socially justified if the winners gained a sufficient amount to compensate the losers and still had something left for themselves.[5] This does not imply that those winners necessarily will compensate the losers, or that they could even identify them, but the idea is that the society as a whole is better off because of the overall increase in benefits. This obviously, then, is a justification of the reliance of cost-benefit analysis on any benefits and on the production of the greatest net benefit possible.

A second fundamental idea underlying cost-benefit analysis is that of the consumer's surplus.[6] Stated simply, this is the amount of money a consumer would be willing to pay for a given product, minus the amount he or she must actually pay. Consumers tend to value the first unit of a product or service they receive more highly than the second, and the second more than the third; the first quart of milk where there has been none is more valuable than the second. But these units are not priced marginally; they are sold at an average price. This means that the utility of increased production will give consumers a surplus value from the production. Thus, any investment that reduces the cost of the product or service produces a benefit in savings that increases the consumer surplus. The investment by government in a new superhighway that reduces the cost to consumers of driving the same number of miles—in time, in gasoline, and in potential loss of life and property—creates a consumer surplus. And

as the time, gasoline, and lives saved by the new highway may be used for other increased production, the actual savings represent a minimum definition of the improvement to society resulting from the construction of the new highway.

Also important in understanding cost-benefit analysis is the idea of opportunity costs: Any resource used in one project cannot be used in another. For example, the concrete and labor used to build the superhighway cannot be used to build a new dam. Consequently, all projects must be evaluated against other possible projects to determine the most appropriate way to use resources. Again, the basic idea of getting the most "bang for the buck" is important in understanding cost-benefit analysis.

Finally, in evaluating costs and benefits, we must be concerned with the role of time. The costs and benefits of most projects do not occur at a single time, but accrue over a number of years. If our superhighway is built, it will be serviceable for fifty years and will be financed over twenty years through government bonds. Policymakers must be certain that the long-term costs and benefits as well as the short-term consequences are positive. This, of course, requires some estimation of the shape of the future. We may estimate that our new superhighway will be useful for fifty years, but oil shortages may so reduce driving during that period that the real benefits will be much less than anticipated. Or, conversely, the value of gasoline may increase so much that the savings produced are more valuable than assumed at present. These kinds of assumptions must be built into the model of valuation for it to aid a decision maker.

In part because of the uncertainty of future costs and benefits, and in part because of the general principle that people prefer a dollar today to a dollar next year, the costs and benefits of projects must be converted to present values before useful cost and benefit calculations can be made. That is, the benefits that accrue to the society in the future have their value discounted and are consequently worth less than benefits produced in the first year of the project. Likewise, costs that occur in future years are lower than costs that occur in the first few years. Thus, cost-benefit analysis would appear to favor projects that have a quick payoff rather than greater long-term benefits; but perhaps higher maintenance and operation costs. While there may be a good logical justification for these biases in the method, they do certainly influence the kinds of program that will be selected and that will have definite social implications, not least of all for future generations.

Doing Cost-Benefit Analysis

To better understand the application of cost-benefit analysis we now work through the steps required to justify the construction of a new dam on the No-

where River. This project is being proposed by the Army Corps of Engineers, and we have to determine whether or not the project should be undertaken. We first have to decide if the project is feasible and acceptable and then if it is preferable to other projects that could be funded with the same resources.

Determining Costs and Benefits

One of the most important things to consider when performing a cost-benefit analysis, especially of a public project, is that all costs and benefits should be enumerated. Thus, unlike projects that might be undertaken in the private sector, public projects require an explicit statement of the social or external costs and benefits. In the public sector, projects whose strictly economic potential may outweigh their costs may not be adopted because of the possibility of pollution or the loss of external benefits such as natural beauty. In fact, one of the principal logical justifications for the public sector is that it should take into account these external factors and attempt to correct them in ways not possible in the private sector.[7]

Thus, for our dam project, we can think of two lists of attributes (see table 14.1). On one side are the costs of the project, the main one being the economic cost of constructing the dam, which should reflect the market valuation of the opportunity costs of using the same resources for other purposes. Also, the dam will impose an economic cost by flooding the houses and farmland of present inhabitants of the area. But there are also social, or human, costs involved here, as these farms have been in the same families for generations, and the farmers have resisted the project from the beginning. Finally, there are further social costs in that the proposed dam will impound a river that currently has some recreational value for canoeists and is essentially an unspoiled natural area.

TABLE 14.1
COSTS AND BENEFITS OF DAM PROJECT

Costs	Benefits
Construction costs	Hydroelectric power
Flooded land	Flood control
Relocation of families	Irrigation
Loss of recreation	New recreational opportunities

On the other side of the ledger are the benefits of the program. First, the dam will provide hydroelectric power for the region. In so doing it will provide a source of power that does not consume scarce fossil fuels and does not create the pollution that would result from producing the same amount of electricity

with fossil fuels. Also, the dam would help control the raging Nowhere River, which every spring overflows its banks and floods a number of towns and cities downstream from the proposed dam. Also, the impounded water behind the dam will provide irrigation water for the remaining farmers, enabling them to grow more crops. Finally, although canoeists will lose some recreational benefits as a result of the building of the dam, those who enjoy boating and waterskiing will benefit from the large lake behind the dam. Thus, although this dam does impose a number of costs on the society, it also provides a number of benefits in return, and we must now begin to attach some figures to these costs and benefits in order to be able to make a decision as to the feasibility and desirability of the project.

Assigning Value

Assigning a real monetary value to all the costs and benefits of this mythical project would be difficult. For some costs and benefits the market directly provides a value. For example, we know or can estimate the costs of building the dam and the value of the hydroelectric power it will produce. Although such costs are generally measurable through the market, the market may not fully measure the costs and benefits. For example, if our dam is to be built in a remote area with little more than subsistence agriculture, bringing in a large number of highly skilled and highly paid workers may distort prices and increase the costs of building the dam. Likewise, not only is the hydroelectric power salable but it may produce substantial secondary benefits (or perhaps costs) by stimulating industrialization in this rural and remote area. The experience of the Tennessee Valley Authority and its impact on the Tennessee Valley as a result of the development of cheap electric power illustrates this point rather nicely. We cannot fully predict these secondary benefits, nor can we rely on them to make the project feasible, but they do frequently occur.

Some other costs and benefits of the project, although not directly measurable through the market, can be estimated in other ways. For example, we have to estimate the dam's recreational value to the people who will use the lake to water ski and its cost to those who will no longer be able to use the river for canoeing. We can do this by estimating the people's willingness to pay for their recreation.[8] Just how much time and money are they willing to invest to enjoy their recreation? This will provide some measure of the economic value of the lake, or the free-flowing stream, to the population.

This means of valuation returns to the idea of the consumer's suplus. The first unit of a particular commodity is valued more highly than any subsequent units, so that as production is increased each unit is marginally less valuable to the consumer. In our dam example, if there have already been a number

of impoundments in the area, as there have been in the Tennessee Valley, then a new lake would have less value to consumers, and they would be less willing to pay than if this were the first lake in an area with a large number of free-flowing streams. Likewise, one more hydroelectric power station in an area that already has cheap electrical power is less valuable than it would be in an economically backward area, and consequently citizens would be less willing to pay for that new power plant.

Finally, on some aspects of the project, the market provides little or no guidance about valuation. For the farmers who are displaced by the project, we can place an economic cost on their land, their houses, and their moving costs. However, we cannot readily assign an economic value to those houses that are the ancestral homes of certain families and that are therefore more valuable than ordinary houses. Likewise, there is some value in not disturbing a natural setting, simply because it is natural, and this is a difficult thing to which to assign an economic value. As a result, at times absolute prohibitions are built into legislation to prevent certain actions, so planners cannot depend entirely on net benefit ratios. The Environmental Protection Agency's guideline for preserving the habitats of endangered species, which resulted in the now notorious case of the snail darter in the Little Tennessee River, is an obvious example of the application of regulations to prevent some actions regardless of the relative costs and benefits.

It is fortunate that the dam we are building does not require any direct decisions about loss of life or injury to human beings. For projects that do—for example, building the superhighway as a means of saving lives—we come to perhaps the most difficult problem of valuation: estimating the value of a human life.[9] Although it is convenient to say that life is priceless, in practice decisions are made that deny some people their lives when that loss of life is preventable. If this is the case, then some subjective, if not objective, evaluation is being made of the worth of lives. One standard method of making such a judgment involves discounted future earnings. In this method the life of the individual is worth whatever the individual could have earned in the course of his or her working life, discounted to present value. Therefore, a highly paid corporate executive's life is worth more than that of a housewife or a college professor. This mechanism for evaluating lives clearly conforms to the basic market valuation, although it can be clearly disputed on humane grounds. Another means of assessing the value of lives in performing a cost-benefit analysis uses the size of the awards to plaintiffs in legal cases of negligence or malpractice that resulted in loss of life. This constitutes another version of the market, albeit one in which considerations of human suffering and "loss of companionship" have a greater (some would say too great) impact on values.

Another means of assessing the value of a human life is somewhat similar to the "willingness to pay" criterion. Presumably individuals would be willing to pay almost anything to preserve their own lives and the lives of their loved ones. However, individuals engage in risky behavior and risky occupations all the time, and when they do so, they make a subjective statement about the value of their life.[10] Because we know how much more likely it is for a coal miner to be killed at work than it is for a construction worker—either in the mines or as a result of black lung—we can estimate from any differences in wages how much the individual would appear to value his life. This method does, of course, imply a certain level of knowledge that individuals may not have, and it assumes that the collective bargaining process, through which wages of coal miners are determined, accurately reflects both individual preferences and the market values of lives. It does, however, offer another feasible means of estimating the value of life, one that uses the assessment of individuals themselves rather than that of the market or the courts.

Discounting

We now return to the problem of time. The costs and benefits of a project do not all magically appear the year the project is completed, but typically are spread over a number of years. Table 14.2 shows the stream of benefits coming from the dam on the Nowhere River over a twenty-year period. This is the projected feasible lifetime of the project, as the Nowhere River carries a great deal of silt and the lake behind the dam is expected to fill with silt after that period. How do we assess these benefits and come up with a single number that we can compare with costs to determine the economic feasibility of the project?

TABLE 14.2
HYPOTHETICAL COSTS AND BENEFITS OF DAM PROJECT FOR TWENTY YEARS
($ millions)

	Year																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Costs	5	8	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Benefits	0	0	0	3	4	5	5	5	5	5	5	5	5	5	5	4	4	4	3	2

To calculate such a figure, we must compute the present value of the future benefits. We have already decided on the time span of the project; the only task that remains is to determine the discount rate that should be applied to a public investment. And, as with the valuation of costs and benefits, disagreements may arise about what that rate should be.[11] One method is to use the opportunity costs of the use of these funds. Presumably any money used in

a project in the public sector will be extracted from the private sector by some means such as taxation or borrowing, and consequently the rate of return these resources could earn if they were invested in private-sector projects is the appropriate rate of discount for public-sector projects. This is not always a practical solution, however, as rates of return differ for different kinds of investments, and investors apparently choose to put some money into each kind of investment. Is building a dam more like building a steel mill or more like investing in a savings account? And which of the many possible rates of return should be selected?

Several other issues arise with respect to the selection of a discount rate. First, in discussing projects for which most benefits are to accrue in the future, there is an element of uncertainty. In our example we have assumed that the probable life span of the dam will be twenty years, but in reality the lake may fill up with silt in fifteen years. Consequently, it may be more prudent to select a discount rate higher than that in the market because we cannot be sure of the real occurrence or real value of the benefits. And because these benefits are expected to be further away in time, they are less certain; therefore, even higher rates of discount should be applied. Also, with inflation and the uncertainties about the increase of oil supplies, we may need to be more conservative about discount rates.

Second, some argue that there should be a "social rate of discount" lower than that set by the market.[12] Such an arbitrarily set discount rate would be justified on the basis of the need for greater public investment and the need to provide a capital infrastructure for future generations. Further, as the size of the public sector is to some degree determined by the rate of discount, that rate should be set not by the market but by more conscious political choices concerning the level of public activity. But the economic argument is that in the long term the society will be better off if resources are allocated on the basis of their opportunity costs. If a public project is deemed unfeasible because of the selection of a market-determined discount rate, then the resources that would have been used in that project will produce greater social benefit in a project that is feasible under that rate of discount, regardless of whether the project is public or private.

Finally, a question arises about intergenerational equity. What do we owe our posterity or, put the other way around, what has posterity ever done for us? If the discount rate is set lower than that determined by the market, then we will tend to undertake projects that have an extended time value and will benefit future generations. But we will also deprive our generation of opportunities for consumption by using those resources as investment capital. This is as much a philosophical as a practical issue, but it is important for our understanding of alternative consequences arising from alternative choices of a rate of discount for public projects.

Using several discount rates, let us now work through the example of levels of benefit from the dam. At this writing, the prime interest rate in the United States is approximately 10 percent. If we use this market-determined interest rate, the $100 in benefits produced after one year is worth

$$V_P = 100/1.10 = \$90.91$$

And $100 in benefits produced after two years would be worth

$$V_P = 100/(1.10)^2 = \$82.64$$

And $100 in benefits produced in the twentieth year of the project would be worth only $14.87 in present value. Thus, if we use this rate of discount in evaluating a project, the net benefit of that project at present value is positive. This project has a rather high cost during its early years, with the benefits occurring gradually over the twenty years. With a higher discount rate such a project is not feasible. If we use a discount rate of 18 percent, which would have seemed very reasonable in the late 1970s, then the net benefit of the dam at present value would be negative and the project is economically infeasible.

Discounting is a means of reducing all costs and benefits of a project to their present value, based on the assumption that benefits created in the future are worth less than those created immediately. Philosophically or ideologically one might want a low discount rate to encourage public investment, but object to the entire process of discounting. Should we simply not look to see if the stream of benefits created is greater than the total costs, no matter how they occur? This would, of course, be equivalent to a discount rate of zero. This point might be valid philosophically, but—until the argument is accepted by economists, financiers, and government decision makers—public investment decisions will be made on the basis of present value and on the basis of interest rates that approximate the real value of the rate of return in the private sector.

Choosing among Projects

We have determined that our dam on the Nowhere River is feasible, given that a benevolent deity has provided us a discount rate of 10 percent for this project. But it is not yet time to break ground for the dam. We must first compare our project with the alternative projects for funding. Thus, the opportunity-cost question arises not only with respect to the single project being considered and the option of allowing the money to remain in private hands but also with regard to choices made among possible projects in the public sector.

We have said that the fundamental rule applied is to select the project that will produce the greatest total benefit to society. If we apply the Kaldor-Hicks criterion, we see that this project is justified simply because it will create more benefits to spread around in the society and presumably compensate those who lost something because the project was built. Thus, in the simplest case, if we were to choose to undertake only a single project this year—perhaps because of limited manpower for supervision—we would choose Project D from table 14.3 simply because it creates the largest level of net benefit. By investing less money in Projects A and B we could have produced slightly more net benefit for society, but we are administratively constrained from making that decision.

TABLE 14.3
COSTS AND BENEFITS OF ALTERNATIVE PROJECTS
($ millions)

Projects	Costs	Benefits	Net Benefit
A	70	130	60
B	90	140	50
C	200	270	70
D	150	250	100

More commonly, however, a particular resource—usually money—is limited and, with that limitation in mind, we have to choose one or more projects that will result in maximum benefits. Let us say that the ten projects listed in table 14.4 are all economically feasible and that we have been given a budget of $50,000 for capital projects. Which projects should we select for funding?

TABLE 14.4
CHOOSING A PACKAGE OF PROJECTS BY NET BENEFIT RATIO
($ millions)

Project	Costs	Cumulative Costs	Benefits	Net Benefits	Net Benefit Ratio
A	2	2	12	10	5.0
B	4	6	20	16	4.0
C	10	16	40	30	3.0
D	10	26	35	25	2.5
E	8	34	28	20	2.5
F	16	50	51	35	2.2
G	2	52	6	4	2.0
H	15	67	42	27	1.8
I	10	77	26	16	1.6
J	18	95	45	27	1.2

In such a situation, we should rank the projects according to the ratio of net benefits to initial costs (the costs that will be reflected in our capital budget), and then we should begin with the best projects, in terms of the ratio of benefits to initial costs, until the budget is exhausted. In this way, we will get the greatest benefit for the expenditure of our limited funds. And projects that we might have selected if we were choosing only a single project would not be selected under these conditions of resource constraint.

This problem of selecting among projects demonstrates the first of several problems that arise from the application of the basic rule of cost-benefit analysis. Given the budgetary process and the allocation of funds among agencies, we may produce a case of "multiorganizational suboptimization." This is a fancy way of saying that if our agency has been given $50 million, we will spend it, even if our agency has a project that will produce a greater benefit to society but that exceeds our budget. Thus, if I had the money, I would continue to fund the projects listed in table 14.4 even though several of them have relatively low cost-benefit ratios and even though there were better projects elsewhere in the government. Of course, I will have been asked what benefits my proposed projects would produce when the capital budget was being considered, but because of political considerations my budget is excessive for the benefits that could be produced from alternative uses of the money. This is not, of course, a flaw in the method; it is a flaw in the application of the method in complex government settings.

A not unrelated problem is that cost-benefit analysis places relatively little importance on efficiency or cost effectiveness. It looks primarily at total benefits rather than at the ratio of costs produced. It could be argued that this tends to favor the ax over the scalpel as a cutting tool. In other words, the method tends to favor large projects over small projects. This may be an inefficient use of resources and may also lock government into costly projects, whereas smaller projects might provide greater flexibility and greater future opportunities for innovation. Capital projects are inherently lumpy, so that only projects of a certain size are feasible, but the concentration on total net benefits in cost-benefit analysis may exaggerate the problems of size and inflexibility.

We have now worked our way from the initial step of deciding what costs and benefits our project provides to deciding if it is the best project to undertake, given our limited resources. At each stage we had to use a number of assumptions and approximations to reach a decision. The cost-benefit analysis does provide a "hard" answer as to whether or not we should undertake a project, but that answer should not go unquestioned. We now discuss some criticisms of cost-benefit analysis and some possible ways of building greater political and economic sophistication into the use of the method.

Criticism and Modification

We have discussed some critical problems regarding cost-benefit analysis. Such things as the difficulty of assigning monetary values to nonmonetary outcomes, the choice of time ranges and discount rates, and the reliance on total net benefit as the criterion all introduce uncertainties about the usefulness of the outcome. We now discuss more basic problems that arise concerning the method itself and its relationship to the political process. Perhaps the most important is that some naive politicians and analysts might let the method make decisions for them, instead of using the information coming from the analysis as one element in their decision-making process. If the method is used naively and uncritically, its application can result in decisions that many people would deem socially undesirable. For example, all costs and benefits are counted as equal in the model, and, even if they could be calculated accurately, some individuals would argue that the cost of death might be more important than other costs. Thus, we might wish to reduce deaths to the lowest possible level and then perhaps apply a cost-benefit analysis to other aspects of the project. We might use this "lexicographic preference" as a means of initially sorting projects, when a single dominant value such as life or the preservation of endangered species is involved.

Perhaps the most socially questionable aspect of the cost-benefit analysis is that it gives little attention to the distributive questions involved in policies.[13] All benefits and costs are counted equally in the method, regardless of who receives or bears them. A project that increased the wealth of a wealthy man by several million dollars and was financed by regressive taxation of $100,000 would be preferred in cost-benefit calculations to a project that produced a benefit of $900,000 for unemployed workers and was financed by progressive taxation of $200,000. This is an extreme example, but it does point to the distributional blindness of the method. Of course, advocates of the method justify it by saying that the society as a whole will be better off with the greatest increase in benefits, and presumably winners can later compensate losers. In reality, however, winners rarely if ever do so, and usually losers cannot be directly identified anyway. Redistributional goals may be included directly in the analysis by attaching some weight to positive changes in the salaries of low-income persons, or redistributional objectives may be imposed on the analysis after the fact. However, because government exists in part to attempt to redress some of the inequities produced in the marketplace, some attention must be given to redistributional goals when evaluating public projects.

Furthermore, the utilitarian and "econocratic" foundations of cost-benefit analysis may not be entirely suitable for a functioning political democracy.[14] In cost-benefit analysis, money is the measure of all things, and decisions made according to the method can be expected to be based on the economic rather than the political values involved. (I discuss in chapter 15 some possible ethical alternatives that may be more suitable in a democracy.)

Finally, cost-benefit analysis has been referred to as "nonsense on stilts."[15] This means that there are so many assumptions involved in the calculations, and so many imponderables about the effects of future projects, that cost-benefit analysis is the functional equivalent of witchcraft in the public sector. Although these criticisms have been phrased in exaggerated language, to some degree they are well taken. It is difficult if not impossible to know the value of eliminating an externality, just as it is difficult to know just how much life, health, and snail darters are worth. Cost-benefit analysis can be used to avoid difficult political decisions and to abdicate responsibility to experts who can supply the "correct" answer. Of course, this fundamental abdication of political responsibility is indeed an "insidious poison in the body politick." Only when the results of analysis are integrated with other forms of analysis, such as ethical analysis, and are combined with sound political judgment can the "correct decisions" ever be made.

Notes

1. Edith Stokey and Richard Zeckhauser, *A Primer for Policy Analysis* (New York: Norton, 1978), 137.

2. Duncan MacRae, "Present and Future in the Valuation of Life" (paper presented to the 1980 convention of the American Political Science Association, Washington, D.C., August 1980).

3. See, for example, Kenneth Arrow, *Social Choice and Individual Values*, 2d ed. (New York: Wiley, 1963).

4. Richard Zeckhauser and Elmer Schaefer, "Public Policy and Normative Economic Theory," in *The Study of Policy Formation*, ed. Raymond A. Bauer and Kenneth J. Gergen (New York: Free Press, 1968), 45-53.

5. Ibid., 58-60.

6. E.J. Mishan, *Cost-Benefit Analysis*, expanded ed. (New York: Praeger, 1976), 24-54.

7. E.J. Mishan, "The Postwar Literature on Externalities: An Interpretative Essay," *Journal of Economic Literature*, March 1978, 1-28.

8. Stokey and Zeckhauser, *A Primer for Policy Analysis*, 149-52.

9. Steven E. Rhoads, ed., *Valuing Life: Public Policy Dilemmas* (Boulder, Colo.: Westview, 1980).

10. Jack Hirshleifer and David L. Shapiro, "The Treatment of Risk and Uncertainty," in *Public Expenditure and Policy Analysis*, ed. Robert H. Haveman and Julius Margolis, 3d ed. (Boston: Houghton Mifflin, 1983), 145-66.

11. For a good general discussion of the problems of discounting, see Robert E. Goodin, "Discounting Discounting," *Journal of Public Policy*, February 1982, 53-71.

12. W.J. Baumol, "On the Social Rate of Discount," *American Economic Review*, September 1968, 788-802.

13. Edward M. Gramlich, *Cost-Benefit Analysis of Government Programs* (Englewood Cliffs, N.J.: Prentice-Hall, 1981).

14. Peter Self, *Econocrats and the Policy Process: The Politics and Philosophy of Cost-Benefit Analysis* (London: Macmillan, 1975).

15. Peter Self, "Nonsense on Stilts: Cost-Benefit Analysis and the Roskill Commission," *Political Quarterly*, July 1970, 30-63.

15. Ethical Analysis of Public Policy

All the mathematical and economic capabilities in the world and all the substantive knowledge of policy areas are of little consequence if we have no moral or ethical foundation on which to base our evaluation of policies. Most of the important questions concerning policy analysis have as much to do with the "should" questions as with the "can" questions. That is, most important policy decisions involve an assessment of what should be done by government as much as they involve the feasibility question of what government can do. The range of technical possibilities is frequently broader for policymakers than the range of ethically justifiable possibilities. But, unfortunately, many values that should affect policy decisions in the public sector conflict with one another. Analysts frequently face choices among competing values rather than clear-cut decisions about options that are either all right or all wrong. In making almost all allocative decisions, policymakers must choose among worthy ends; they do not have the luxury of picking the only acceptable policy. This chapter presents several of the important ethical premises that influence policy decisions and some of the difficulties of implementing those values in real public-sector decisions.

Fundamental Value Premises

Any number of premises have been used to justify policy decisions. These range from vague concepts such as "Americanism," "Aryan purity," or the principles of Marxism-Leninism to well-articulated philosophical or religious principles. The main difficulty in ethical analysis of policy decisions is finding principles that can be consistently applied to a number of situations and that produce acceptable decisions in those situations.[1] Words like "justice," "equity," and "good" are thrown about in debates over public policies in a rather cavalier fashion. The analyst must attempt to systematize his or her values and learn to apply them consistently to all types of issues. The analyst must be a moral actor as well as a technician, or else remain what Meltsner refers to as a "baby analyst" throughout his or her career.[2] As we pointed out in discussing the application of cost-benefit analysis (see chapter 14), values are embedded throughout the

policy process. In order to understand what one wants, one must explicate and examine those values. In this chapter I discuss four important value premises for making policy decisions: preservation of life, preservation of individual autonomy, truthfulness, and fairness. These values would probably be widely accepted by the public as important standards for assessing policies, and they have a rather wide range of applicability. As I point out, however, they cannot be applied unambiguously, and conflicts are embedded in each issue as well as across the several issues.

The Preservation of Life

The preservation of human life is one of the most fundamental values that we could expect to see manifested in the policy process. The sanctity of life is, after all, a fundamental value of Judeo-Christian ethics and is embodied in all professional codes of ethics.[3] Despite the importance of human life as an ethical criterion, a number of conflicts arise over its application.

One obvious conflict exists between identifiable lives and statistical lives. Here we are faced with the tendency of individuals to allocate resources differently if known lives are at stake from how they would evaluate them if some unspecified persons would be saved some time in the future. If we know that certain individuals will die in the near future, we tend to give them the resources they need, even though the same resources could save many more—unidentifiable—lives if we allocated them differently. In medical care this is manifested in the conflict between acute and preventive medicine. Preventive medicine is almost certainly the most cost-effective means of saving lives that could be lost as a result of cancer, circulatory diseases, or accidents, but it is difficult to identify the direct beneficiaries. However, the victims of the disease are clearly identifiable, have identifiable families, and consequently are more difficult to refuse care than the unknown statistical beneficiaries of preventive medicine. This pattern was referred to earlier as the "mountain-climber syndrome," in which we may spend thousands of dollars to save a stranded mountain climber, even though we could save many more lives by spending the same amount of money on highway accident prevention.[4] It is virtually impossible to say no to mountain climbers and their families, although if the appropriate ethical criterion is to save as many lives as possible, that is what we should do.

But even if all the lives at stake in a decision are identifiable, in some instances allocative decisions must be made. Table 15.1, although it concentrates on a relatively small number of individuals who are potential users of a kidney machine, points out the broader problem of being forced to choose among lives. Each individual in table 15.1 is worthy of receiving the lifesaving treatment simply because he or she is a human being. But because kidney machines are scarce

TABLE 15.1
WHO SHALL LIVE AND WHO SHALL DIE?

Patient	Sex and Age	Occupation	Home Life	Medical Stability	Civic Activities and Other Considerations
A	M 55	Cardiac surgeon on the verge of a major new technique	Married, two adult children	Bad long-term prognosis, maybe 2 years	Philanthropist with very high net worth; rumors of unfaithfulness
B	F 38	Owner of successful designer shop	Widow, three children, ages 4, 8, and 13	Good	From out of state; excellent violinist in community orchestra
C	M 46	Medical technician	Married, six children, ages 8 to 14	Good	Union boss
D	M 29	Assembly-line worker	Single	Good	Retarded—mental age, 10 years; ward of the state
E	F 36	Well-known historian, college professor; Ph.D.	Divorced, custodian of one son, age 5, ex-husband alive	Fair prognosis, but odd case which would allow perfection of new surgical technique	Excessive eater, drinker, and smoker; very popular professor; other medical conditions
F	M 60	Ex-state senator; now retired	Widower	Good	Criminal record (extortion)
G	M 45	Vice-president of local bank	Happily married, three sons, ages 15 to 25	Good	Deacon of local church, member of Rotary Club

SOURCE: *Washington Post*, 12 March 1981.

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and because the demand for them exceeds the supply, decisions must be made that will allow some people to live and force others to die. What criteria can be applied in making such a choice? One might be a utilitarian criterion: The individuals who will contribute the most to the community will be allowed to live. Another criterion might be longevity: The youngest persons should be allowed to receive the treatment, thus saving the greatest number of person-years of life. Another criterion might be autonomy: Individuals who have the greatest probability of returning to active and useful lives after treatment should receive the treatment. Certain other criteria could also justify one choice over another. But additional allocative questions arise from this example: How many kidney machines should be purchased to treat any number of patients who might need this care, regardless of the cost and the underutilization of the machines most of the time? Or should only enough be purchased to meet average demands?

Even though the preservation of life may be an important value for public policymaking, in many situations the definition of life itself is in question. The use of therapeutic abortion as a means of birth control presents one problem of this sort: determining when human life begins.[5] Issues concerning artificial means of prolonging life even when a person would be considered dead by many clinical criteria illustrate the problem of defining life at the other end of the life cycle.[6] Thus, while all policymakers and all citizens may agree on the importance of preserving human life, serious disagreements arise over just what constitutes a human life.

Finally, in some situations the government sanctions and encourages the taking of human lives. The most obvious example is war; others are capital punishment and, in some instances, the management of police response to threats. The question here then is what criteria we oan use to justify the taking of some lives while we prohibit the taking of others?[7] Obvious criteria that we might apply are self-preservation and the protection of society against elements that could undermine it or take other lives. But to some degree there is a definite inconsistency in the arguments here, and we must justify placing higher values on some lives than on others. Again, the fundamental point here is that although there may be broad agreement in society on the importance of preserving human lives as a goal of all public policies, this criterion is not obviously and unambiguously enforceable in all situations. We must have a detailed analysis of all situations and some understanding of the particular application of the criterion in each of those varied situations.

The Preservation of Individual Autonomy

Another criterion that should be applied to policy choices, especially in demo-

cratic political systems, is the preservation or enhancement of the autonomy of individual citizens. That is, policy choices should be made that enhance the ability of individuals to determine their own fates and the fate of their society. One of the most basic principles underlying democratic political thought is that the individual should be allowed to make his or her own choices in an informed and intelligent manner.

This principle also underlies a considerable body of conservative political thought which assumes that the interests of the individual are more important than those of the society as a whole. Thus, child labor, sweatshops, and extremely long working hours with low wages were all justified at one time because they preserved the right of the individual to choose his or her own working conditions.[8] With such an extreme definition of individual autonomy the public sector would be excluded from almost all forms of social and economic activity. But even with this extreme version of autonomy the state did intervene to protect individuals against fraud and breach of contract, and it did to some degree protect children and other less competent individuals more than it did adults, who presumably were able to make their own decisions.

Several interesting questions arise in the public sector in regard to individual autonomy. One involves an extension of the above comments. What groups in society should the state attempt to protect, either against themselves or against those who would defraud them or otherwise infringe on their rights? Children have traditionally been protected—even against their own parents—because they have been assumed to be incapable of exercising full, autonomous choice. The state has been empowered to operate *in loco parentis* to try to preserve the rights of children. Likewise, the state has protected mentally incompetent adults who cannot make rational, autonomous choices. Less justifiably by most criteria, the state has operated to limit the choices of welfare recipients, unwed mothers, and individuals who, although they may have full mental capabilities, are stigmatized in some fashion. Again, what criteria should be used to decide which groups the state should treat as its children?

The state may also intervene to protect the life of an individual who has made an autonomous decision to end his or her life. Legislation that makes suicide a crime and attempts to prevent individuals from purposely ending their lives indicates the apparent belief that the value of preserving life supersedes the value of preserving individual autonomy. In this hierarchy of values, the decision to end one's own life is taken by definition to indicate that the individual needs the protection of the state. The same principle is apparently applied to individuals who have made it clear that they do not wish to be kept "alive" by artificial means when all hope of their recovery to a fully conscious and autonomous life is lost. In such an instance there are several conflicting values:

What actually constitutes a human life? The problems of preserving life and preserving autonomy become even more confused here because an individual who once made an autonomous choice about how he or she would like to be treated may at some point be no longer able to decide anything autonomously and may, in fact, never be able to do so again.

In less extreme instances, the state may also remove the autonomy of an individual for the sake of protecting him or her. Consumer protection is an obvious example; government may disregard *caveat emptor* and simply prohibit the sale of potentially harmful products in order to protect the citizen. On the one hand, the conservative, or any other person interested in preserving individual choice, would argue that such protections are harmful inasmuch as the paternalistic actions of government prevent citizens from being truly free actors. On the other hand, the complexity of the marketplace, the number of products offered for sale, and the absence of full information may prevent individuals from making meaningful judgments. As a consequence, government is justified in intervening, especially as many of the products banned would affect those incapable of making their own informed choices—for example, children.

Professional licensing and laws that control the licensing of drugs have been criticized on the same grounds. It is argued that individuals should have the right to select the form of treatment they would like, even if the medical establishment deems it quackery. So, for example, the prohibition of laetrile in most states is said to deny individuals the right to exercise choice in the treatment of cancer. Of course, the counterargument is that this restriction is justified because it increases the probability that the individual will receive treatment that is more likley to contribute to the cure of the disease.

Lying

Most systems of ethics and morality prohibit lying.[9] People generally regard lying as wrong simply "because it is wrong." It can also be deemed wrong because it allows one individual to deprive another of his or her autonomy. When one person lies to another, the liar deprives the other person of the ability to make rational and informed decisions. In some instances, telling "little white lies" may prevent awkward social situations. But perhaps special criteria should be applied to justify lies told in government.

Lying to the public by public officials has been justified primarily as being in the public's own good. Those who use this paternalistic justification assume that public officials have more information and are unwilling to divulge it either for security reasons or because they believe that the information will only "confuse" citizens. They may therefore lie to the public to get average citizens to

behave in ways that they—the public officials—prefer, believing that the citizens would behave in the same way if they had adequate information. Even if citizens would not behave as public officials want them to, officials think that they should behave in that manner, and the lie is therefore justified as a means of protecting the public from itself.

Such lying obviously limits the autonomy of the average citizen when making policy choices or evaluating the performance of those in office. Even white lies are questionable; the importance of autonomy in democratic political systems may demand much closer attention to honesty, even though the short-term consequences of telling the truth may not benefit the incumbents in office.

Other white lies told by officials to the public involve withholding information that might cause panic or other responses that are potentially very dangerous. For example, a public official may learn that a nuclear power plant has had a minor and apparently controllable accident that is not believed to endanger anyone. The official may withhold this information from the public in the belief that doing so will prevent a panic; a mass flight from the scene could cause more harm than the accident. But, as with other ethical situations, the decision to lie about one thing and not about others makes it difficult to behave consistently. Perhaps the only standard that can be applied with any consistency in this case is the utilitarian criterion: The harm prevented by the lie must outweigh the ill effects caused by the lie. Determining this is relatively easy when we are balancing deaths and property damage from a minor nuclear accident against a widespread and violent panic. Continued lying, however, will eventually cause a public loss of trust in government and its officials, and the cost of such skepticism is difficult to calculate.

A special category of lying is the withholding of information by public officials to protect their own careers. This is a problem for the "whistle blowers" as well as for the liars, and it happens in the private as well as the public sector,[10] placing many individuals in difficult situations. For example, the man who blew the whistle on government cost overruns on the Lockheed C5A lost his job, as have many other conscientious officials in less dramatic circumstances. The problem caused when someone blows the whistle on a lie is especially difficult to analyze when the individual at fault does not lie directly but simply does nothing. The whistle blower must go to some lengths in order to make the information about the lie known to the public. And as a consequence policymakers may want to devise ways to encourage whistle blowers and to protect them against reprisals. In the absence of mechanisms for encouraging officials to divulge information, legislation such as the Freedom of Information Act can at least make it more difficult for government to suppress information.

Thus, in addition to the general moral prohibition, lying carries a particular onus in the public sector because it can destroy an individual's ability to make appropriate and informed choices. Although a lie may be told for good reasons, it must be questioned unless it has extremely positive benefits and is not told just for the convenience of the individual. The long-term consequences for government of even "justifiable" lying may be negative. Citizens who learn that government lies to them for good reasons may soon wonder if it will not lie to them for less noble reasons.

If strictures against lying are to some degree dependent on a desire to preserve the political community and a sense of trust within it, then somewhat different rules may apply in international politics. Although there is a concept of the international community of nations, the bonds among them are weaker than the bonds that exist within a single nation. Further, a political leader's paramount responsibilities are to his or her own citizens. Therefore, lying in international politics may be more acceptable; political leaders have the problem of "dirty hands," which seems to be part of the job of being a political leader in an imperfect world.[11]

Fairness

Finally, fairness is a value to which citizens expect government to give maximum importance. One standard justification for the existence of government is that it protects and enforces the rights of individuals. Further, it is argued that governments can redress any inequities in the distribution of goods and services that result from the operations of the marketplace.[12] Government, then, is charged with making sure that citizens are treated fairly in the society.

But just what is "fair treatment of citizens"? In different schools of social and political thought the word "fair" has had different meanings. To a conservative, for example, fairness means allowing individuals maximum opportunities to exercise their abilities and allowing them to keep what they earn in the marketplace with those abilities. Some conservatives consider it fair that people who cannot provide for themselves should suffer, along with their families. The doctrine "from each according to his abilities to each according to his needs" implies a very different standard of fairness.[13] In other words, all members of the society, provided they are willing to contribute their abilities, are entitled to have their material needs satisfied. According to this standard of fairness, those with lower earning capacities need not suffer, although the doctrine does not imply a standard of absolute equality.

The standard of fairness applied in most contemporary welfare states is something of a mixture of the two standards, although it lacks the intellectual underpinnings of either extreme. The mixed-economy welfare state that operates

in noncommunist, industrialized societies usually allows productive citizens to keep most of their earnings and at the same time asks them to help build a floor of benefits under the less fortunate so that they can maintain at least a minimal standard of living. Unlike the situation in the Marxist state, this redistribution of goods and services to the less fortunate from the more successful is conducted in the context of free and open politics.

Can these operating principles of the contemporary welfare state—principles that arise largely from political accidents and pragmatic evolution—be systematized and developed on a more intellectual plane? One promising approach can be found in philosopher John Rawls's concept of justice in a society. In his essay "Justice as Fairness,"[14] Rawls develops two principles of justice for a society. The first is that "each person participating in a practice, or affected by it, has an equal right to the most extensive liberty compatible with like liberty of all." This is a restatement of the basic right of individuals to be involved in governmental decisions that affect them, a principle not incompatible with the cry "No taxation without representation!" This first principle of justice would place the burden of proof on anyone who would seek to limit participation in political life; it can therefore be seen as a safeguard for procedural democracy in contemporary societies. Thus, Rawls places a strong emphasis on the decision-making procedures employed when evaluating the fairness of those decisions and the fairness of the institutions of society.

The second principle advanced by Rawls is more substantive and also more problematic. Referred to as the "difference principle," it states that "social and economic inequalities are to be arranged so that they are both *(a)* to the greatest benefit of the least advantaged and *(b)* attached to offices and positions open to all under conditions of fair equality of opportunity."[15] This principle places the burden of proof on those who attempt to justify a system of inequalities. Inequalities can be seen as just only if all other possible arrangements would produce lowered expectations for the least-well-off group in society. To help a society that is striving for equality, citizens are asked to think of their own place in society as shrouded behind a "veil of ignorance," so that it cannot be known to them in advance.[16] Would they be willing to gamble on being in the lowest segment of the society when they decide on a set of inequalities for the society? If they are not, then they have good reason to understand the need of the society to equalize the distribution of goods and services. Of course, it is impossible to apply the logic of the veil of ignorance in existing societies, but it is useful in understanding rational acceptance of redistributive government policies.

Several interesting questions arise with respect to Rawls's difference principle. One is the place of natural endowments and individual differences in

producing inequalities. Should those who have special natural abilities be allowed to benefit from them? One is reminded of a Kurt Vonnegut story in *Player Piano*, in which individuals' particular talents are balanced by the "great handicapper." Individuals who can run particularly fast, for instance, are required to wear heavy weights to slow them down and those who have creative gifts are required to wear earphones through which come loud and discordant noises to distract them from thinking. Does Rawls regard such a homogeneous and ultimately dull society as desirable? One would think not, but he does point out that natural endowments are desirable primarily because they can be used to assist those in the lowest segment of society. Thus, *noblesse oblige* is expected of those who have natural talents.

Does the same hold true for those whose endowments are economic rather than physical or intellectual? It would appear that in Rawls's view equality is a natural principle that can be justified by the veil of ignorance as well as by the cooperative instincts that Rawls believes are inherent in humans. Again, in his view, these endowments should exist only to the extent that they can be used for the betterment of the lowest segments in society.[17] Quite naturally, critics point to the natural rights of individuals to retain their holdings and to the potential incentives for work and investment that are built into a system of inequalities. Inequalities are argued to be useful to society in that they supply a spur to ambition and an incentive to produce more, which in turn will benefit the entire society.[18] These incentives should influence artistic as well as economic production. Thus, to critics of Rawls's philosophy, the tendency toward equality may be inappropriate on ethical grounds because it would deny individuals something they have received through either genetics or through education, and it may be wrong on utilitarian grounds because it reduces the total production of the society along several dimensions.

Finally, the Rawlsian framework is discussed primarily within the context of a single society, or a single institution in which cooperative principles would at least be considered, if not always followed. Can these principles be applied to a broader context; in particular, should they be applied to a global community? In other words, should the riches accumulated in the industrialized countries be used to benefit the citizens of the most impoverished countries of the world? Such a policy would, of course, be politically difficult at best. However, the ethical underpinnings of foreign aid may be important, especially as the world moves into a era of increased scarcity.

While opinions may differ as to the applicability of Rawls's ideas to the real world, and the desirability of such application if it becomes possible, his work does raise some interesting ethical questions for those attempting to design public policies. Many industrialized countries have been making redistributive

policy decisions for years. These decisions have been justified on pragmatic or political grounds. The work of Rawls provides intellectual underpinnings for these policies, even though no government has gone as far in redistributing income and wealth as Rawls's difference principle would demand.

Ethics and Public Policy: Alternatives to Utilitarianism

The ethical system most often applied to public policy analysis is utilitarianism. As noted in chapter 14, this principle underlies such approaches as cost-benefit analysis. In this chapter we have discussed several ethical questions that arise in making and implementing public policies, as well as some possible answers to these questions. Ultimately, no one can provide definitive answers to these questions. Likewise, public officials may face ethical questions that have no readily acceptable answers. Values and ethical principles are frequently in conflict, and the policymaker must frequently violate one firmly held ethical position in order to protect another.

Despite these practical difficulties, it is important for citizens and policymakers to think about policy in ethical terms. Perhaps too much policymaking has been conducted without attention to anything but the political and economic consequences. Of course, those consequences are important as criteria on which to base an evaluation of a program, but they may not be the only criteria. Both the policymaker and the citizen must be concerned also with the criteria of justice and trust in society. It may be that ultimately justice and trust make the best policies—and even the best politics.

Notes

1. Victor Grassian, *Moral Reasoning* (Englewood Cliffs, N.J.: Prentice-Hall, 1981).

2. Arnold Meltsner, *Policy Analysts in the Bureaucracy* (Berkeley: University of California Press, 1976), 3-25.

3. Abraham Kaplan, "Social Ethics and the Sanctity of Life," in *Life or Death: Ethics and Options*, ed. D.H. Labby (London: Macmillan, 1968), 58-71.

4. See Guido Calabresi and Philip Bobbitt, *Tragic Choices* (New York: Norton, 1978), 21.

5. See J. Feinberg, ed., *The Problem of Abortion* (Belmont, Calif.: Wadsworth, 1973).

6. See John A. Behnke and Sissela Bok, *The Dilemmas of Euthanasia* (Garden City, N.Y.: Anchor, 1975).

7. See Jonathan Glover, *Causing Deaths and Saving Lives* (Harmondsworth, England: Penguin, 1977).

8. This ideology was expressed in a number of Supreme Court decisions in the late nineteenth and early twentieth centuries. See, for example, *Lochner v. New York* (1905).

9. See Sissela Bok, *Lying: Moral Choice in Public and Private Life* (New York: Vintage, 1979).

10. See Edward Weisband and Thomas M. Franck, *Resignation in Protest* (New York: Penguin, 1975).

11. Michael Walzer, "Political Action: The Problem of Dirty Hands," *Philosophy and Public Affairs*, Winter 1973, 160-80.

12. Geoffrey K. Fry, *The Growth of Government* (London: Frank Cass, 1979).

13. Karl Marx, *Criticism of the Gotha Program* (New York: International Universities Press, 1938), 29:14.

14. John Rawls, "Justice as Fairness," *Philosophical Review*, 1958, 164-94, esp. 166.

15. John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971), 11-17.

16. Ibid., 19.

17. For a critique see Robert Nozick, *Anarchy, State and Utopia* (New York: Basic Books, 1974), 149-63.

18. Kenneth P. Jameson, "Supply-Side Economics: Growth versus Income Distribution," *Challenge*, November/December 1980, 26-31.

Glossary

ADMINISTRATIVE PROCEDURES ACT. Passed in 1946, specifying the details of procedures to be followed by federal administrative agencies. Especially important in defining the process through which these agencies can issue regulations.

ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS. An independent commission composed of congressmen, senators, and representatives of state and local governments advising the federal government in matters of changes in the federal structure of the United States.

AGENDA. The set of issues to be considered when making a public decision. Unless an issue is put on the agenda, it cannot be acted on by government. Agendas may be systemic, or the total range of issues under consideration by the public sector, or institutional for a particular institution such as Congress or the President.

AID TO FAMILIES WITH DEPENDENT CHILDREN (AFDC). The major welfare program in the United States. It provides benefits to families that lack an income earner. In general, this means that the family is headed by a woman without any male in the household.

ANTITRUST POLICY. Beginning with the Sherman Anti-Trust Act (1890), a major component of business policy in the United States. The basic idea is to ensure competition in business and prevent the formation of monopolies.

AUTHORITY. The ability of political systems to have their decisions accepted without opposition. This may be contrasted to power, or the ability to have decisions accepted in spite of opposition.

AUTOMATIC FISCAL STABILIZERS. The effects of tax receipts and social expenditures automatically regulating the economy. In an inflationary period tax receipts increase and social expenditures tend to fall, while in a recession the opposite would be true. This would put money into circulation during a recession and take it out of circulation during inflation.

BACK-DOOR SPENDING. The practice of agencies gaining the authority to spend money through letting of contracts or borrowing of money without specific congressional authorization.